



RESEARCH ARTICLE

Vascular flora of the Nuratau Mountains (Uzbekistan): an annotated checklist

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ABSTRACT

The Nuratau Mountains located in Uzbekistan, in the transitional zone between the Central Asian Mountain and the Turanian phytogeographical provinces, are one of the key biodiversity areas within the Mountains of Central Asia Global Biodiversity Hotspot. These medium-altitude semiarid mountains are treated as the Nuratau phytogeographical district and have been identified as a center of endemism and priority area for protection. The flora of this very peculiar large natural area has been studied for over 150 years, but a complete checklist has never been published. This paper, which provides a fairly complete synopsis of the vascular flora of the Nuratau Mountains, enumerates 1320 species from 471 genera and 86 families.

Key words: alien species, biogeography, checklist, endemic, flora, key biodiversity areas, Mountains of Central Asia Global Biodiversity Hotspot, native species, plant diversity, threatened species.

Introduction

Although a focus of botanical research since the 19th century, Uzbekistan remains among the so-called ‘global dark spots of vascular plants diversity,’ or countries with an insufficiently explored and documented flora (Ondo et al. 2024, Ma et al. 2024). A typical example is the large (about 14,000 km²) region occupied by the Nuratau Mountains in central Uzbekistan. Although the area has been studied for over 150 years, a complete checklist of the flora has never been published. A new state research program, ‘Digital Nature. Development of a digital platform for the flora of Central Uzbekistan,’ launched in 2025, aims to detailed and thoroughly study the plant diversity of region and to map the flora using a grid system

to help eliminate the existing shortcomings in the knowledge of plant diversity and its spatial distribution.

The Nuratau Mountains are composed of two mid-altitude semiarid mountain chains with a maximal elevation of 2,169 m a.s.l. They are the north-western spurs of the Pamir-Alay system stretched approximately 250 km in a sub-latitudinal direction along the right bank of the Zeravschan River (Figure 1). Since the first reconnaissance surveys in the 19th century, the plant diversity of the Nuratau Mountains has been studied by many prominent botanists, resulting a huge volume of resources on the flora of the area, including herbarium collections, phytosociological descriptions, several outdated checklists (Kultiasow 1923, Kudrjashev 1930, Zakirov 1961, Demurina

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1975, Zakirov 1969, 1971), modern publications (Beshko 2000, 2011, 2020, Batoshov 2016, Tojibaev et al. 2017, 2018,

2019, 2020, 2021, Volis & Beshko 2023) and internet data from the citizen-science platforms Plantarium (2007–2025) and iNaturalist (2025).

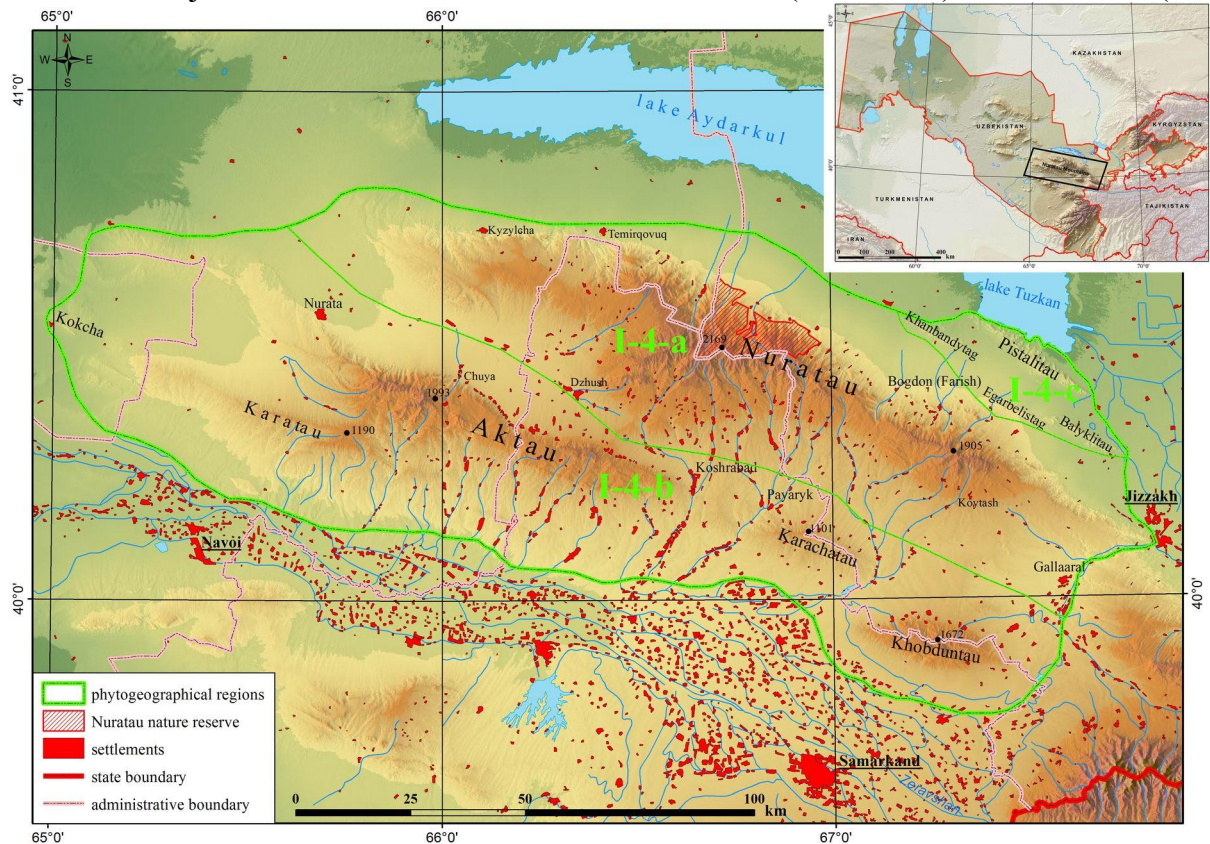


Fig. 1. Map of the Nuratau Mountains. Phytogeographical regions are designated according to Tojibaev et al. (2017) as follows: 1-4-a – Nuratau, 1-4-b – Aktau, 1-4-c – Nuratau Relic Mountains.

The Nuratau Mountains, among the oldest mountains of Central Asia, are treated as the Nuratau phytogeographical district of the Central Asian Mountain Province (Kamelin 1973, 1990, 2021, Tojibaev et al. 2017, Beshko 2020). They represent a peculiar, ancient, isolated mountainous area situated in the transitional zone between the Central Asian Mountain (or Turkestanian) and the Turanian (or Aralo-Caspian) phytogeographical provinces (Takhtajan 1986) and have been identified as a priority area for protection within the Mountains of Central Asia Global Biodiversity Hotspot. The Nuratau Mountains harbor a unique flora and fauna rich in endemic and threatened taxa as well as threatened plant communities and natural habitats (CEPF 2017). At the same time, the deserts and mountains of

Central Asia are considered to be vulnerable ecoregions sensitive to climate change and biodiversity loss (Myers et al. 2000, Mittermeier et al. 2004, CEPF 2017, Ondo et al. 2024). The study area is not exception in this regard. As noted by Kudrjashev (1930), Zakirov (1955), Demurina (1975), Zakirov (1969, 1971), Kamelin (1973), Tojibaev et al. (2017) and Beshko (2020), the vegetation of the Nuratau Mountains, except for remote and hardly accessible rocky areas, has been significantly transformed by the local people since ancient times due to traditional semi-nomadic grazing of livestock, clear-cutting of trees and shrubs for fuel, and agriculture. Currently, different anthropogenic threats (livestock farming & ranching, agriculture, land development, tourism, geological exploration,

mining & quarrying, pollution, etc.) are rapidly and considerably increasing, which, if continued at the present rate, will lead to irreversible degradation, fragmentation and loss of natural ecosystems in the Nuratau Mountains.

In accordance with the phytogeographical division of Uzbekistan (Sennikov et al. 2016, Tojibaev et al. 2017), the Nuratau district is divided into three phytogeographical regions: Nuratau, Aktau and Nuratau Relic Mountains (Figure 1). The Nuratau phytogeographical region includes the Nuratau Range (2,169 m), which forms the northern branch of the Nuratau Mountains about 200 km long. The southern branch of the Nuratau Mountains, considered as the Aktau phytogeographical region, includes several smaller ranges, Aktau (about 100 km long and 1,993 m elevation), Karatau (50 km long, 1,190 m), Karachatau (20 km long, 1,101 m), Khobduntau (35 km long, 1,672 m) and an insular mountain Kokcha (485 m). The third phytogeographical region, Nuratau Relic Mountains, includes the insular relic mountains Pistalitau (32 km long, 557 m), Khanbandytag (16 km long, 476 m), Egarbelistag (15.5 km long, 618 m) and Balyklitau (17 km long, 581 m), located north of the Nuratau Range at the southern edge of the Kyzylkum Desert.

The natural conditions and history of botanical research conducted in the Nuratau Mountains have been described in detail by Zakirov (1969, 1971); Tojibaev et al. (2017, 2018, 2019, 2020, 2021), Beshko (2020) and Volis & Beshko (2023).

The literature provides a large amount of contradictory and scattered data on the flora of the Nuratau Mountains, which needed to be critically revised. The following data on the flora of the region was published during the 20th Century: a preliminary checklist of the flora of the Pistalitau Range with 148 species (Kultiasow 1923); a preliminary checklist of the Khobduntau and Karachatau ranges with 228 species (Kudrjashev 1930); a checklist of 1,139 plant species recorded for the western part of the Turkestan Range, Malguzar Range, and Nuratau Mountains (Demurina 1975); 372 species cited for the southern branch of the

Nuratau Mountains in a synopsis of the flora of the Zeravshan River basin compiled by K.Z. Zakirov (1961); the first checklist of the flora of the Nuratau Mountains with 686 species in 335 genera and 62 families and the first checklist of the flora of the Nuratau Range with 679 species in 329 genera and 63 families by P.K. Zakirov (1969, 1971); a list of 157 new records for the flora of the Nuratau Mountains (Kamelin 1973), and an estimation of the flora of the Nuratau Mountains at 1,172 species in 475 genera and 84 families (without a checklist) (Kamelin 1990). The following information appeared since 2000: the first checklist of the flora of the Nuratau Nature Reserve with 775 species in 347 genera and 74 families (Beshko 2000a); an updated checklist of the flora of the protected area with 820 species in 385 genera and 81 families (Beshko 2011), and the latest online version of the flora of the Nuratau Nature Reserve with 843 species (Beshko 2017–2025); a checklist of the flora of the phytogeographical region of the Nuratau Relic Mountains and Mount Kokcha with 781 species in 355 genera and 69 families (Batoshov 2016).

The most recent floristic checklists for parts of the Nuratau phytogeographical district situated within Samarkand, Navoi, Bukhara and Jizzakh administrative regions were published in a series of books titled ‘Inventory of the Flora of Uzbekistan’ (Tojibaev et al. 2018, 2019, 2020b, 2021) and in the illustrated ‘Flora of the Dzhizak Province, Uzbekistan’ (Tojibaev et al., 2020a). In particular, in the checklist of the flora of the Jizzakh administrative region, 1139 and 563 species were reported for the Jizzakh part of the Nuratau and Aktau phytogeographical regions, respectively, 619 species were attributed for the phytogeographical region of Nuratau Relic Mountains (Tojibaev et al., 2021). According to the ‘Inventory of the Flora of Uzbekistan: Samarkand Region’ (Tojibaev et al. 2018), 1004 species occur in the Samarkand part of the Nuratau Range and 816 – on the Aktau Range. In the checklist of the flora of the Navoi administrative region (Tojibaev et al., 2019), 972 and 842 species were cited for the Nuratau and Aktau phytogeographical regions,

respectively, and 205 species were reported for the westernmost part of the Karatau Range, which belongs to the Bukhara Region (Tojibaev et al., 2020b). The most recent estimation of the flora of the Nuratau Mountains, 1,283 species of vascular plants in 474 genera and 86 families including 1,180 native species and 32 endemics, was presented in the illustrated book 'Flora of Central Asia: the Nuratau Mountains' (Beshko 2020). It includes descriptions of 335 species supplemented with photographs. The taxonomic composition, life forms and other characteristics of the flora of the Nuratau Mountains were analyzed in detail in the introductory part of this illustrated guide, and the distribution of species within the three phytogeographical regions was reported as follows: 1205 – Nuratau region, 907 – Aktau region, and 621 species – Nuratau Relic Mountains, but a checklist was not provided.

The account presented here provides the first annotated and fairly complete synopsis of the vascular flora of the Nuratau Mountains. It is hoped that it will help to fill a gap in our knowledge of the plant diversity of the area.

Materials and Methods

A checklist of the flora of Nuratau Mountains was compiled by the author based on field surveys performed from 1990 through 2025, critically revised literature, herbarium collections from TASH, LE, MW, Samarkand State University and Nuratau Nature Reserve, and occurrence records from Plantarium, GBIF and iNaturalist. In total, over 10,360 occurrence records are cited, including 6,608 specimens from TASH, 1,326 specimens from the Nuratau Nature Reserve's herbarium collection, 367 specimens from LE, 274 from MW, 21 herbarium specimens from Samarkand State University, 1,048 observations from Plantarium website, 434 observations from iNaturalist, 11 occurrence records from GBIF and 273 occurrence records from plant community descriptions (phytosociological relevés).

The main literature sources were 'An essay on the vegetation of the Pistaltau

Mountains' (Kultiasow 1923), 'Vegetation of the Khobduntau and Karachatau Mountains' (Kudrjashev 1930), 'Flora and vegetation of the Zeravshan river basin', vol. 2 (Zakirov 1961), 'Vegetation cover of the Nuratau Mountains' (Zakirov, 1969), 'Botanical geography of low mountains of Kyzylkum and Nuratau Range' (Zakirov, 1971), 'An account to the knowledge of the flora of the Nuratavian Mountains' (Kamelin 1973), 'Vegetation of the western part of Turkestan ridge and its spurs' (Demurina 1975), 'Flora of the planned biosphere reserve Nuratau-Kyzylkum' (Beshko 2000b), 'Flora of vascular plants of the Nuratau nature reserve' (Beshko 2011), 'Flora of South-East Kyzylkum Relic Mountains' (Batoshev 2016), 'Inventory of the Flora of Uzbekistan: Samarkand Region' (Tojibaev et al. 2018), 'Inventory of the Flora of Uzbekistan: Navoi Region' (Tojibaev et al. 2019), 'Inventory of the Flora of Uzbekistan: Bukhara Region' (Tojibaev et al. 2020b), 'Flora of the Dzhizak Province, Uzbekistan' (Tojibaev et al., 2020a), 'Inventory of the Flora of Uzbekistan: Jizzakh Region' (Tojibaev et al. 2021), 'Flora of the U.S.S.R.' (Komarov 1934–1964), 'Conspectus Florae Asiae Mediae' (Kovalevskaya 1968–1971, Bondarenko & Nabiev 1972, Pakhomova 1974–1976, Kamelin et al. 1981, Adylov 1983, 1987, Nabiev 1986, Adylov & Zuckerwanik 1993, Khassanov 2015), and 'Flora of Uzbekistan' (Kudrjashev 1941, Vvedensky 1953–1962, Sennikov 2016, 2017, 2019, 2022, 2023a, 2023b).

Families in the checklist are arranged in accordance with PPG I (2016) for ferns and fern allies, Christenhusz & al. (2011) for gymnosperms, and APG IV (2016) for angiosperms. Genera and species are arranged in alphabetic order.

The information for each species in the checklist is arranged in the following order: accepted name supplemented with nomenclatural reference, relevant synonymy, life form, phytogeographic element, habitat, altitudinal zone, abundance, native status, conservation status and distribution in the Nuratau phytogeographical district based on known occurrence records. The accepted names

of the species are provided in accordance with Plants of the World Online (POWO 2025), critically cross-checked with the International Plant Name Index (2025) and GBIF (2025).

The distributional data were taken from the literature, mainly from the new 'Flora of Uzbekistan' (Sennikov 2016, 2017, 2019, 2022, 2023a, 2023b), 'Conspectus Florae Asiae Mediae' (1968–2015) and from the online sources Plants of the World Online (POWO 2025) and GBIF (2025). Phytogeographic elements are given according to the hierarchical classification of the terrestrial regions of the world by Takhtajan (1986), modified by Morrone & Ebach (2022), a widely accepted schema for floristic divisions.

The habitat types are provided according to the IUCN Habitats Classification Scheme, ver. 3.1 (IUCN 2012, Jung et al. 2020). Vertical belts within the study area are as follows: plain (300–500 m a.s.l.), foothills (500–800 m a.s.l.) and montane zone (from 800 m a.s.l. up to the crest of the Nuratau Mountains with the maximum elevation of 2,169 m).

The D.A.F.O.R. scale was used for semi-quantitative ratings of the species abundance within the study area: D – dominant, A – Abundant, F – Frequent, O – Occasional, and R – Rare.

The non-native status of alien species was determined on the basis of published data (Nikitin 1983, IUCN/ISSG 2014, CABI 2017, Sennikov & al. 2018, Makhkamov et al. 2024), critically cross-checked with Plants of the World Online (POWO 2025) and 'Flora of Uzbekistan' (1941–1962, Sennikov 2016, 2017, 2019, 2022, 2023a, 2023b). Separating old naturalized aliens (archaeophytes) from surely native weedy species is a very difficult task, and some of them are treated as native in global databases, such as POWO (Sennikov & Lazkov 2024). In this regard, the species with contradictory information about their native or non-native status based on different sources are designated in the checklist as 'probably alien.'

The conservation status is indicated for species listed in the Red Data Book of Uzbekistan (2019) and species included in the IUCN Red List (IUCN 2025) as threatened (CR, EN or VU) or near threatened (NT). IUCN RL is the abbreviation for the IUCN Red List; UzbRDB is the abbreviation for the Red Data Book of Uzbekistan (2019). National categories of threatened species are follows: 1 (endangered, disappearing species) – meets CR or EN categories of IUCN, 2 (rare species) – meets VU category of IUCN and 3 (declining species) – corresponds to NT category of IUCN. The occurrence records cited in the checklist are arranged within mountain ranges and three phytogeographical regions of the Nuratau phytogeographical district (Tojibaev & al. 2017) and marked as follows: I-4-a – Nuratau phytogeographical region, I-4-b Aktau region, I-4-c region of Nuratau Relic Mountains.

Results and Discussion

The checklist of the flora of the Nuratau Mountains presented here contains 1320 species in 471 genera and 86 families of vascular plants (Appendix). Most species in the list are confirmed by herbarium gatherings or other occurrence records, but 63 species are based on only on data from the literature. A number of species reported for the region by Zakirov (1969, 1971), Beshko (2000b, 2011), Batoshov (2016), Tojibaev et al. (2018, 2019, 2020a, 2020b, 2021), but not confirmed with occurrence records, are considered to be erroneous or doubtful and are not included in the checklist. Those 32 taxa are listed in Table 1 in alphabetic order. Given their geographic distribution and ecology, some of them could potentially be found in the Nuratau Mountains, but others are surely erroneous, as some endemics of the Western Tien Shan and alpine species, which were included in the checklist by Zakirov (1969, 1971).

Table 1. List of taxa doubtfully reported for the Nuratau Mountains.

Species	Family	Note
<i>Angelica decurrens</i> (Ledeb.) B.Fedtsch.	Apiaceae	Reported for the Nuratau Range in the ‘Conspectus Florae Asiae Mediae’ (vol. 7, 1983)
<i>Angelica tschimganica</i> (Korovin) V.N.Tikhom.	Apiaceae	Endemic to the Western Tien Shan, erroneously reported by Zakirov in ‘Vegetation cover of Nuratau Mountains’ (1969) and ‘Botanical geography of low mountains of Kyzylkum and Nuratau Range’ (1971)
<i>Aulacospermum simplex</i> Rupr.	Apiaceae	Reported by Zakirov in ‘Vegetation cover of Nuratau Mountains’ (1969) and ‘Botanical geography of low mountains of Kyzylkum and Nuratau Range’ (1971)
<i>Butomus umbellatus</i> L.	Butomaceae	Reported for the region of Nuratau Relic Mountains in the thesis of Batoshov (2016) and ‘Inventory of the Flora of Uzbekistan: Jizzakh Region’ (Tojibaev et al. 2021)
<i>Conringia persica</i> Boiss.	Brassicaceae	Reported by Zakirov in ‘Botanical geography of low mountains of Kyzylkum and Nuratau Range’ (1971)
<i>Draba nemorosa</i> L.	Brassicaceae	Reported for the Nuratau Range in the ‘Inventory of the Flora of Uzbekistan: Jizzakh Region’ (Tojibaev et al. 2021) based on the misidentified specimen of <i>Draba nuda</i> from the herbarium of the Nuratau Nature Reserve (revised by D.A. German in 2025)
<i>Draba stenocarpa</i> Hook. f. & Thomson	Brassicaceae	Reported for the Nuratau Range in the ‘Inventory of the Flora of Uzbekistan: Jizzakh Region’ (Tojibaev et al. 2021) based on two misidentified specimens of <i>Draba nuda</i> from the herbarium of the Nuratau Nature Reserve (revised by D.A. German in 2025)
<i>Eminium lehmanii</i> (Bunge) O.Kuntze	Araceae	Reported for the Nuratau Mountains in ‘Inventory of the Flora of Uzbekistan: Navoi Region’ (Tojibaev et al. 2019) ‘Inventory of the Flora of Uzbekistan: Jizzakh Region’ (Tojibaev et al. 2021)
<i>Enneapogon persicus</i> Boiss.	Poaceae	Reported for the Nuratau Range and Nuratau Relic Mountains in the ‘Inventory of the Flora of Uzbekistan: Jizzakh Region’ (Tojibaev et al. 2021)
<i>Equisetum arvense</i> L.	Equisetaceae	Reported for the Nuratau Mountains in ‘Inventory of the Flora of Uzbekistan: Navoi Region’ (Tojibaev et al. 2019) ‘Inventory of the Flora of Uzbekistan: Jizzakh Region’ (Tojibaev et al.

		2021)
<i>Ferula ferganensis</i> Lipsky ex Korovin	Apiaceae	Erroneously reported for the Nuratau Range in the ‘Conspectus Florae Asiae Mediae’ (vol. 7, 1983)
<i>Ferula tenuisecta</i> Korovin	Apiaceae	Endemic to the Western Tien Shan, erroneously reported by Zakirov in ‘Vegetation cover of Nuratau Mountains’ (1969) and ‘Botanical geography of low mountains of Kyzylkum and Nuratau Range’ (1971)
<i>Helictochloa hookeri</i> (Scribn.) Romero Zarco	Poaceae	Reported for the Nuratau Range in the ‘Inventory of the Flora of Uzbekistan: Jizzakh Region’ (Tojibaev et al. 2021)
<i>Helictotrichon desertorum</i> (Less.) Pilg.	Poaceae	Reported for the Nuratau and Aktau Ranges in the ‘Inventory of the Flora of Uzbekistan: Navoi Region’ (Tojibaev et al. 2019) and ‘Inventory of the Flora of Uzbekistan: Jizzakh Region’ (Tojibaev et al. 2021)
<i>Matthiola obovata</i> Bunge	Brassicaceae	Reported for the Nuratau Mountains by Zakirov in ‘Vegetation cover of Nuratau Mountains’ (1969) and ‘Botanical geography of low mountains of Kyzylkum and Nuratau Range’ (1971), as well as in the checklist of the flora of the Nuratau Nature Reserve (Beshko 2011), ‘Inventory of the Flora of Uzbekistan: Samarkand Region’ (Tojibaev et al. 2018), ‘Inventory of the Flora of Uzbekistan: Navoi Region’ (Tojibaev et al. 2019) and ‘Inventory of the Flora of Uzbekistan: Jizzakh Region’ (Tojibaev et al. 2021) based on several erroneously identified specimens from TASH and herbarium of the Nuratau Nature Reserve. These gatherings were recently revised by D.A. German and identified as <i>Matthiola integrifolia</i> Kom.
<i>Megacarpaea orbiculata</i> B.Fedtsch.	Brassicaceae	Reported for the Nuratau Mountains by Zakirov in ‘Vegetation cover of Nuratau Mountains’ (1969) and ‘Botanical geography of low mountains of Kyzylkum and Nuratau Range’ (1971), as well as in the checklist of the flora of the Nuratau Nature Reserve (Beshko 2011), ‘Inventory of the Flora of Uzbekistan: Samarkand Region’ (Tojibaev et al. 2018), ‘Inventory of the Flora of Uzbekistan: Navoi Region’ (Tojibaev et al. 2019) and ‘Inventory of the Flora of Uzbekistan: Jizzakh Region’ (Tojibaev et al. 2021) based on erroneously identified specimens collected by Androssov in 1927 and by Zaprometova in 1954. These gatherings were recently revised by D.A. German and identified

		as <i>Megacarpaea gigantea</i> Regel
<i>Najas marina</i> L.	Hydrocharitaceae	Reported for the region of Nuratau Relic Mountains in the thesis of Batoshov (2016) and ‘Inventory of the Flora of Uzbekistan: Jizzakh Region’ (Tojibaev et al. 2021)
<i>Najas minor</i> All.	Hydrocharitaceae	Reported for the region of Nuratau Relic Mountains in the thesis of Batoshov (2016) and ‘Inventory of the Flora of Uzbekistan: Jizzakh Region’ (Tojibaev et al. 2021)
<i>Persicaria amphibia</i> (L.) Delarbre	Polygonaceae	Reported for the Nuratau Mountains in the ‘Inventory of the Flora of Uzbekistan: Samarkand Region’ (Tojibaev et al. 2018) and ‘Inventory of the Flora of Uzbekistan: Jizzakh Region’ (Tojibaev et al. 2021)
<i>Persicaria hydropiper</i> (L.) Delarbre	Polygonaceae	Reported for the Nuratau Mountains in the ‘Inventory of the Flora of Uzbekistan: Samarkand Region’ (Tojibaev et al. 2018), ‘Inventory of the Flora of Uzbekistan: Navoi Region’ (Tojibaev et al. 2019) and ‘Inventory of the Flora of Uzbekistan: Jizzakh Region’ (Tojibaev et al. 2021)
<i>Persicaria minor</i> (Huds.) Opiz	Polygonaceae	Reported for the Nuratau Mountains in the ‘Inventory of the Flora of Uzbekistan: Samarkand Region’ (Tojibaev et al. 2018) and ‘Inventory of the Flora of Uzbekistan: Jizzakh Region’ (Tojibaev et al. 2021), but not confirmed by occurrence records
<i>Phleum phleoides</i> (L.) H.Karst.	Poaceae	Reported for the Nuratau Mountains in the ‘Inventory of the Flora of Uzbekistan: Samarkand Region’ (Tojibaev et al. 2018), ‘Inventory of the Flora of Uzbekistan: Navoi Region’ (Tojibaev et al. 2019) and ‘Inventory of the Flora of Uzbekistan: Jizzakh Region’ (Tojibaev et al. 2021)
<i>Phleum pratense</i> L.	Poaceae	Reported for the Nuratau Mountains in the ‘Inventory of the Flora of Uzbekistan: Samarkand Region’ (Tojibaev et al. 2018), ‘Inventory of the Flora of Uzbekistan: Navoi Region’ (Tojibaev et al. 2019) and ‘Inventory of the Flora of Uzbekistan: Jizzakh Region’ (Tojibaev et al. 2021)
<i>Potentilla pamiroalaica</i> Juz.	Rosaceae	Subalpine and alpine species erroneously reported by Zakirov in ‘Vegetation cover of Nuratau Mountains’ (1969) and ‘Botanical geography of low mountains of Kyzylkum and Nuratau Range’ (1971)
<i>Pseudosedum bucharicum</i> Boriss.	Crassulaceae	Erroneously reported by Zakirov in ‘Vegetation cover of Nuratau Mountains’ (1969) and

		‘Botanical geography of low mountains of Kyzylkum and Nuratau Range’ (1971)
<i>Puccinellia distans</i> (Jack.) Parl.	Poaceae	Reported for the Nuratau Mountains in the ‘Inventory of the Flora of Uzbekistan: Samarkand Region’ (Tojibaev et al. 2018), ‘Inventory of the Flora of Uzbekistan: Navoi Region’ (Tojibaev et al. 2019) and ‘Inventory of the Flora of Uzbekistan: Jizzakh Region’ (Tojibaev et al. 2021)
<i>Sagittaria trifolia</i> L.	Alismataceae	Reported for the region of Nuratau Relic Mountains in the thesis of Batoshov (2016) and ‘Inventory of the Flora of Uzbekistan: Jizzakh Region’ (Tojibaev et al. 2021)
<i>Schtschurowskia meifolia</i> Regel & Schmalh.	Apiaceae	Alpine species erroneously reported by Zakirov in ‘Vegetation cover of Nuratau Mountains’ (1969) and ‘Botanical geography of low mountains of Kyzylkum and Nuratau Range’ (1971)
<i>Stipa orientalis</i> Trin. ex Ledeb.	Poaceae	Reported for the Nuratau Range in the checklist of the flora of the Nuratau Nature Reserve (Beshko 2011) and ‘Inventory of the Flora of Uzbekistan: Jizzakh Region’ (Tojibaev et al. 2021)
<i>Stuckenia filiformis</i> (Pers.) Börner (<i>Potamogeton filiformis</i> Pers.)	Potamogetonaceae	Reported for the region of Nuratau Relic Mountains in the thesis of Batoshov (2016) and ‘Inventory of the Flora of Uzbekistan: Jizzakh Region’ (Tojibaev et al. 2021), but not confirmed by occurrence records
<i>Turritis glabra</i> L.	Brassicaceae	Reported for the Nuratau Mountains in the ‘Inventory of the Flora of Uzbekistan: Samarkand Region’ (Tojibaev et al. 2018), ‘Inventory of the Flora of Uzbekistan: Navoi Region’ (Tojibaev et al. 2019) and ‘Inventory of the Flora of Uzbekistan: Jizzakh Region’ (Tojibaev et al. 2021), but not confirmed by occurrence records
<i>Vallisneria spiralis</i> L.	Hydrocharitaceae	Reported for the regions of Aktau and Nuratau Relic Mountains in the ‘Inventory of the Flora of Uzbekistan: Jizzakh Region’ (Tojibaev et al. 2021)

The flora of the Nuratau Mountains is composed predominantly of angiosperms represented by 1307 species in 463 genera and 81 families (99.02% of all species), including 1059 species of dicots (80.23% of all species) and 248 species of monocots (18.79%). Due to the arid conditions, the diversity of ferns and fern allies is extremely low (5 species in 5 genera and 3 families, 0.38% of all species).

Gymnosperms are also poorly represented (8 species in 3 genera and 2 families, 0.6%).

The average number of genera and species per family is 5.46 and 15.35, respectively; and the average number of species per genus is 2.81. The 20 largest families, which have 15 or more species each, include 1084 species (82.12% of the flora), while the remaining 66 families together contain 236

species (17.88%); 38 families are represented by a single species. The 10 largest families contain 842 species (63.79%), and the three

leading families, Asteraceae, Fabaceae and Poaceae, contain 441 species (33.41%) (Figure 2).

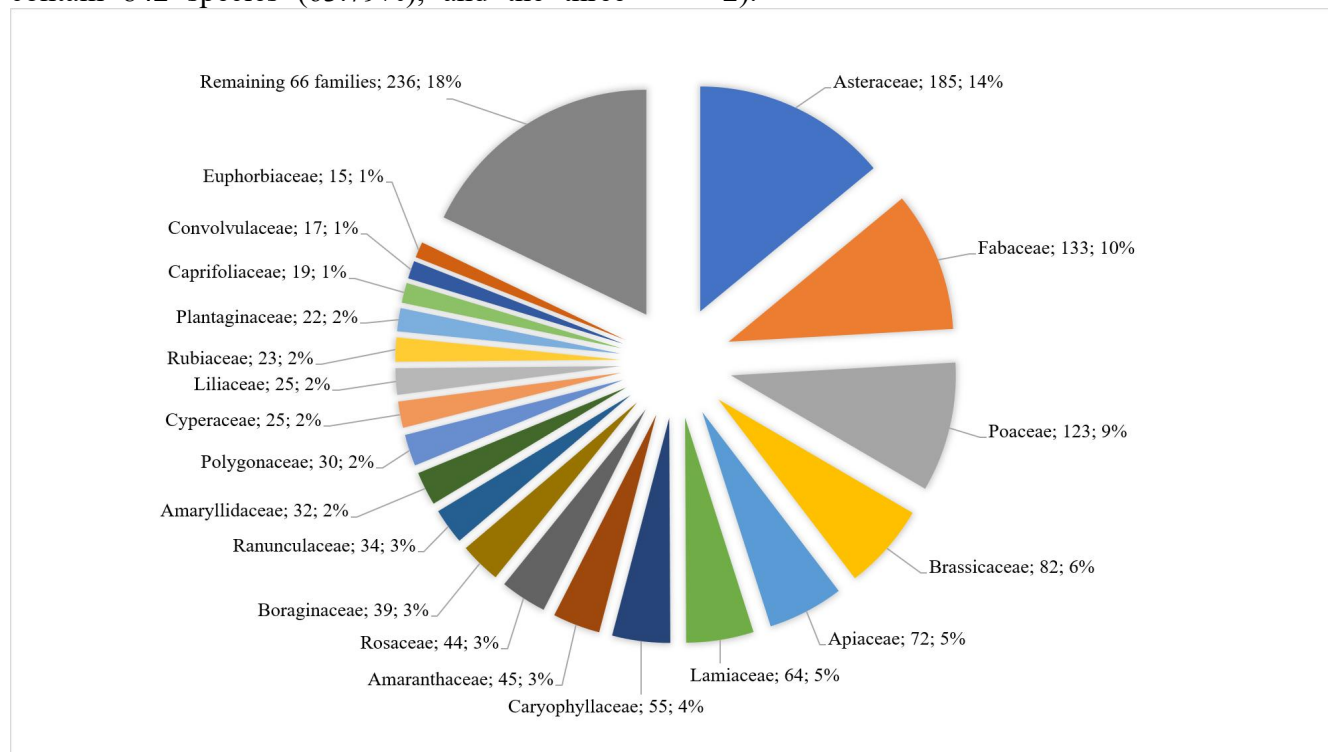


Fig. 2. Dominant families in the flora of the Nuratau Mountains

The 10 largest genera are *Astragalus* (69 species), *Allium* (31), *Cousinia* (26), *Silene* (20), *Artemisia* (19), *Ferula* (16), *Gagea* (16), *Veronica* (15), *Ranunculus* (15) and *Galium* (14), with a total of 241 species (18.26% of all species), while the remaining 461 genera

contain 1079 species (81.74% of all species) (Figure 3). The 48 medium-rich genera (6–13 species) contain 383 species; 169 genera with 2–5 species each contain 455 species; and 244 genera are represented by a single species.

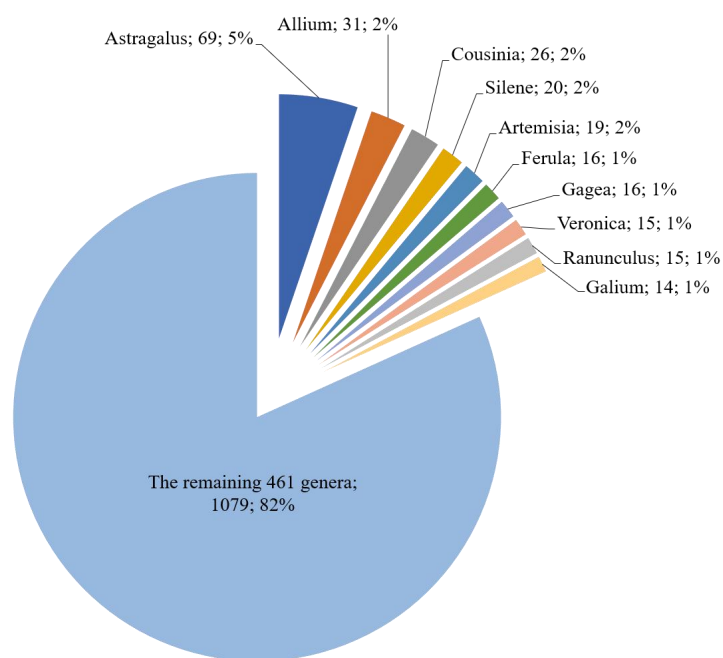


Fig. 3. Ten largest genera in the flora of the Nuratau Mountains

In general, the composition of the flora of the Nuratau Mountains with a predominance of hemicryptophytes (35.93%) and therophytes (35.48%), and low proportion of phanerophytes

(7.41%), is typical for the peripheral arid mountains of Central Asia and the Irano-Turanian region (Figure 4).

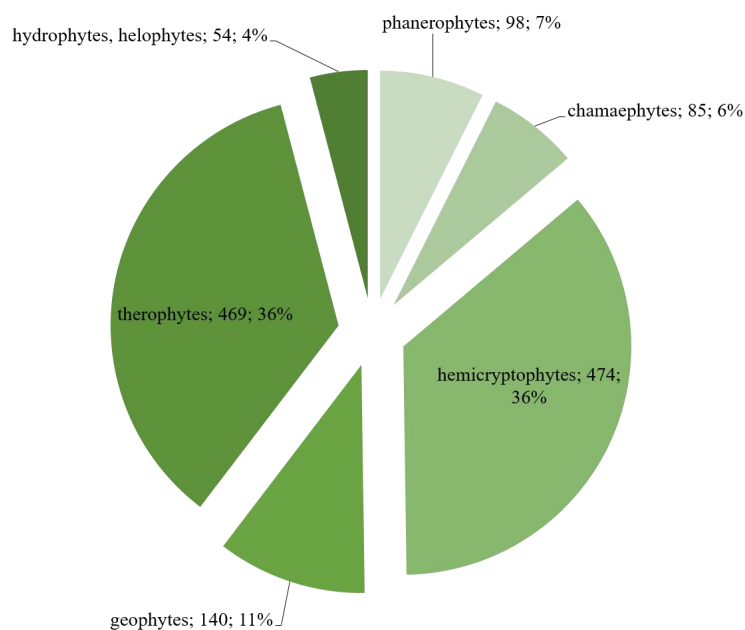


Fig. 4. Life forms in the flora of the Nuratau Mountains

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The flora of the study area is characterized by a predominance of Tethyan (Ancient Mediterranean) phytogeographic elements (Takhtajan 1986), which make up 65.4% of the species. More than half of the flora of the Nuratau Mountains (733 species, 55.5%), including 309 (23.41%) species restricted to the mountains of Central Asia, is of Irano-Turanian origin; 60 species are endemic to the Pamir-Alay, and 33 species are endemic to the Nuratau Mountains including one new

undescribed species (the protologue will be submitted for publication soon). Endemic taxa are listed and illustrated below (Table 2, Figures 16, 17). The most actual data on their ecology, distribution and recommendations for conservation based on species distribution modelling were published recently by Volis & Beshko (2023). One endemic, *Parrya nuratensis* Botsch. & Vved. (Brassicaceae), recently was synonymized with *P. fruticulosa* Regel & Schmalh. (German et al. 2025).

Table 2. List of species endemic to the Nuratau Mountains.

Species	Family	Life form	Conservation status (UzbrDB)	Distribution
<i>Acantholimon nuratavicum</i> Zakirov	Plumbaginaceae	subshrub	2	Nuratau Range
<i>Acantholimon subavenaceum</i> Lincz.	Plumbaginaceae	subshrub	2	Nuratau Range
<i>Acantholimon zakirovii</i> Beshko	Plumbaginaceae	subshrub	-	Nuratau Range
<i>Allium aktauense</i> F.O.Khass. & Esankulov	Amaryllidaceae	perennial	-	Aktau Range
<i>Allium habibii</i> F.O.Khass.	Amaryllidaceae	perennial	-	Aktau Range
<i>Allium nuratavicum</i> (R.M.Fritsch & Beshko) Beshko	Amaryllidaceae	perennial	-	Nuratau Range
<i>Allium svetlanae</i> Vved. ex Filim.	Amaryllidaceae	perennial	-	Nuratau Range
<i>Arctium pallidivirens</i> (Kult.) S.Lopez, Romanschenko, Susanna & N.Garcia	Asteraceae	perennial	2	Nuratau and Aktau ranges
<i>Astragalus nuratensis</i> Popov	Fabaceae	perennial	1	Aktau Range
<i>Astragalus saidii</i> F.O.Khass. & Esankulov	Fabaceae	perennial	-	Aktau Range
<i>Autumnalia innopinata</i> Pimenov	Apiaceae	perennial	1	Karatau Range
<i>Cousinia botschantzevii</i> Juz. ex Tscherneva	Asteraceae	biennial	-	Nuratau, Aktau and Khobduntau ranges
<i>Cousinia pseudolanata</i> Popov ex Tscherneva	Asteraceae	perennial	1	Aktau Range
<i>Dianthus helenae</i> Vved.	Caryophyllaceae	perennial	-	Nuratau Mts. (all ranges)
<i>Dracocephalum nuratavicum</i>	Lamiaceae	subshrub	-	Nuratau and Aktau

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Adylov				ranges
<i>Eremurus nuratavicus</i> Khohkr.	Asphodelaceae	perennial	1	Nuratau Range
<i>Eremurus pseudolactiflorus</i> Makhmudjanov & Beshko sp. nov. ined.	Asphodelaceae	perennial	-	Nuratau Range
<i>Ferula helenae</i> Rakhmankulov & Melibaev	Apiaceae	perennial	2	North-Nuratau insular low mountains
<i>Ferula nuratavica</i> Pimenov	Apiaceae	perennial	-	Aktau Range
<i>Helichrysum nuratavicum</i> Krasch.	Asteraceae	perennial	2	Nuratau and Aktau ranges
<i>Iris hippolyti</i> (Vved.) Kamelin	Iridaceae	perennial	1	Mt. Kokcha, Karatau Range
<i>Jurinea zakirovii</i> Iljin	Asteraceae	perennial	1	Nuratau and Aktau ranges
<i>Lagochilus olgae</i> Kamelin	Lamiaceae	subshrub	2	Nuratau Range
<i>Lagochilus proskorjakovii</i> Ikramov	Lamiaceae	subshrub	1	Nuratau Range
<i>Lappula nuratavica</i> Nabiev & Zakirov	Boraginaceae	perennial	2	Nuratau Range
<i>Lepidium olgae</i> (R.M.Vinogr.) Al-Shehbaz & Mumm.	Brassicaceae	perennial	2	Nuratau Range
<i>Oxytropis pseudorosea</i> Filim.	Fabaceae	perennial	2	Nuratau and Aktau ranges
<i>Phlomis anisochila</i> (Pazij & Vved.) Salmaki	Lamiaceae	perennial	2	Nuratau Range
<i>Phlomis nubilans</i> Zakirov	Lamiaceae	perennial	3	Nuratau and Aktau ranges
<i>Salvia submutica</i> Botsch. & Vved.	Lamiaceae	perennial	2	Nuratau Range
<i>Silene nuratavica</i> Kamelin	Caryophyllaceae	perennial	-	Nuratau Range
<i>Thymus subnervosus</i> Vved., Nabiev & Tulyag.	Lamiaceae	subshrub	-	Nuratau and Aktau ranges
<i>Vicoa krascheninnikovii</i> Kamelin	Asteraceae	perennial	3	Aktau Range

The sub-endemics include 46 species with a restricted range confined to the Nuratau Mountains and an adjacent phytogeographical district: 30 species occur within the Nuratau and Kuhistan districts; 10 species have a distribution range in the Nuratau and Western Tien Shan districts; 5 species are confined to the Nuratau Mountains and the relic mountains of Kyzylkum; and one species is distributed within the Nuratau Mountains and Mirzachul.

Due to long-term anthropogenic influence, a noticeable part of the flora is composed of species with a wide geographical range. Among them, the group of taxa distributed within the Tethyan and Euro-Siberian regions constitute 20.75% of the flora. Other species with wide geographical ranges (pluriregional, circumtemperate, palearctic, etc.) make up 13.86% of the flora (Figure 5).

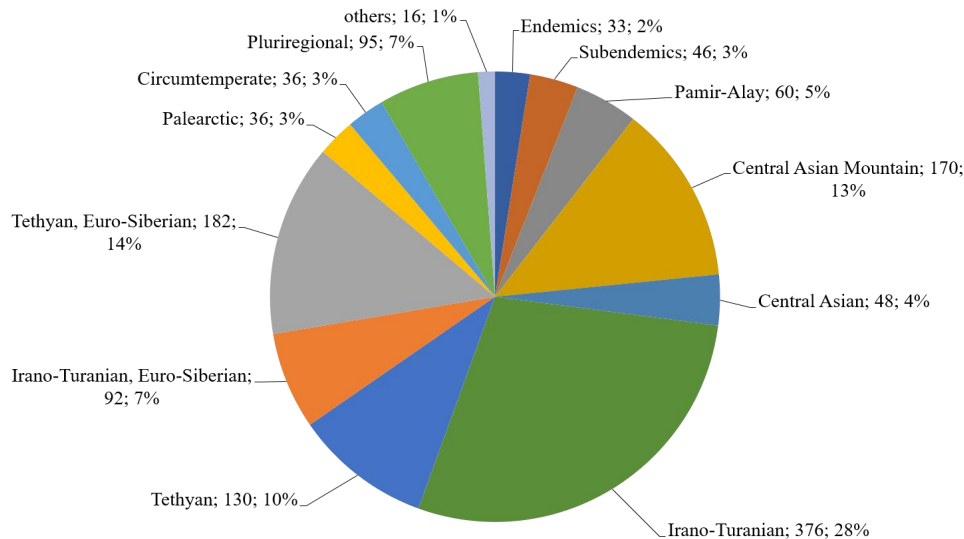


Fig. 5. Geographical elements in the flora of the Nuratau Mountains

In the ‘Flora of Central Asia: the Nuratau Mountains’ (Beshko 2020), 1,180 of 1,283 species were reported as native and 103 were considered to be naturalized aliens, based on the ‘Global Register of Introduced and Invasive Species – Uzbekistan. Version 1.3’ (Sennikov et al. 2018). The checklist of non-native species in the flora of Uzbekistan is now under revision. The number of surely alien species in the flora the Nuratau Mountains is seems to be significantly less than was indicated in earlier publications – 58 species (20 of them are introduced), 20 species are probably non-native, and the majority of the species (1242, 94.1%) are native. The non-native species are confined mainly to modified

habitats and are represented both by archaeophytes, which have an Oriental, Mediterranean, Caucasian or Hyrcanian origin, and neophytes with their primary range mainly being in the Americas. Alien species are listed in Table 3 in alphabetic order. Their native range shown in accordance with the Plants of the World Online website (POWO 2025), which does not match with the data published in other sources (CABI 2017, Makhkamov et al. 2024, Sennikov & Lazkov 2024). Thus, further special studies are required to reveal the status, times and pathways of introduction of alien plants, and to evaluate their impact on the natural ecosystems of the Nuratau Mountains.

Table 3. Alien taxa naturalized in the Nuratau Mountains.

Species	Family	Life form	Alien status	Native range (POWO)
<i>Abutilon theophrasti</i> Medik.	Malvaceae	annual	Probably non-native	East and Central Asia
<i>Ailanthus altissima</i> (Mill.) Swingle	Simaroubaceae	tree	Surely non-native (introduced)	China

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<i>Amaranthus albus</i> L.	Amaranthaceae	annual	Surely non-native	North America
<i>Amaranthus blitoides</i> S.Watson	Amaranthaceae	annual	Surely non-native	North America
<i>Amaranthus retroflexus</i> L.	Amaranthaceae	annual	Surely non-native	Mexico
<i>Apium graveolens</i> L.	Apiaceae	annual, biennial	Surely non-native	Europe, North Africa, West and Central Asia
<i>Avena sterilis</i> L.	Poaceae	annual	Probably non-native	Europe, Africa, West and Central Asia
<i>Brassica rapa</i> L.	Brassicaceae	annual	Surely non-native (introduced)	Mediterranean, West Asia
<i>Bryonia alba</i> L.	Cucurbitaceae	perennial	Surely non-native	Europe, Turkey, Central Asia
<i>Bryonia cretica</i> subsp. <i>dioica</i> (Jacq.) Tutin	Cucurbitaceae	perennial	Surely non-native	Europe, North Africa
<i>Camelina sativa</i> (L.) Crantz	Brassicaceae	annual	Surely non-native (introduced)	Europe, Asia Temperate
<i>Carthamus tinctorius</i> L.	Asteraceae	annual	Surely non-native (introduced)	Iran, Turkey
<i>Centaurea cyanus</i> L.	Asteraceae	annual	Surely non-native	Mediterranean
<i>Centaurea solstitialis</i> L.	Asteraceae	biennial	Probably non-native	Europe, North Africa, West and Central Asia
<i>Chenopodium murale</i> (L.) S.Fuentes, Uotila & Borsch	Amaranthaceae	annual	Probably non-native	Europe, Africa, South, West and Central Asia
<i>Chenopodium vulvaria</i> L.	Amaranthaceae	annual	Probably non-native	Europe, North Africa, West and Central Asia
<i>Convolvulus arvensis</i> L.	Convolvulaceae	perennial	Probably non-native	Eurasia, North Africa
<i>Cynoglossum creticum</i> Mill.	Boraginaceae	annual, biennial	Probably non-native	Mediterranean, West and Central Asia
<i>Cuscuta campestris</i> Yunck.	Convolvulaceae	annual, parasite	Surely non-native	North and South America
<i>Datura stramonium</i> L.	Solanaceae	annual	Surely non-native	Mexico
<i>Echinochloa crus-galli</i> (L.) P.Beauv.	Poaceae	annual	Probably non-native	Eurasia, Africa
<i>Erigeron canadensis</i> L.	Asteraceae	annual	Surely non-	North and South

			native	America
<i>Eruca sativa</i> Mill.	Brassicaceae	annual	Probably non-native	Mediterranean, West and Central Asia, China
<i>Euphorbia prostrata</i> Aiton	Euphorbiaceae	annual	Surely non-native	North and South America
<i>Fraxinus angustifolia</i> subsp. <i>syriaca</i> (Boiss.) Yalt.	Oleaceae	tree	Surely non-native (introduced)	West Asia
<i>Galinsoga parviflora</i> Cav.	Asteraceae	annual	Surely non-native	North and South America
<i>Gleditsia caspica</i> Desf.	Fabaceae	tree	Surely non-native (introduced)	Transcaucasus, Iran
<i>Gypsophila paniculata</i> L.	Caryophyllaceae	perennial	Surely non-native	Europe, Asia Temperate
<i>Gypsophila vaccaria</i> (L.) Sm.	Caryophyllaceae	annual	Surely non-native	Europe, North Africa, West Asia
<i>Hordeum vulgare</i> subsp. <i>distichon</i> (L.) Körn.	Poaceae	annual	Surely non-native	West Asia
<i>Hyoscyamus niger</i> L.	Solanaceae	biennial	Surely non-native	Mediterranean, West Asia
<i>Lactuca saligna</i> L.	Asteraceae	annual, biennial	Surely non-native	Europe, North Africa, West Asia
<i>Lathyrus sativus</i> L.	Fabaceae	annual	Surely non-native	Balkans
<i>Linum usitatissimum</i> L.	Linaceae	annual	Surely non-native (introduced)	Caucasus, West Asia
<i>Lolium multiflorum</i> Lam.	Poaceae	perennial	Surely non-native	Mediterranean, North Africa, Caucasus, West and Central Asia
<i>Lolium perenne</i> L.	Poaceae	perennial	Surely non-native	Europe, North Africa, West and Central Asia
<i>Lysimachia arvensis</i> (L.) U.Manns & Anderb.	Primulaceae	annual	Probably non-native	Europe, Africa, West and Central Asia
<i>Lysimachia foemina</i> (Mill.) U.Manns & Anderb.	Primulaceae	annual	Probably non-native	Europe, North Africa, West and Central Asia
<i>Malva neglecta</i> Wallr.	Malvaceae	perennial	Probably non-native	Europe, North Africa, West and Central Asia
<i>Malva sylvestris</i> L.	Malvaceae	biennial, perennial	Probably non-native	Europe, North Africa, West and Central Asia

<i>Medicago sativa</i> L.	Fabaceae	perennial	Probably non-native (introduced)	Mediterranean, Caucasus, West and Central Asia
<i>Morus alba</i> L.	Moraceae	tree	Surely non-native (introduced)	China
<i>Morus nigra</i> L.	Moraceae	tree	Surely non-native (introduced)	Iran
<i>Mutarda arvensis</i> (L.) D.A.German	Brassicaceae	annual	Surely non-native (introduced)	Temperate Eurasia, North Africa
<i>Orobanche aegyptiaca</i> Pers.	Orobanchaceae	perennial, parasite	Probably non-native	SE Europe, North Africa, West and Central Asia
<i>Paspalum distichum</i> L.	Poaceae	perennial	Surely non-native	North and South America
<i>Platycladus orientalis</i> (L.) Franco	Cupressaceae	tree	Surely non-native (introduced)	East Asia
<i>Portulaca oleracea</i> L.	Portulacaceae	annual	Surely non-native	Europe, Africa, West Asia
<i>Prunus amygdalus</i> Batsch	Rosaceae	tree	Surely non-native (introduced)	Transcaucasus
<i>Prunus cerasus</i> L.	Rosaceae	tree	Surely non-native (introduced)	Caucasus
<i>Prunus domestica</i> L.	Rosaceae	tree	Surely non-native (introduced)	Transcaucasus, Iran
<i>Pyrus communis</i> L.	Rosaceae	tree	Surely non-native (introduced)	Europe, Caucasus, Asia Minor
<i>Ranunculus sardous</i> Crantz	Ranunculaceae	perennial	Surely non-native	Europe, North Africa
<i>Reseda lutea</i> L.	Resedaceae	biennial, perennial	Surely non-native	Europe, North Africa, West and Central Asia
<i>Reseda luteola</i> L.	Resedaceae	biennial	Surely non-native	Europe, North Africa, West and Central Asia
<i>Rubus creticus</i> Tourn. ex L.	Rosaceae	shrub	Surely non-native (introduced)	Mediterranean, Caucasus, West Asia
<i>Secale cereale</i> L.	Poaceae	annual	Surely non-native (introduced)	Asia Minor

<i>Setaria verticillata</i> (L.) P.Beauv.	Poaceae	annual	Probably non-native	Tropical and Subtropical Old World
<i>Silybum marianum</i> (L.) Gaertn.	Asteraceae	annual, biennial	Surely non-native	Mediterranean, West and Central Asia, India
<i>Sinapis alba</i> L.	Brassicaceae	annual	Surely non-native (introduced)	Temperate Eurasia, North Africa
<i>Sisymbrium orientale</i> L.	Brassicaceae	annual	Surely non-native	Mediterranean, West Asia
<i>Solanum nigrum</i> L.	Solanaceae	annual	Surely non-native	Temperate Eurasia, Africa
<i>Solanum villosum</i> Mill.	Solanaceae	annual	Surely non-native	Europe, Africa, South, West and Central Asia
<i>Sonchus asper</i> (L.) Hill	Asteraceae	annual	Surely non-native	Temperate Eurasia, Africa
<i>Sonchus oleraceus</i> L.	Asteraceae	annual	Surely non-native	Europe, North Africa, West Asia
<i>Sorghum halepense</i> (L.) Pers.	Poaceae	perennial	Probably non-native	North Africa, West and Central Asia, Indo-China
<i>Stizolophus balsamita</i> (Lam.) K.Koch	Asteraceae	annual	Probably non-native	Caucasus, West and Central Asia
<i>Taraxacum officinale</i> F.H.Wigg.	Asteraceae	perennial	Surely non-native	Europe, Siberia
<i>Trachyspermum ammi</i> (L.) Sprague	Apiaceae	annual	Surely non-native	West and Central Asia
<i>Trifolium campestre</i> Schreb.	Fabaceae	annual	Surely non-native	Europe, Africa, West Asia
<i>Tripolium pannonicum</i> (Jacq.) Dobrocz.	Asteraceae	annual	Probably non-native	Temperate Eurasia, North Africa
<i>Ulmus glabra</i> Huds.	Ulmaceae	tree	Surely non-native (introduced)	Europe, Siberia, West Asia
<i>Ulmus laevis</i> Pall.	Ulmaceae	tree	Surely non-native (introduced)	Europe, Siberia, Asia Minor
<i>Ulmus pumila</i> L.	Ulmaceae	tree	Surely non-native (introduced)	Siberia, Central and East Asia
<i>Veronica persica</i> Poir.	Plantaginaceae	annual	Surely non-native	Iran, Caucasus
<i>Veronica polita</i> Fr.	Plantaginaceae	annual	Surely non-native	Europe, North Africa, West and Central Asia
<i>Xanthium orientale</i> L.	Asteraceae	annual	Surely non-	North and South

<i>Xanthium spinosum</i> L.	Asteraceae	annual	native Surely non- native	America North and South America

Plant species are distributed along vertical belts of the Nuratau Mountains as follows: 658 species are recorded from the plains (33 occur only on the plains; 161 – on the plain and in the foothills), 962 – in the

foothills (20 only in foothills), and 1108 – in the montane zone (335 only in the montane zone and 300 in both the montane zone and foothills); 471 species occur in all three altitudinal zones (Figure 6).

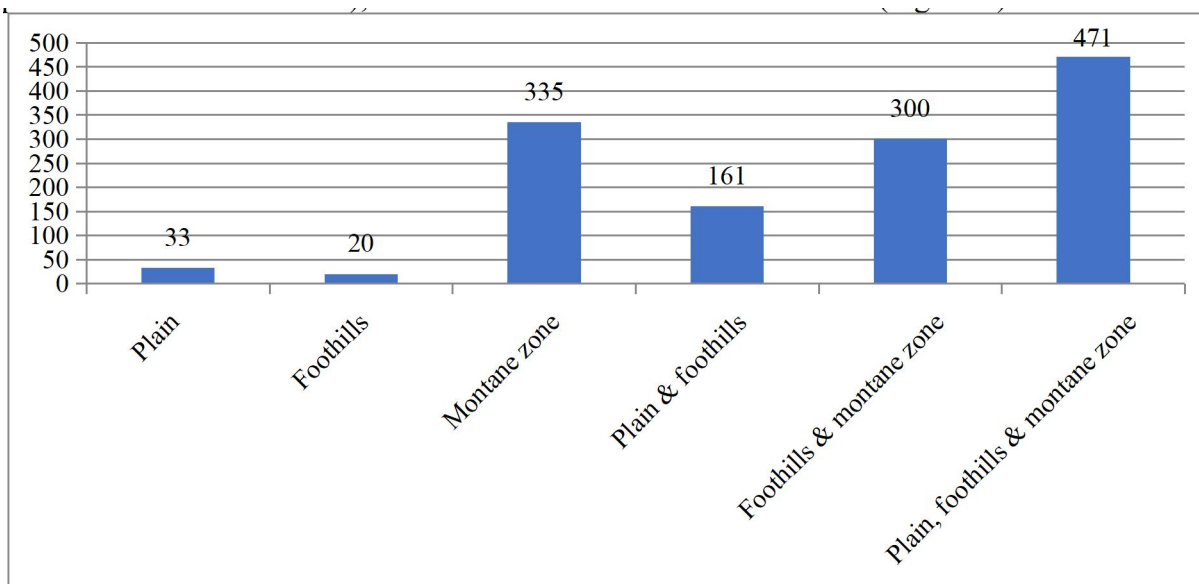


Fig. 6. Distribution of species in the flora of the Nuratau Mountains by altitudinal zones

The IUCN Habitats Classification Scheme (2012) consists of 18 habitat classes of the first level of a three-level hierarchical scheme, nine of them are represented within the study area: forest, shrubland, grassland, wetlands (inland), rocky areas, caves and

subterranean habitats, desert, artificial terrestrial and artificial aquatic. The distribution of the species in the flora of the Nuratau Mountains within these habitats is shown on the diagram below (Figure 7).

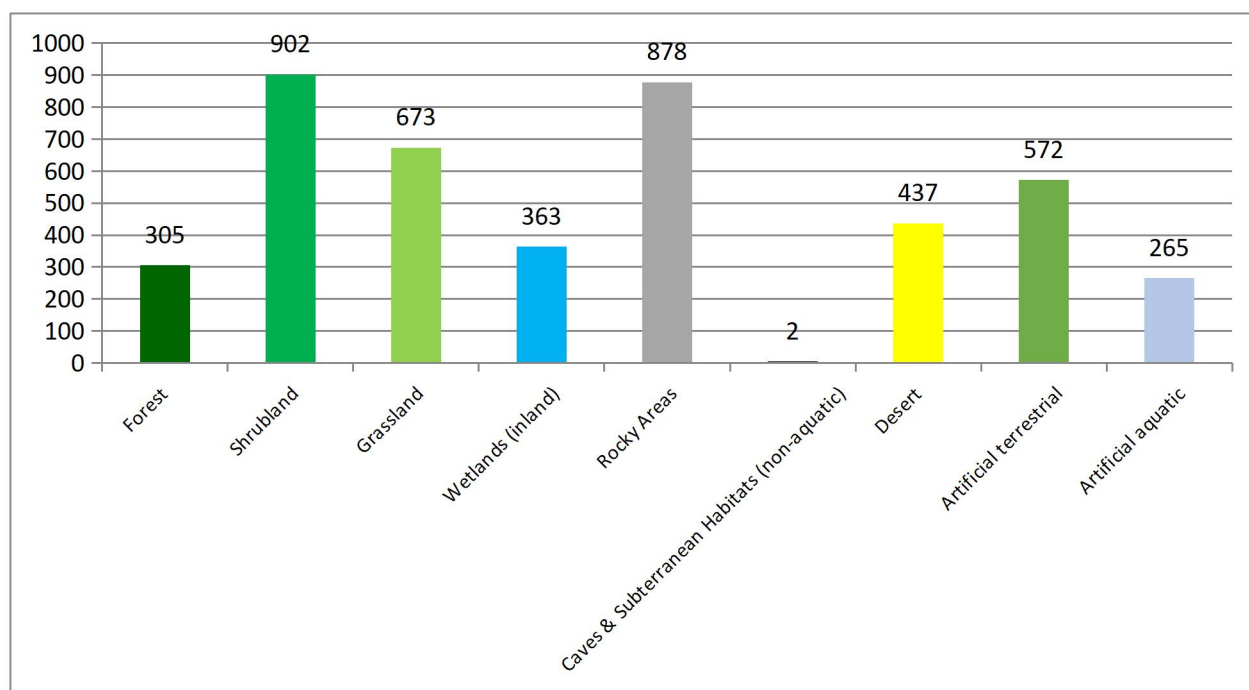


Fig. 7. Distribution of species in the flora of the Nuratau Mountains by main types of habitats

In the Nuratau Mountains, forests are represented by mesophilous deciduous riparian gallery woodlands, including poplar-willow stands and relict walnut-fruit forests in which are many introduced species cultivated since ancient times, such as *Morus alba* (Figure 8). This habitat occupies a rather small and rapidly decreasing area. The evergreen juniper woodland composed of *Juniperus seravschanica*, which is a dominant zonal

vegetation type in the montane zone of the western Pamir-Alay and western Tien Shan, had been cut almost entirely in the Nuratau Mountains by the beginning of the 20th century and replaced with shrubland and grassland. Nowadays, only a few small groups of juniper trees are extant in some remote places in the central part of the Nuratau and Aktau ranges. In total, 305 plant species are recorded for this habitat type (Figure 7).



Fig. 8. Riparian gallery forest in the Nuratau Range: A – mixed walnut-willow stands in the valley Madjrumsey; B – willow stands in the gorge Ustuksay; walnut stands in the valley Hayatsay.

Shrubland is represented by open xerophilous scrub, so-called ‘shiblyak’, dominated by of spiny almond (*Prunus spinosissima*), Bukhara almond (*Prunus bucharica*), *Lonicera nummulariifolia*, *Acer semenovii*, *Pistacia vera* and species of *Atraphaxis*, *Cotoneaster*, *Crataegus* and *Rosa*,

with *Zygophyllum atriplicoides* in the westernmost part of the Nuratau Mountains. Tamarisk scrub, developed along the valleys of some mountain streams and Lake Tuzkan, also belongs to this habitat type (Figure 9). This is the most species-rich habitat type with 902 species (Figure 7).

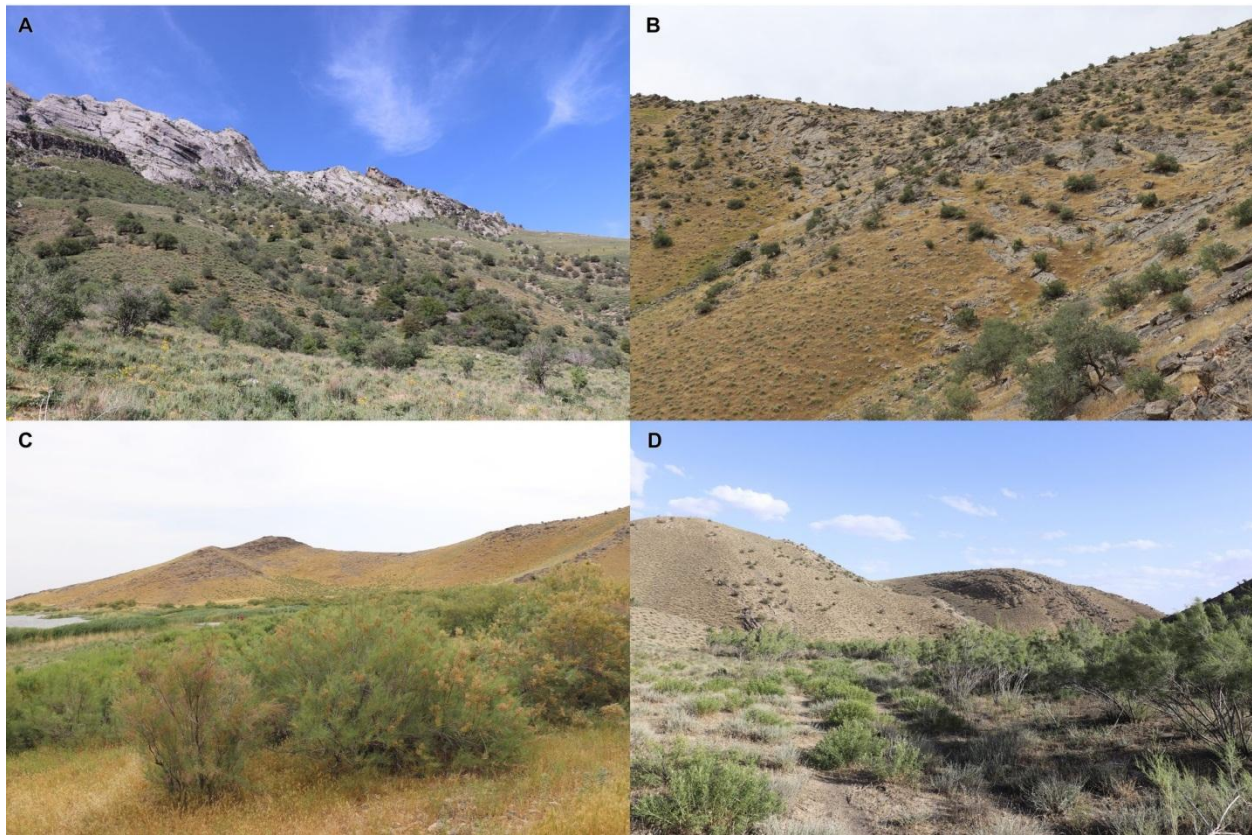


Fig. 9. Shrublands in the Nuratau Mountains: A – mixed shrubland (*Prunus bucharica*, *Lonicera nummulariifolia*, *Cotoneaster* sp.) in the montane zone of the Nuratau Range; B – sparse xerophytic shrubland composed by spiny almond (*Prunus spinosissima*) in the foothills; C – tamarisk scrub on the shore of the salt lake Tuzkan, at the northern piedmonts of the Pistalitau Range; D – tamarisk scrub along the valley of the seasonal stream, Karatau Range.

Grasslands are represented by various plant communities dominated by grasses, other herbs and subshrubs; shrubs are absent or very sparsely distributed (Figure 10). The main formations of grasslands are so-called savannoids – communities dominated by tall grasses (*Trichopyrum intermedium* or *Hordeum bulbosum*) and tall herbs (species of *Ferula* and *Prangos*), forb-sagebrush and fescue-sagebrush communities dominated by *Artemisia*

tenuisecta, *Festuca valesiaca* and *Poa relaxa*, subshrub communities (so-called phryganoids) dominated by *Galatella grimmii*, *Lepidolopha komarovii* and *L. nuratavica*, communities of prickly cushion-like plants (so-called mountain xerophytes) dominated by *Astragalus* sect. *Macrothrix* and representatives of *Acantholimon* and *Acanthophyllum*. This habitat supports 673 plant species in the Nuratau Mountains (Figure 7).



Fig. 10. Grasslands in the Nuratau Mountains.

Wetlands in the study area are various and represented by permanent and seasonal

small rivers and streams, waterfalls, mountain fens and swamps, freshwater springs,

freshwater and saline lakes and pools, etc. (Figure 11). Wetlands cover a very small area in the Nuratau Mountains, but support

significant plant diversity (363 species) (Figure 7).

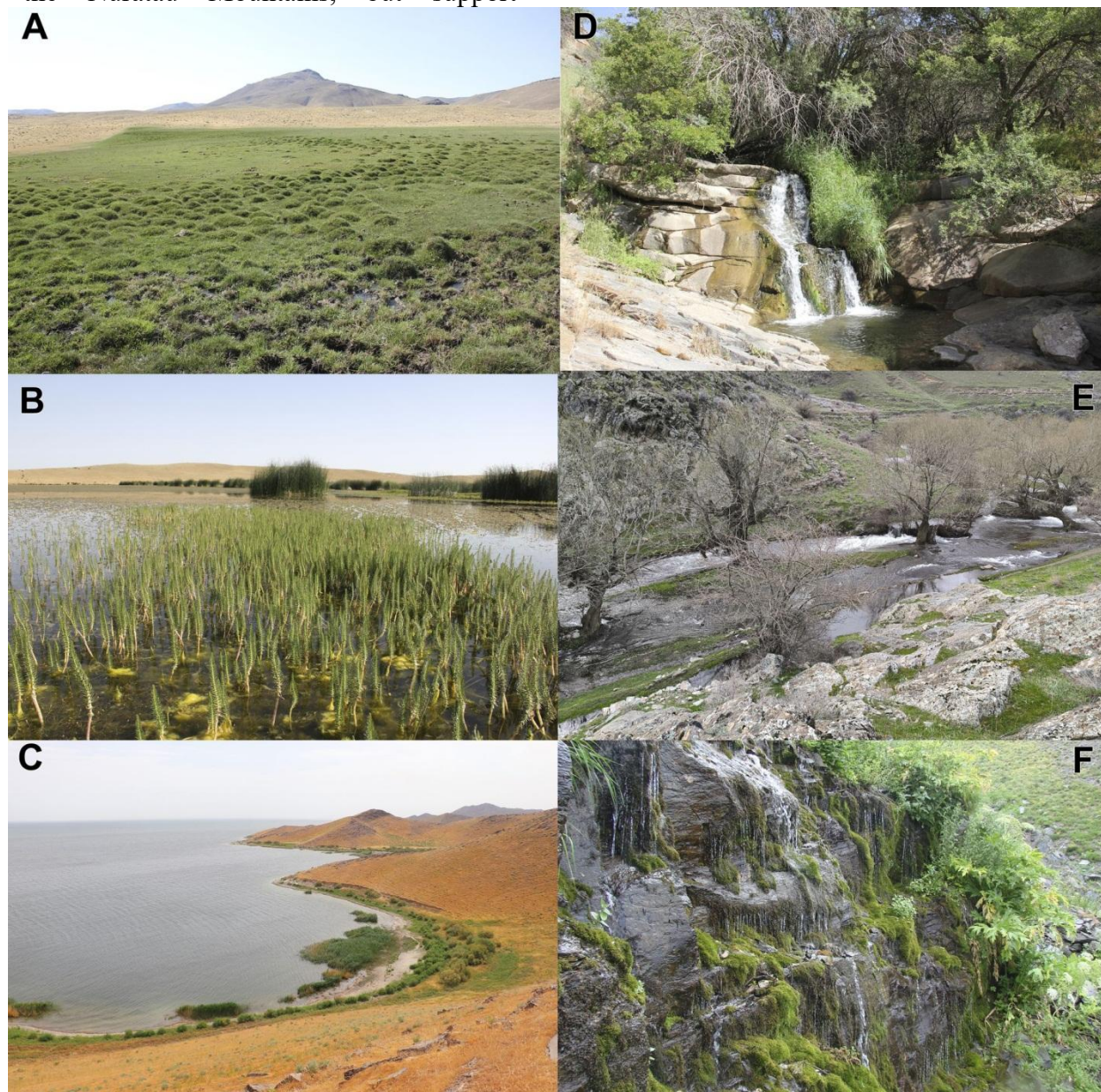


Fig. 11. Wetlands in the Nuratau Mountains: A – mountain swamp in the central part of the Nuratau Range; B – freshwater Lake Fazilman; C – reeds along shore of salty Lake Tuzkan, at northern piedmonts of the Pistalitau Range; D, E – mountain stream; F – freshwater spring.

Rocky areas are represented by shale, limestone, granite, granodiorite, marble, dolomite and sandstone rocks, screes and stony slopes; this habitat is typical of the Nuratau Mountains (Figure 12). This is the second most

species-rich category of habitats (878 species) (Figure 7). Subterranean habitats are represented by several small caves and are almost devoid of plants; only two species of ferns are recorded for this habitat.

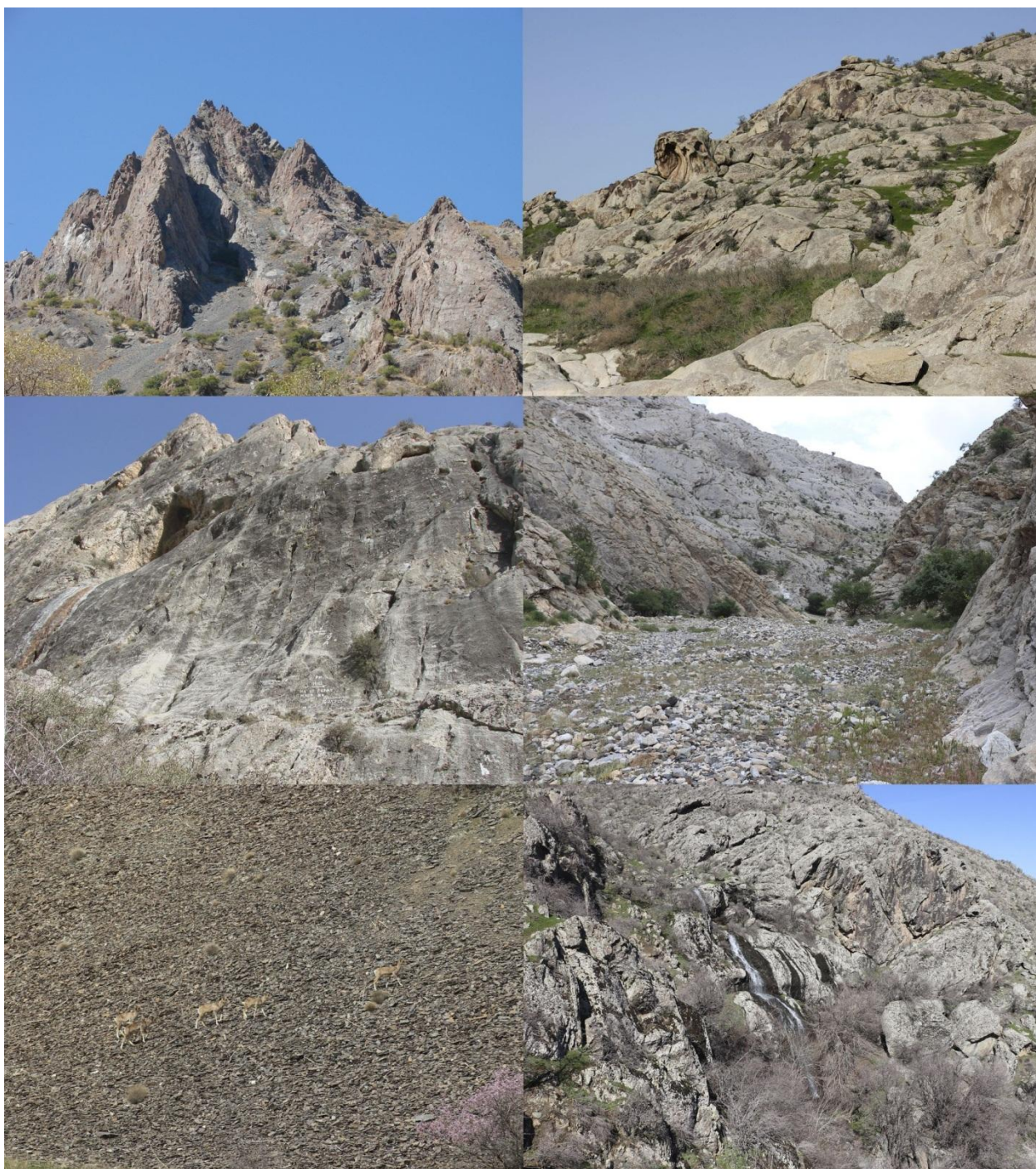


Fig. 12. Rocky areas.

Desert is represented on the arid piedmont plain of the Nuratau Mountains and is covered mainly by ephemeroid-sagebrush plant communities dominated by *Artemisia diffusa*, *Poa bulbosa* and *Carex pachystylis*, often associated with xerophytic forbs (*Alhagi kirghisorum*, *Cousinia resinosa*), *Iris songarica*, *Ferula foetida* and species typical for the

Kyzylkum Desert (especially, at the western extremity of the Nuratau Mountains), such as *Astragalus villosissimus*, *Carex physodes*, *Convolvulus hamadae*, *Haloxylon ammodendron*, *Oreosalsola arbusculiformis* and *Xylosalsola arbuscula* (Figure 13). The piedmont desert of the Nuratau Mountains supports 437 plant species (Figure 7).



Fig. 13. Piedmont desert.

Artificial terrestrial habitats are represented by several small towns, numerous

villages, gardens, vineyards, rainfed and irrigated arable lands, fallow lands covered

with secondary grasslands and used as pastures, ruderal places, quarries, and other modified terrestrial habitats (Figure 14). The floristic

diversity of artificial terrestrial habitats accounts for 572 species (Figure 7).

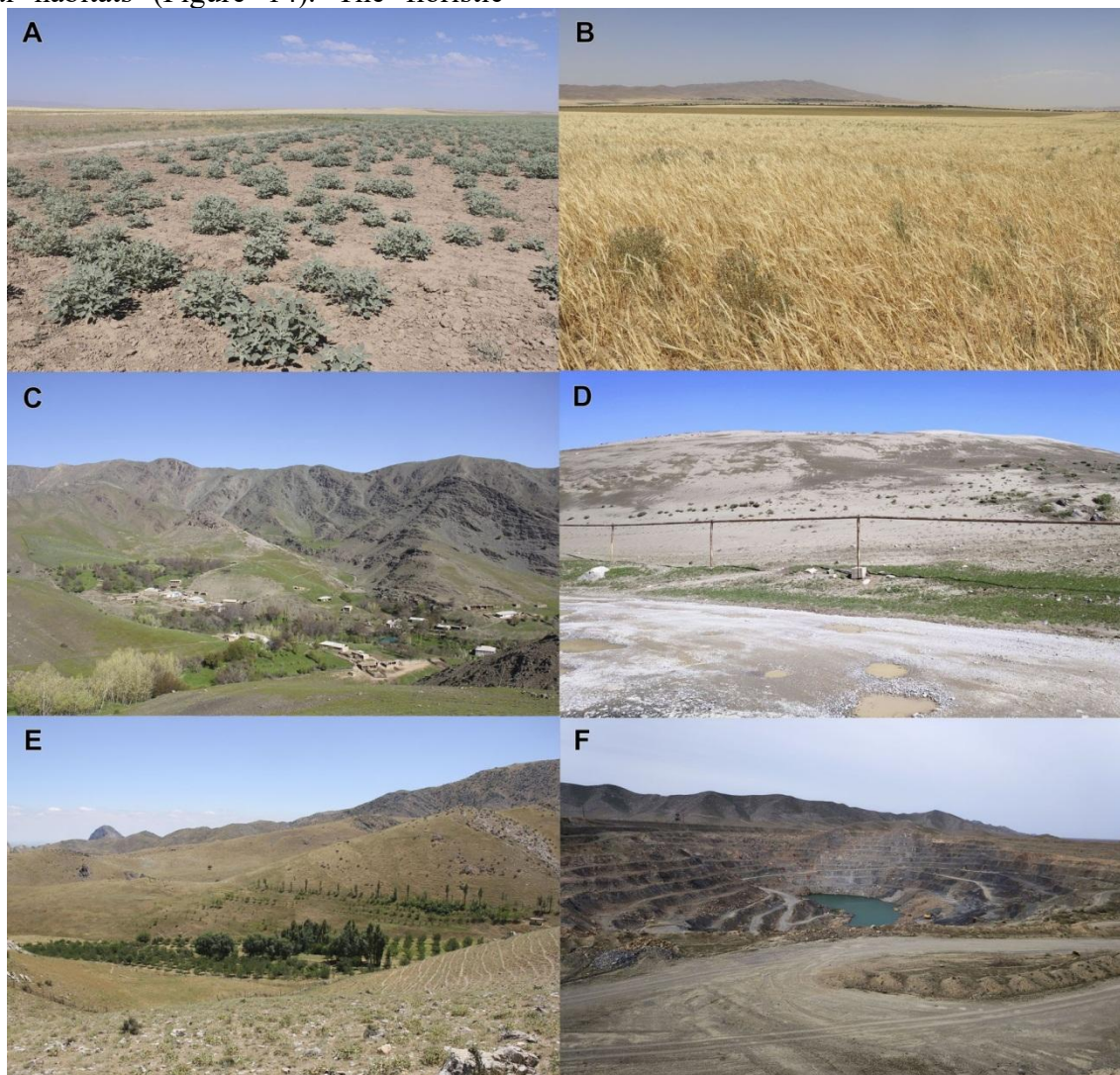


Fig. 14. Artificial terrestrial habitats: A – fallow land with weedy vegetation, B – non-irrigated croplands, C – mountain village, D – mine dumps near the village Koytash, E – rural garden, F – Uchkulach open pit.

Artificial aquatic habitats are represented by canals, irrigation channels and

ponds (Figure 15). This type of habitats supports 265 plant species (Figure 7).



Fig. 15. Artificial aquatic habitats: irrigation channels.

As for the environmental status of the representatives of the flora, 47 species are listed in the Red Data Book of Uzbekistan (2019, currently under revision) including 12 category 1 species (endangered), 17 category 2 species (rare) and 18 category 3 species (vulnerable, declining) (Table 4, Figure 18). The global status of the IUCN Red List is as follows: one

introduced species (*Gleditsia caspica* Desf.) belongs to the category Endangered (EN), 4 species are assessed as Vulnerable (VU), 6 as Near Threatened (NT), 215 as Least Concern (LC), and 18 as Data Deficient (DD). The remaining 1079 species were not evaluated (NE), including 33 endemic taxa listed in Table 2.

Table 4. Threatened species of the flora of the Nuratau Mountains listed in the Red Data Book of Uzbekistan and/or in the IUCN Red List.

Species	Family	Life form	Conservation status	
			National (UzbRDB)	Global (IUCN RL)
<i>Acantholimon nuratavicum</i> Zakirov	Plumbaginaceae	subshrub	2	NE
<i>Acantholimon subavenaceum</i> Lincz.	Plumbaginaceae	subshrub	2	NE
<i>Acanthophyllum cyrtostegium</i> Vved.	Caryophyllaceae	subshrub	2	NE
<i>Acanthophyllum gypsophiloides</i> Regel	Caryophyllaceae	subshrub	3	NE
<i>Akhanian canescens</i> (Moq.) Sukhor.	Amaranthaceae	subshrub	3	NE
<i>Allium eremoprasum</i> Vved.	Amaryllidaceae	perennial	2	NE
<i>Allium isakulii</i> R.M.Fritsch & F.O.Khass.	Amaryllidaceae	perennial	1	NE
<i>Allium praemixtum</i> Vved.	Amaryllidaceae	perennial	1	DD

<i>Arctium haesitabundum</i> (Juz.) S.Lopez, Romasch., Susanna & N.Garcia	Asteraceae	perennial	1	NE
<i>Arctium pallidivirens</i> (Kult.) S.Lopez, Romanschenko, Susanna & N.Garcia	Asteraceae	perennial	2	NE
<i>Astragalus knorringianus</i> Boriss.	Fabaceae	perennial	2	NE
<i>Astragalus leptophysus</i> Vved.	Fabaceae	perennial	2	NE
<i>Astragalus nuratensis</i> Popov	Fabaceae	perennial	1	NE
<i>Autumnalia innopinata</i> Pimenov	Apiaceae	perennial	1	NE
<i>Cicer grande</i> (Popov) Korotkova	Fabaceae	perennial	1	NE
<i>Colchicum robustum</i> (Bunge) Stef.	Colchicaceae	perennial	3	NE
<i>Cousinia dshisakensis</i> Kult.	Asteraceae	biennial	3	NE
<i>Cousinia pseudolanata</i> Popov ex Tscherneva	Asteraceae	perennial	1	NE
<i>Eremurus nuratavicus</i> Khohkr.	Asphodelaceae	perennial	1	NE
<i>Eremurus robustus</i> Regel	Asphodelaceae	perennial	3	LC
<i>Ferula helenae</i> Rakhmankulov & Melibaev	Apiaceae	perennial	2	NE
<i>Ferula kyzylkumica</i> Korovin	Apiaceae	perennial	3	NE
<i>Ferula sumbul</i> (Kauffm.) Hook.f.	Apiaceae	perennial	3	NE
<i>Fraxinus sogdiana</i> Bunge	Oleaceae	tree	-	NT
<i>Helichrysum nuratavicum</i> Krasch.	Asteraceae	perennial	2	NE
<i>Iris hippolyti</i> (Vved.) Kamelin	Iridaceae	perennial	1	NE
<i>Jurinea zakirovii</i> Iljin	Asteraceae	perennial	1	NE
<i>Lagochilus inebrians</i> Bunge	Lamiaceae	subshrub	3	NE
<i>Lagochilus olgae</i> Kamelin	Lamiaceae	subshrub	2	NE
<i>Lagochilus proskorjakovii</i> Ikramov	Lamiaceae	subshrub	1	NE
<i>Lappula nuratavica</i> Nabiev & Zakirov	Boraginaceae	perennial	2	NE
<i>Lepidium olgae</i> (R.M.Vinogr.) Al-Shehbaz & Mumm.	Brassicaceae	perennial	2	NE
<i>Lepidolopha nuratavica</i> Krasch.	Asteraceae	subshrub	3	NE
<i>Malus sieversii</i> (Ledeb.) M.Roem.	Rosaceae	tree	-	VU
<i>Oxytropis pseudorosea</i> Filim.	Fabaceae	perennial	2	NE
<i>Parrya sarawschanica</i> (Regel & Schmalh.) D.A.German & Al-Shehbaz	Brassicaceae	biennial	2	NE
<i>Phlomoides anisochila</i> (Pazij & Vved.) Salmaki	Lamiaceae	perennial	2	NE
<i>Phlomis nubilans</i> Zakirov	Lamiaceae	perennial	3	NE
<i>Pistacia vera</i> L.	Anacardiaceae	tree, shrub	-	NT
<i>Platanus orientalis</i> L.	Platanaceae	tree	3	DD
<i>Prunus bucharica</i> (Korsh.) B.Fedtsch. ex Rehder	Rosaceae	tree, shrub	-	VU
<i>Salvia submutica</i> Botsch. & Vved.	Lamiaceae	perennial	2	NE
<i>Seseli turbinatum</i> Korovin	Apiaceae	perennial	1	NE
<i>Silene paranadena</i> Bondarenko & Vved.	Caryophyllaceae	perennial	2	NE
<i>Stipa karataviensis</i> Roshev.	Poaceae	perennial	3	NE
<i>Tulipa affinis</i> Botschantz.	Liliaceae	perennial	3	VU
<i>Tulipa korolkowii</i> Regel	Liliaceae	perennial	3	NT

<i>Tulipa lehmanniana</i> Merckl.	Liliaceae	perennial	3	NT
<i>Tulipa micheliana</i> Hoog	Liliaceae	perennial	3	VU
<i>Vicoa krascheninnikovii</i> Kamelin	Asteraceae	perennial	3	NE
<i>Vitis vinifera</i> L.	Vitaceae	shrub	3	LC



Fig. 16. Photo gallery of endemic species: A – *Acantholimon nuratavicum* Zakirov, B – *Acantholimon subavenaceum* Lincz., C – *Acantholimon zakirovii* Beshko, D – *Allium aktauense* F.O.Khass. & Esankulov, E – *Allium svetlanae* Vved. ex Filim., F – *Arctium pallidivirens* (Kult.) S.Lopez, Romanschenko, Susanna & N.Garcia, G – *Astragalus nuratensis* Popov, H – *Autumnalia innopinata* Pimenov, I – *Cousinia botschantzevii* Juz. ex Tscherneva, J – *Eremurus nuratavicus* Khohkr., K – *Dracocephalum nuratavicum* Adylov, L – *Iris hippolyti* (Vved.) Kamelin, M – *Lagochilus olgae* Kamelin, N – *Lagochilus proskorjakovii* Ikramov.



Fig. 17. Photo gallery of endemic species: A – *Dianthus helenae* Vved., B – *Helichrysum nuratavicum* Krasch., C – *Jurinea zakirovii* Iljin, D – *Lepidium olgae* (R.M.Vinogr.) Al-Shehbaz & Mumm., E – *Lappula nuratavica* Nabiev & Zakirov, F – *Oxytropis pseudorosea* Filim., G – *Phlomoides anisochila* (Pazij & Vved.) Salmaki, H – *Phlomis nubilans* Zakirov, I – *Salvia submutica* Botsch. & Vved.



Fig. 18. Photo gallery of threatened species of the flora of the Nuratau Mountains: A – *Allium eremoprasum* Vved., B – *Allium isakulii* R.M.Fritsch & F.O.Khass., C – *Allium praemixtum* Vved., D – *Astragalus knorringianus* Boriss., E – *Astragalus leptophysus* Vved., F – *Lagochilus inebrians* Bunge, G – *Lepidolopha nuratavica* Krasch., H – *Parrya sarawschanica* (Regel & Schmalh.) D.A.German & Al-Shehbaz, I – *Tulipa affinis* Botschantz., J – *Tulipa korolkowii* Regel, K – *Tulipa micheliana* Hoog.

The detailed analysis of the flora of the Nuratau Mountains will follow in a separate publication in the near future.

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APPENDIX. AN ANNOTATED CHECKLIST OF THE FLORA OF THE NURATAU MOUNTAINS

I. PTERIDOPHYTES (FERNS AND FERN ALLIES)

Equisetaceae Michx. ex DC.

Equisetum L.

1. *Equisetum ramosissimum* Desf., Fl. Atlant. 2: 398 (1799). Perennial, helophyte. Circumtemperate. Wetlands (inland), Artificial aquatic. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Savryuksay, 20.07.1931, *Kobranova 151* (TASH, LE); Nakrutsay, near the village Chalakarga, 23.07.1940, *Gomolitsky, Dolgikh 120* (TASH); upper reaches of Ustuksay, 29.05.1964, *Zuckerwanik 365* (TASH); Majrum, 18.06.1968, *Mambetjumaev 208* (TASH); Sentobsay, 24.06.1971, *Kamelin, Botschantzev* (LE); Nuratau Nature Reserve, Madjrumsay, 07.07.1991, *Beshko, Yakovenko* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Bolosay, 01.07.2008, *Beshko* (www.plantarium.ru); Samarkand Region, Koshrabad District, Ustuksay, 06.07.2024, *Beshko* (www.inaturalist.org). **I-4-b Aktau Range:** 15 km east of the village Tikalik, 08.07.1932, *Knorring, Emme 43* (MW). **I-4-b Khobduntau Range:** Gumsay, 13.06.1929, *Kudrjashev* (TASH); Gumsay, 3 km from the village, 27.06.1929, *Kudrjashev* (TASH); Gumsay, 20.06.2015, *Beshko, Batashov* (TASH).

Pteridaceae E.D.M.Kirchn.

Adiantum L.

2. *Adiantum capillus-veneris* L., Sp. Pl. 2: 1096 (1753). Perennial, hemicryptophyte. Pluriregional. Wetlands (inland), Caves & Subterranean Habitats (non-aquatic). Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** the gorge Gurdara, surroundings of the village Sarymsak, 23.06.1971, *Kamelin, Botschantzev* (LE); Nuratau Nature Reserve, Mt. Parrandoz, a cave, 17.06.1990, *Beshko, Yakovenko 90/003* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Gurdara, 04.04.2022, *Beshko* (www.plantarium.ru, www.inaturalist.org).

Oeosporangium Vis.

3. *Oeosporangium persicum* (Bory) Vis., Mem. Reale Ist. Veneto Sci. 16: 44 (1872) (*Cheilanthes persica* (Bory) Mett. ex Kuhn.). Perennial, hemicryptophyte. Tethyan. Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Sob pass, 04.08.1940, *Gomolitsky, Dolgikh, Arkhireev 280* (TASH); Sentobsay, 24.06.1971, *Kamelin, Botschantzev* (LE). **I-4-b Aktau Range:** Bakhiltau, 10.05.2013, *Beshko* (TASH); northern slope of the Aktau Range, Ambarsay, 18.05.2024, *Beshko* (www.plantarium.ru, www.inaturalist.org).

Aspleniaceae Newman

Asplenium L.

4. *Asplenium ruta-muraria* L., Sp. Pl. 2: 1081 (1753). Perennial, hemicryptophyte. Circumtemperate. Rocky areas, Caves & Subterranean Habitats (non-aquatic). Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Nature Reserve, Mt. Parrandoz, 27.07.2016, *Beshko* (TASH). **I-4-b Aktau Range:** Petyrsay, 14.07.1972, *Kamelin* (LE).

Cystopteris Berh.

5. *Cystopteris fragilis* (L.) Bernh., Schrad. Neu. Journ. Bot. 1(2): 26 (1805). Perennial, hemicryptophyte. Pluriregional. Shrubland, Wetlands (inland), Rocky areas. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Nature Reserve, Tykchasay, 03.06.1981, *Mukhina 81/117* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Karysay, Pubsay, 06.06.1990, *Beshko, Yakovenko 90/001, 90/002* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Mt. Parrandoz, 21.05.2008, *Beshko* (www.plantarium.ru); Jizzakh Region, Farish District, Hayatsay, 40.499115° N 66.73163° E, 17.09.2023, *Beshko* (www.inaturalist.org); Nuratau Nature Reserve, Mt. Parrandoz, 40.4871° N 66.776373° E, 02.05.2025, *Beshko* (www.inaturalist.org). **I-4-b Aktau Range:** Bakhiltai, 10.05.2013, *Beshko* (TASH).

II. GYMNOSPERMAE (GYMNOSPERMS)

Ephedraceae Dumort.

Ephedra L.

6. *Ephedra botschantzevii* Pachom., Opred. Rast. Sred. Azii 1: 199 (1968). Shrub, phanerophyte. Irano-Turanian. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, north slope, 28.06.1971, *Botschantzev, Kamelin 258* (LE); Nuratau Nature Reserve, Hayatsay, 1400 m a.s.l., 09.08.1978, *Korshunov* (TASH); Nuratau Nature Reserve, Mt. Hayatbashi, 08.09.2010, *Beshko* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Madjrumsay, Shokhchinon, 30.06.2011, *Beshko* (herbarium of the Nuratau Nature Reserve).

7. *Ephedra ciliata* Fisch. & C.A.Mey., Bull. Cl. Phys.-Math. Acad. Imp. Sci. Saint-Petersbourg 5: 36 (1845) (*Ephedra kokanica* Regel). Shrub, chamaephyte. Irano-Turanian, Saharo-Arabian. Shrubland, Rocky areas. Foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, 3–4 km SE of the village Sulukli, 02.08.1937, *Demurina 754* (TASH); surroundings of the village Tutli, 29.05.1940, *Gomolitsky, Dolgikh 79* (TASH); upper reaches of Sentobsay, 02.08.1940, *Gomolitsky, Dolgikh 264* (TASH); between the valleys Sentob and Katta-Ej, 27.05.1956, *Zaprometova* (TASH); Mt. Piyazli, 21.07.1975, *Baranova, Kljuykov, Pimenov 759* (MW); Sentobsay, 23.06.1983, *Bulgakova 25, 39* (TASH); Sobsay, 31.03.2018, *Beshko* (TASH, www.plantarium.ru, www.inaturalist.org). **I-4-b Aktau Range:** dry valley 10 km west of the village Chuya, 10.06.2018, *Beshko, Rakhimova, Sharipova* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 08.04.1911, *Dimo, Sprygin, Shulga 882* (TASH).

8. *Ephedra equisetina* Bunge, Beitr. Fl. Russl.: 324 (1852). Shrub, phanerophyte. Irano-Turanian. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Nature Reserve, Hayatsay, 02.06.1981, *Mukhina 81013* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 02.06.1983, *Petrochenko 83001* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Madjrumsay, 04.06.1996, *Beshko 96103* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 14.07.2006, *Beshko 06/271, 06272* (herbarium of the Nuratau Nature Reserve), Nuratau Nature Reserve, Madjrumsay, 23.03.2024, *Beshko* (www.plantarium.ru, www.inaturalist.org). **I-4-b Aktau Range:** 2 north of the village Khanbashi 2nd, 05.07.1932, *Knorring, Emme 14* (MW); Takylak (Tikalik) pass, 03.12.1957, *Momotov, Li 224* (TASH); dry valley 10 km west of the village Chuya, 10.06.2018, *Beshko, Rakhimova, Sharipova* (TASH).

9. *Ephedra intermedia* Schrenk & C.A.Mey., Bull. Cl. Phys.-Math. Acad. Imp. Sci. Saint-Petersbourg, 5: 35 (1845). Shrub, chamaephyte. Irano-Turanian. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, valley

Arbankul, 29.05.1940, *Gomolitsky, Dolgikh* 89 (TASH); Alaysay, 17.01.1956, *Zaprometova* 288 (TASH); Pistalisay, 08.05.1958, *Li, Zakirov* 423 (TASH); Gatchasay, 08.06.1958, *Zaprometova* (TASH); Mts. Koytash, north slope, 28.06.1971, *Botschantzev, Kamelin* 256 (TASH, LE); Mts. Koytash, south slope, surroundings of the village Koytash, 28.06.1971, *Botschantzev, Kamelin* 581 (TASH, LE); Nuratau Nature Reserve, Karysay, 27.06.2011, *Beshko* (www.plantarium.ru); upper reaches of Ustuksay, 10.06.2013, *Beshko* (www.plantarium.ru); upper reaches of Ustuksay, 04.07.2024, *Beshko* (www.plantarium.ru, www.inaturalist.org). **I-4-b Khobduntau Range:** Khobduntau, 13.06.1929, *Kudrjashev* (TASH). **I-4-b Karatau Range:** Karakarga pass, 24.04.1987, *Pimenov, Vassiljeva* 52 (MW). **I-4-b Mt. Kokcha:** Mt. Kokcha, 14.08.1934, *Sakhobiddinov, Neyumina* 867 (TASH); 23.04.1955, *Momotov, Li* 25 (TASH); 21.04.1964, *Adylov, Shorakhimov* 2317 (TASH).

10. *Ephedra regeliana* Florin, Kongl. Svenska Vetensk. Acad. Handl., ser. 3, 12(1): 17 (1933). Dwarf shrub, chamaephyte. Irano-Turanian. Shrubland, Grassland, Rocky areas. Montane zone. Rare. Native.

Occurrence records: I-4-a Nuratau Range: Mts. Koytash, 28.05.1941, *Lepeschkin* (TASH).

11. *Ephedra strobilacea* Bunge, Beitr. Fl. Russl.: 323 (1852). Shrub, phanerophyte. Irano-Turanian. Desert. Plain. Rare. Native. **Occurrence records: I-4-b Aktau Range:** 3 km north-east of the well Taldy, 09.06.1955, *Momotov* 372 (TASH).

Cupressaceae Gray

Juniperus L.

12. *Juniperus seravschanica* Kom., Bot. Zhurn. S.S.S.R. 17: 481 (1932). Tree, phanerophyte. Irano-Turanian. Forest, Shrubland, Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Nakrutsay (Beshbarmaksay), 19.06.1992, *Beshko* 92/314 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Tykchasay, 11.05.2010, *Beshko* (www.plantarium.ru, www.inaturalist.org); Nuratau Nature Reserve, Madjrumsay, 30.06.2011, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, upper reaches of Madjrumsay, Devgan, 25.05.2025, *Beshko* (TASH). **I-4-b Aktau Range:** valley Ingichka, marble cliffs, 26.06.1971, *Botschantzev, Kamelin* 491 (LE).

Platycladus Spach

13. *Platycladus orientalis* (L.) Franco. Tree, phanerophyte. Oriental. Forest, Artificial terrestrial. Montane zone. IUCN RL (NT). Rare. Alien (introduced). Only two locations known: a giant “holy” tree ca. 8 m in diam. and ca. 2000 years old, the valley Madjrum, and 3 old age specimens near the village Archa-ata on the southern slope. Trees bear fruits, but young growth is absent. **Occurrence records: I-4-a Nuratau Range:** Nuratau Nature Reserve, Madjrumsay, 16.08.1980, *Mukhina* 80/001, 80/002, 80/003 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Madjrumsay, 22.05.2000, *Beshko* 00/023 (herbarium of the Nuratau Nature Reserve); Madjrumsay, 26.03.2011, *Davkaev* (www.plantarium.ru).

III. ANGIOSPERMAE (ANGIOSPERMS)

LILIOPSIDA (MONOCOTS)

Araceae Juss.

Arum L.

14. *Arum korolkowii* Regel, Trudy Imp. S. Peterburgsk. Bot. Sada 2: 407 (1873). Perennial, geophyte. Irano-Turanian. Forest, Shrubland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Mt. Mirishkar, 05.05.1913, *Korovin* 235, 310 (TASH); Nuratau

Nature Reserve, 04.05.1981, *Mukhina* (TASH); Nuratau Nature Reserve, Bolosay, 08.05.1992, *Beshko* 92/436 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Tykchasay, Mt. Parrandoz, 11.05.2010, *Beshko* 10/037 (herbarium of the Nuratau Nature Reserve, www.inaturalist.org); Nuratau Nature Reserve, Hayatsay, 08.05.2014, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Madjrumsay, 40.57752° N 66.70896° E, 23.03.2024, *Beshko* (www.inaturalist.org). **I-4-b Aktau Range:** 5 km west of the village Chuya, 14.07.1932, *Knorring, Emme* 72 (MW); dry valley 10 km west of the village Chuya, 10.06.2018, *Beshko, Rakhimova, Sharipova* (TASH); Ambarsay, 18.05.2024, *Beshko, Volis, Azimov, Sindirov* (TASH). **I-4-b Khobduntau Range:** valley Bodbod, 20.06.1929, *Kudrjashev* (TASH).

Lemna L.

15. *Lemna minor* L., Sp. Pl.: 970 (1753). Perennial, hydrophyte. Pluriregional. Wetlands (inland), Artificial aquatic. Plain, foothills. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** valley of the river Sanzar, Tamerlane's gorge, 26.09.1934, *Gomolitsky* 416 (TASH).

Alismataceae Vent.

Alisma L.

16. *Alisma gramineum* Lej., Fl. Spa 1: 175 (1811). Perennial, hydrophyte. Circumtemperate. Wetlands (inland). Montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** northern shore of Fazilman Lake, 40.552165° N, 66.588563° E, 1650 m, 01.07.2024, *Volkova, Dadykin* (IBIW 078474–078475); Fazilman Lake, 05.07.2024, *Beshko* (TASH, www.inaturalist.org).

17. *Alisma plantago-aquatica* L., Sp. Pl.: 342 (1753). Perennial, hydrophyte. Pluriregional. Wetlands (inland), Artificial aquatic. Foothills, montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** Fazilman Lake, 08.06.2013, *Beshko* (TASH). **I-4-b Aktau Range:** Payaryk District, Collective Farm Kazakov, 1954, *Makhmudov* (herbarium of the Samarkand University).

Juncaginaceae Rich.

Triglochin L.

18. *Triglochin palustris* L., Sp. Pl.: 338 (1753). Perennial, hydrophyte. Pluriregional. Wetlands (inland). Foothills, montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** Dzhingilsay, 21.06.2002, *Dieterich* 02108 (herbarium of the Nuratau Nature Reserve); Temirqovuqsay, 40°38'57" N, 66°22'38" E, 11.07.2019, *Beshko* (TASH); Fazilman Lake, 40°32'37" N, 66°35'55" E, 1645 m a.s.l., 12.07.2019, *Beshko* (TASH, www.plantarium.ru, www.inaturalist.org).

Potamogetonaceae Bercht. & J.Presl.

Potamogeton L.

19. *Potamogeton crispus* L., Sp. Pl.: 126 (1753). Perennial, hydrophyte. Pluriregional. Wetlands (inland). Montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** Fazilman Lake, 08.06.2013, *Beshko* (TASH).

20. *Potamogeton gramineus* L. (*P. heterophyllus* Schreber.), Sp. Pl.: 127 (1753). Perennial, hydrophyte. Pluriregional. Wetlands (inland), Artificial aquatic. Foothills. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** 2 km north of Sentyab village, reservoir, 40.643079° N, 66.681024° E, 550 m, 30.06.2024, *Volkova, Dadykin* (IBIW 078516–078518).

21. *Potamogeton lucens* L., Sp. Pl.: 126 (1753). Perennial, hydrophyte. Pluriregional. Wetlands (inland). Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Fazilman Lake, 08.06.2013, *Beshko* (TASH); northern shore of Fazilman Lake, 40.552165° N, 66.588563° E, 1650 m, 01.07.2024, *Volkova, Dadykin* (IBIW 078521).

22. *Potamogeton natans* L., Sp. Pl.: 126 (1753). Perennial, hydrophyte. Pluriregional. Wetlands (inland). Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Fazilman Lake, 08.06.2013, *Beshko* (TASH).

23. *Potamogeton perfoliatus* L., Sp. Pl.: 126 (1753). Perennial, hydrophyte. Pluriregional. Wetlands (inland), Artificial aquatic. Foothills. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** 2 km north of Sentyab village, reservoir, 40.643079° N, 66.681024° E, 550 m, 30.06.2024, *Volkova, Dadykin* (IBIW 078528).

24. *Potamogeton pusillus* L., Sp. Pl.: 127 (1753). Perennial, hydrophyte. Pluriregional. Wetlands (inland), Artificial aquatic. Foothills. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** 1.5 km west of Karatash village, pond, 40.37047° N, 67.38522° E, 600 m, 29.06.2024, *Volkova, Dadykin* (IBIW 078535–078536); northern shore of Fazilman Lake, 40.552165° N, 66.588563° E, 1650 m, 01.07.2024, *Volkova, Dadykin* (IBIW 078537).

Stuckenia Börner

25. *Stuckenia pectinata* (L.) Börner (*Potamogeton pectinatus* L.), Fl. Deut. Volk: 713 (1912). Perennial, hydrophyte. Pluriregional. Wetlands (inland). Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Fazilman Lake, 08.06.2013, *Beshko* (TASH); northern shore of Fazilman Lake, 40.552165° N, 66.588563° E, 1650 m, 01.07.2024, *Volkova, Dadykin* (IBIW 078565–078566).

Zannichellia L.

26. *Zannichellia palustris* L. aggr., Sp. Pl.: 969 (1753). Perennial, hydrophyte. Pluriregional. Wetlands (inland), Artificial aquatic. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Fazilman Lake, 23.06.2002, *Beshko* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, Andebaraut, pond, 40.52149° N, 66.74788° E, 03.04.2022, *Beshko* (TASH, www.inaturalist.org); Jizzakh Region, Farish District, Nuratau Nature Reserve, Hayatsay, 40.52149° N, 66.74788° E, 05.06.2022, *Beshko* (www.inaturalist.org); 1.5 km west of Karatash village, slow stream, 40.36859° N, 67.388802° E, 600 m, 29.06.2024, *Volkova, Dadykin* (IBIW 078576–078577); northern shore of Fazilman Lake, 40.552165° N, 66.588563° E, 1650 m, 01.07.2024, *Volkova, Dadykin* (IBIW 078578–078579); 3 km south of Sob village, stream, 40.61276° N, 66.64411° E, 700 m, 02.07.2024, *Volkova, Dadykin* (IBIW 078580). **I-4-b Aktau Range:** near the village Andak, 01.05.1925, *Popov* (TASH).

Colchicaceae DC.

Colchicum (Tourn.) L.

27. *Colchicum kesselringii* Regel, Trudy Imp. S.-Peterburgsk. Bot. Sada 8: 646 (1884). Perennial, geophyte. Mountain Middle Asian. Desert, Shrubland, Grassland, Rocky areas. Foothills, montane zone. Rare. Native. UzbRDB 3. **Occurrence records: I-4-a Nuratau Range:** north-west of Jizzakh, 05.04.1911, *Dimo, Sprygin, Shulga* 330 (TASH); Kyzylcha State Farm, 26.02.1958, *Galkina* (TASH); Nuratau Nature Reserve, Karysay, 22.03.1984, *Petrochenko* 19 (TASH, herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Madjrumsay, 25.03.2016, *Beshko* (herbarium of the Nuratau Nature Reserve); Samarkand Region, Koshrabad District, Ustuksay, 40.5355° N, 66.5664° E, 31.03.2018, *Beshko* (TASH, www.plantarium.ru, www.inaturalist.org); Samarkand Region, Koshrabad

District, near the Fazilman Lake, 40.5483° N, 66.5891° E, 31.03.2018, *Beshko* (www.inaturalist.org); Navoi Region, Nurata District, Kurgansay, upstream of the village Balaybokho, 40.650935° N, 66.556966° E, 22.02.2020, *denisch* (www.inaturalist.org).

28. *Colchicum robustum* (Bunge) Stef. (*Merendera robusta* Bunge), Sborn. B'lgar. Akad. Nauk 22: 24 (1926). Perennial, geophyte. Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas. Plain, foothills. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Kyzylcha, 28.04.1913, *Korovin 123* (TASH); Urganchi, 02.05.1913, *Korovin* (TASH); Nurata State Farm, 15.04.1943, *Dzhanaeva 40* (TASH); Kyzylcha State Farm, 15.02.1952, *Zaprometova* (TASH); Kyzylcha State Farm, 05.04.1954, *Zaprometova* (TASH); Kyzylcha State Farm, 23.03.1958, *Galkina* (TASH); northern piedmont plain of the Nuratau Range (Farish Steppe), 26.03.2011, *Davkaev* (www.plantarium.ru); piedmont plain of the Nuratau Range opposite Madjrumsay, 26.03.2011, *Gaziev* (www.plantarium.ru); Pistalisay, 19.03.2013, *Tojibaev, Beshko, Shomurodov, Batashov* (TASH); middle reaches of Pistalisay, 40°42'15"N, 66°04'28"E, 19.03.2013, *Beshko* (TASH); Nuratau Nature Reserve, lower reaches of Madjrumsay, 955 m a.s.l., rocky-gravelly slope, 23.03.2024, *Beshko* (www.plantarium.ru, www.inaturalist.org). **I-4-b Aktau Range:** Nurata, 29.04.1913, *Korovin* (TASH); Khonbandy – Chuya, 02.05.1913, *Korovin* (TASH); piedmont plain near the town Nurata, 11.03.1963, *Markova* (TASH). **I-4-b Karatau Range:** Karakarga Mountains, Jizlan Pass, 22.04.1913, *Korovin 151* (TASH); Karakarga Mountains, March 1938, *Gomolitsky* (TASH); near the Karakarga Pass, 40°22'29"N, 65°30'00"E, 19.03.2013, *Tojibaev, Beshko, Shomurodov, Batashov* (TASH); western part of the Karatau Range, ca. 410 m a.s.l., 21.04.2024, *Beshko* (www.plantarium.ru, www.inaturalist.org). **I-4-b Mt. Kokcha:** southern slope of Kokchatau remnant mountain, 22.03.2013, *Beshko* (www.plantarium.ru); Bukhara Region, Gizhduvan District, northern piedmonts of Kokchatau remnant mountain, 40.52911° N, 65.04942° E, 12.04.2025, *Beshko* (www.inaturalist.org).

Liliaceae Juss.

Fritillaria L.

29. *Fritillaria karelinii* (Fisch. ex D.Don) Baker (*Rhinopetalum karelinii* Fisch.), J. Linn. Soc., Bot. 14: 268 (1874). Perennial, geophyte. Turanian. Desert. Plain, foothills. Rare. Native. **Occurrence records: I-4-b Karatau Range:** Tan-saray, piedmonts of Karatau, 17.03.1938, *Granitov* (TASH). **I-4-b Mt. Kokcha:** central part of Kokchatau, southern slope, 40.52625° N, 65.042361° E, 22.03.2013, *Beshko* (field observation); central part of Kokchatau, 11.04.2015, *Shomurodov et al.* (plant community description, published in “Coenopopulation of rare and endangered plant species of remnant low mountains of Kyzylkum”, 2018, p. 30–31).

30. *Fritillaria olgae* Vved., Fl. Turkmen. 1: 297 (1932). Perennial, geophyte. Western Pamir-Alay. Shrubland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Koytash Range, above the village Koytash, ca. 1500 m a.s.l., 13.07.1972, *Kamelin 44* (LE); Nuratau Nature Reserve, Mt. Dushokh, slope to the village Ukhum, 02.05.1982, *Mukhina* (TASH); Nuratau Nature Reserve, Karysay, Pub, 02.07.1992, *Beshko 92410* (herbarium of the Nuratau Nature Reserve); [same locality], 16.03.1993, *Beshko 93033* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, rocky massif Parrandoz, 11.05.2010, *Beshko* (www.plantarium.ru, www.inaturalist.org); Nuratau Nature Reserve, northern slope of the rocky massif Parrandoz, 13.05.2010, *Beshko* (www.plantarium.ru), Nuratau Nature Reserve, Tykchasay, Parrandoz, 02.05.2025, *Beshko* (TASH, www.plantarium.ru, www.inaturalist.org).

Gagea Salisb.¹

31. *Gagea afghanica* A.Terracc., Boll. Soc. Orto Palermo II, 3: 3 (1904). Perennial, geophyte. Irano-Turanian. Desert. Plain, foothills. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** piedmont plain near Kyzylcha State Farm, 27.02.1958, *Zaprometova* (TASH); Alaysay, 28.02.1958, *Zaprometova* (TASH). **I-4-b Aktau Range:** piedmont plain near the district center Nurata, 11.03.1963, *Markova* (TASH).
32. *Gagea capusii* A.Terracc., Bull. Herb. Boissier II, 5: 1115 (1905). Perennial, geophyte. Western Tien Shan, Pamir-Alay. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** 1 km south of the village Kokbulak, 22.04.1956, *Zakirov* 35 (TASH); Nuratau Nature Reserve, Hayatsay, 09.04.1984, *Petrochenko* 84023, 84024 (herbarium of the Nuratau Nature Reserve); surroundings of the town Gallaaral, 22.02.2006, *Gaziev* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 13.03.2016, *Beshko* 02/2016 (TASH); Nuratau Nature Reserve, watershed crest between Hayatsay and Andygensay, 24.03.2020, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** the gorge Yangokly, 19–21.05.1941, *Zakirov*, *Niyazov* (SAM).
33. *Gagea chomutovae* (Pascher) Pascher, Bull. Soc. Imp. Naturalistes Moscou, n.s., 19: 372 (1907). Perennial, geophyte. Irano-Turanian. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** town Jizzakh, 01.04.1921, *Vvedensky* 92 (MW); near the town Jizzakh, 01.04.1921, *Vvedensky* 95, 96 (TASH); hills along the bank of river Sanzar near the town Jizzakh, 04.04.1921, *Korovin* 17 (TASH); Nurata State Farm, 13.04.1943, *Djanaeva* 12 (TASH); Karasay, 14.04.1954, *Zaprometova* (TASH); valley 2.5 km south-east of Kyzylcha State Farm, 15.04.1954, *Zaprometova* (TASH); piedmont plain near Kyzylcha State Farm, 29.03.1958, *Galkina* (TASH); Sharaussay, 26.03.1958, *Zaprometova* 128 (TASH); Alaysay, 30.03.1958, *Zaprometova* 6 (TASH); southern slope of Mt. Zargar, 26.04.1979, *Pimenov*, *Kljuykov*, *Boryaev*, *Baranova*, *Vassiljeva* 74 (MW); Nuratau Nature Reserve, Hayat, 15.04.1981, *Mukhina* (TASH); 35 km along the road from Jizzakh to Farish, May 1981, *Sharipov* (TASH); hills along the road to the village Ukhum, May 1981, *Sharipov* (TASH); Nuratau Nature Reserve, Hayatsay, 21.04.1983, *Fominykh* (TASH); Asrafsay, 11.04.1984, *Petrochenko*, 84025, 84026 (herbarium of the Nuratau Nature Reserve); Hayatsay, 01.04.1991, *Beshko*, *Yakovenko* 91021, 91022 (herbarium of the Nuratau Nature Reserve); near the lake Sentobkul (Fazilman), 14.05.1993, *Beshko* 93067 (herbarium of the Nuratau Nature Reserve); Hayatsay, Andebaraut, 05.04.2008, *Beshko* 08001 (herbarium of the Nuratau Nature Reserve); lower reaches of Fuzhaksay, 06.04.2012, *Beshko* (TASH); Nuratau Nature Reserve, Tykchasay, 13.04.2016, *Beshko* (www.plantarium.ru); Ustuksay, 31.03.2018, *Beshko* (www.plantarium.ru); upper reaches of Osmansay above the Zangori Olov summer camp, 05.04.2019, *Beshko*, *Adilov* (plant community description); Nuratau Nature Reserve, valley Gurdara, about 600 m a.s.l., 04.04.2022, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** piedmont plain near district center Nurata, 16.03.1963, *Markova* (TASH); Nuratau Range, 01.04.1963, *Khaydarov* 253 (TASH); 18 of the town Nurata, Ingichkasay, 21.04.1981, *Sharipov* (TASH). **I-4-b Karatau Range:** Karakarga Pass, 15.04.2015, *Beshko* (TASH). **I-4-b Khobduntau Range:** Gumsay, 05.04.2014, *Beshko* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 18.03.2013, *Tojibaev*, *Beshko*, *Shomurodov*, *Batashov* (TASH).
34. *Gagea divaricata* Regel, Trudy Imp. S.-Peterburgsk. Bot. Sada, prepr. 6: 510 (1879). Perennial, geophyte. Turanian. Desert. Plain. Rare. Native. **Occurrence records: I-4-b Mt. Kokcha:** Kokchatau, 15.04.2015, *Batashov* 0009 (TASH).

¹ In addition to 15 species of the genus *Gagea* cited in this checklist, two new species were found from the Nuratau Range, which have not yet been published

35. *Gagea gageoides* (Zucc.) Vved., Fl. Turkmen. 1: 261 (1932). Perennial, geophyte. Irano-Turanian. Forest, Shrubland, Grassland, Rocky areas. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Koblatysay, 04.04.1952, *Zaprometova* (TASH); Karasay, 12.04.1955, *Zaprometova* (TASH); southern slope of Mt. Zargar, 26.04.1979, *Pimenov, Kljuykov, Boryaev, Baranova, Vassiljeva* 71 (MW); Nuratau Nature Reserve, Hayatsay, 15.04.1981, *Mukhina* (TASH); Nuratau Nature Reserve, Mt. Dushokh, 21.04.1982, *Mukhina* (TASH); Nuratau Nature Reserve, Madjrumsay, 08.05.1984, *Petrochenko* 84027, 84028 (herbarium of the Nuratau Nature Reserve); Hayatsay, 20.04.1993, *Beshko* 93005 (herbarium of the Nuratau Nature Reserve); Mt. Kichik Fazilman, near the Fazilman Lake, 06.05.2020, *Akbarov, Turdiev, Juramurodov* 6052020092 (TASH); Nuratau Nature Reserve, Hayatsay, about 1250 m a.s.l., 22.04.2023, *Beshko* (www.plantarium.ru, www.inaturalist.org).

36. *Gagea graminifolia* Vved., Fl. Turkmen. 1: 269 (1932). Perennial, geophyte. Irano-Turanian. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Abundant. Native. **Occurrence records: I-4-a Nuratau Range:** piedmont plain 16 east of Farish, 12.05.1955, *Zaprometova* (TASH); Gatchasay, 01.05.1956, *Zaprometova* 28 (TASH); Nuratau, mountains above the farmstead of the Jizzakh Cotton Procurement Point, 22.04.1981, *Sharipov* (TASH); Asrafsay, 11.04.1984, *Petrochenko* 84029, 84030 (herbarium of the Nuratau Nature Reserve); northern piedmont plain of Nuratau Range (Farish Steppe), 26.03.2011, *Davkaev* (www.plantarium.ru); foothills of Nuratau Range near the village Ilonchi, 06.04.2011, *Beshko* (www.plantarium.ru); foothills of Nuratau Range near the village Osmansay, 31.03.2012, *Beshko* (www.plantarium.ru); piedmont plain of Nuratau Range 6 km east of the village Karatash, 25.03.2019, *Beshko, Shomurodov, Adilov, Abduraimov* (plant community description); piedmont plain between the villages Uchma and Safarota, 28.03.2019, *Beshko, Shomurodov, Adilov, Abduraimov* (plant community description); Nuratau Nature Reserve, Hayatsay, 24.03.2020, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, lower reaches of Gurdara, about 600 m a.s.l., 04.04.2022, *Beshko* (www.plantarium.ru, www.inaturalist.org). **I-4-b Aktau Range:** valley Chashma, 13.06.1962, *Khaydarov* 161 (TASH). **I-4-b Khobduntau Range:** Gallaaral District, surroundings of Milyutinskaya Station, experimental station of cereal crops, 24.03.1934, *Toporova* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 08.04.1915, *Kultiasow* (TASH); 5 km north of town Band, between two dumps of the Uchkulach open pit, 26.03.2019, *Beshko, Shomurodov, Adilov, Abduraimov* (plant community description).

37. *Gagea kamelinii* Levichev, Bot. Mater. Gerb. Inst. Bot. Akad. Nauk Uzbeksk. S.S.R. 20: 22 (1982). Perennial, geophyte. Hyrcanian, Mountain Middle Asian. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** surroundings of the town Jizzakh, hills along the bank of river Sanzar, 02.04.1921, *Vvedensky* 129 (TASH); Mt. Hayatbashi, 25.04.1994, *Beshko* 94008 (herbarium of the Nuratau Nature Reserve); Mt. Dushokh, 25.04.1997, *Beshko* 97002 (TASH).

38. *Gagea olgae* Regel, Trudy Imp. S.-Peterburgsk. Bot. Sada 3(2): 292 (1875). Perennial, geophyte. Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Abundant. Native. **Occurrence records: I-4-a Nuratau Range:** surroundings of Jizzakh, 06.03.1925, *Vvedensky* (TASH); Kyzylcha State Farm, 27.02.1958, *Zaprometova* (SAM); Nuratau Nature Reserve, Hayatsay, 20.08.1977, *Levichev* (TASH); Nuratau Nature Reserve, 14.03.1981, *Mukhina* (TASH); Nuratau, mountains above the farmstead of the Jizzakh Cotton Procurement Point, 22.04.1981, *Sharipov* (TASH); foothills between villages Ukhum and Asraf, 01.04.2009, *Beshko* 09/012 (herbarium of the Nuratau Nature Reserve); Hayatsay, 27.03.2011, *Davkaev* (www.plantarium.ru); upper reaches of Sentobsay, plateau near the Fazilman Lake, 31.03.2018, *Beshko* (www.plantarium.ru); piedmont plain of Nuratau Range 6 km east of the village Karatash, 25.03.2019, *Beshko, Shomurodov, Adilov, Abduraimov* (plant community description);

piedmont plain between the villages Uchma and Safarota, 28.03.2019, *Beshko, Shomurodov, Adilov, Abduraimov* (plant community description); Nuratau Nature Reserve, Hayatsay, 24.03.2020, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** valley Chashma, 16.02.1963, *Khaydarov 204* (TASH). **I-4-b Khobduntau Range:** reported by Kudrjashev in “Vegetation of the Khobduntau and Karachatau Mountains” (1929, p. 60). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 22.04.1986, *Pimenov, Kljuykov, Vassiljeva, Melibaev* (MW); Pistalitau, 24.01.2019, *Beshko* (www.plantarium.ru); the crest of Egarbelistag, 1.5 km west of the Carbonat JSC quarry, 25.03.2019, *Beshko, Shomurodov, Adilov, Abduraimov* (plant community description); northern piedmonts of remnant mountains Uchkulach, 26.03.2019, *Beshko, Shomurodov, Adilov, Abduraimov* (plant community description); piedmonts of remnant mountains Pistalitau, surroundings of Uchkulach, 27.03.2019, *Beshko, Shomurodov, Adilov, Abduraimov* (plant community description); southern piedmonts of remnant mountains Pistalitau, about 7 km east of the villages Yangiabad and Uchkulach, 06.04.2019, *Beshko, Shomurodov, Adilov* (plant community description).

39. *Gagea ova* Stapf, Denkschr. Kaiserl. Akad. Wiss., Wien. Math.-Naturwiss. Kl. 50: 16 (1885). Perennial, geophyte. Irano-Turanian. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** near the town Jizzakh, 01.04.1921, *Vvedensky 84, 100* (TASH); near the town Jizzakh, 04.04.1921, *Korovin 30* (TASH); piedmont plain near Kyzylcha State Farm, 20.04.1956, *Zaprometova 128* (TASH); 10 km east of the village Dzhush, 11.05.1957, *Momotov, Li 285* (TASH); valley 2.5 south-east of Kyzylcha State Farm, 21.04.1954, *Zaprometova* (TASH); valley 1 km west of Kyzylcha State Farm, 11.04.1958, *Galkina* (TASH); Alaysay, 15.05.1960, *Zaprometova 47* (TASH); Hayatsay, field station of Nuratau Nature Reserve, 09.04.2008, *Beshko 08004* (herbarium of the Nuratau Nature Reserve); near the village Ilonchi, 31.03.2012, *Beshko* (www.plantarium.ru); piedmont plain of Nuratau Range 6 km east of the village Karatash, 25.03.2019, *Beshko, Shomurodov, Adilov, Abduraimov* (plant community description); Madjrumsay, 23.03.2020, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** 12 km north-west of district center Nurata, Chashma, 27.02.1963, *Markova* (TASH). **I-4-b Mt. Kokcha:** Kokchatau, 25.03.1958, *Adylov 154* (TASH); northern slope of Kokchatau, 13.04.1964, *Adylov, Shorakhimov 2292* (TASH); [same locality], 21.04.1964, *Adylov, Shorakhimov 2349* (TASH). **I-4-c North-Nuratau insular low mountains:** Balyklitau north of Nuratau, near Farish, 22.03.1983, *Levichev* (TASH); Balyklitau, 02.04.2011, *Batashov 1* (TASH).

40. *Gagea pakistanica* Levichev & Ali, Pakistan J. Bot. 38: 60 (2006). Perennial, geophyte. Western Himalaya, Pamir-Alay. Desert. Plain, foothills. Rare. Native. **Occurrence records:** **I-4-c North-Nuratau insular low mountains:** piedmont plain of Pistalitau, near the railway, 15 km south-east of village Yangiabad, 332 m a.s.l., 31.03.2012, *Batashov 00223* (TASH 065066).

41. *Gagea pseudoreticulata* Vved., Fl. Turkmen. 1: 268 (1932). Perennial, geophyte. Mountain Middle Asian. Desert, Shrubland, Grassland. Foothills, montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** foothills between village Ukhum and Asraf, 09.04.2008, *Beshko 08004* (herbarium of the Nuratau Nature Reserve); northern piedmont plain of Nuratau Range, 26.03.2011, *Gaziev* (www.plantarium.ru); northern piedmont plain of Nuratau Range, 05.04.2011, *Beshko* (www.plantarium.ru); piedmont plain of Nuratau Range 6 km east of the village Karatash, 25.03.2019, *Beshko, Shomurodov, Adilov, Abduraimov* (plant community description). **I-4-b Aktau Range:** near the village Karakisa, 30.07.1937, *Mironov 53* (TASH); near the town Nurata, 16.03.1963, *Markova* (TASH); southern slope of Aktau Range 4 km downstream of the village Langar, 28.04.1979, *Pimenov, Kljuykov, Boryaev, Baranova, Vassiljeva 134* (MW). **I-4-b Khobduntau Range:** on the top of mountains, 27.06.1929, *Kudrjashev* (TASH).

42. *Gagea stipitata* Merckl. ex Bunge, Beitr. Fl. Russl.: 336 (1852). Perennial, geophyte. Irano-Turanian. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills,

montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** near the town Jizzakh, 01.04.1921, *Vvedensky 104, 105* (TASH); Nurata State Farm, 13.04.1943, *Djanaeva 12* (TASH); valley 2 km south-west of Kyzylcha State Farm, 11.04.1954, *Zaprometova* (TASH); Alaysay, 06.05.1956, *Zaprometova 68* (TASH); Gatchasay, 02.03.1958, *Zaprometova* (TASH); plain near Kyzylcha State Farm, 27.03.1958, *Zaprometova 172* (TASH); Hayatsay, 29.03.1984, *Petrochenko 84031* (herbarium of the Nuratau Nature Reserve); Yangikishlak, near the office of nature reserve, 21.02.1992, *Beshko 92310* (herbarium of the Nuratau Nature Reserve); Hayatsay, 25.04.1996, *Beshko 96001* (herbarium of the Nuratau Nature Reserve); northern piedmont plain of Nuratau Range, 26.03.2011, *Gaziev* (www.plantarium.ru); piedmont plain of Nuratau Range 6 km east of the village Karatash, 25.03.2019, *Beshko, Shomurodov, Adilov, Abduraimov* (plant community description). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 09.04.1915, *Kultiasow 130* (TASH); Pistalitau, 22.04.1986, *Pimenov, Kljuykov, Vassiljeva, Melibaev 115a* (MW); Uchkulach remnant mountains, 17.04.2011, *Batashov* (TASH); the crest of Egarbelistag, 1.5 km west of the Carbonat JSC quarry, 27.04.2020, *Beshko, Shomurodov, Adilov* (plant community description).

43. *Gagea subtilis* Vved., Fl. Uzbekistan. 1: 542 (1941). Perennial, geophyte. Western Tien Shan, Pamir-Alay. Shrubland, Rocky areas. Foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** 2–3 north-west of the village Kokbulak, 18.07.1937, *Demurina 599* (TASH); gorge Gurdara, 19.04.1981, *Mukhina* (TASH); Nuratau, mountains above the farmstead of the Jizzakh Cotton Procurement Point, 22.04.1981, *Sharipov* (TASH); Madjrumsay, 26.03.2016, *Beshko* (TASH); Tykchasay, 13.04.2016, *Beshko* (TASH). **I-4-b Aktau Range:** 15 km from the village Nurata, Ingichkasay, 21.04.1981, *Sharipov* (TASH). **I-4-c North-Nuratau insular low mountains:** Balyklitau north of Nuratau, near Farish, 22.03.1983, *Levichev* (TASH); mountains Pistalitau, 22.04.1986, *Pimenov, Kljuykov, Vassiljeva, Melibaev 115* (MW).

44. *Gagea taschkentica* Levichev, Bot. Mater. Gerb. Inst. Bot. Akad. Nauk Uzbeksk. S.S.R. 20: 24 (1982). Perennial, geophyte. Hyrcanian, Mountain Middle Asian. Desert, Shrubland, Grassland. Plain, foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** valley of the river Sanzar near town Jizzakh, 06.03.1925, *Vvedensky* (MW); plain north of the spring Yangaly, 10.05.1939, *Mikhaylova, Popova* (TASH); Koblatysay, 17.03.1952, *Zaprometova* (TASH); piedmont plain north of Kyzylcha State Farm, 05.04.1954, *Zaprometova* (TASH); Mt. Zargar, 3 km north-east of the village Urtasay, 11.05.1957, *Momotov, Li 270* (TASH); plain near Kyzylcha State Farm, 27.03.1958, *Zaprometova* (TASH); upper reaches of Ustusay, surroundings of the Fazilman Lake, 28.05.1964, *Zuckerwanik 337* (TASH). **I-4-b Aktau Range:** near the village Karakisa, 30.07.1937, *Mironov 53* (TASH); near the town Nurata, 16.03.1963, *Markova* (TASH); 12 km north of district center Nurata, Chashma, 27.03.1963, *Markova* (TASH). **I-4-b Mt. Kokcha:** surroundings of Kokcha, 24.03.1958, *Adylov 643* (TASH); Kokchatau, 21.04.1964, *Adylov 2348* (TASH). **I-4-c North-Nuratau insular low mountains:** Balyklitau north of Nuratau, near Farish, 26.03.1983, *Levichev* (TASH); Balyklitau near Farish, 08.04.1983, *Levichev* (TASH); Balyklitau near Farish, 18.04.1985, *Krassovskaja* (TASH).

45. *Gagea tenera* Pascher, Lotos 52: 129 (1904). Perennial, geophyte. Irano-Turanian. Shrubland, Grassland, Rocky areas. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Koblatysay, 26.02.1958, *Zaprometova* (TASH); Kyzylcha State Farm, 17.04.1958, *Galkina* (TASH); Nuratau Nature Reserve, Hayatsay, 14.02.1981, *Mukhina* (TASH); Hayatsay, 09.04.1984, *Petrochenko, 84032–84034* (herbarium of the Nuratau Nature Reserve); Hayatsay, Khotunon, 07.04.1992, *Beshko, 92020* (TASH, herbarium of the Nuratau Nature Reserve); Hayatsay, Novi Daroz, 24.03.2009, *Beshko, 09002* (herbarium of the Nuratau Nature Reserve).

46. *Gagea vegeta* Vved., Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk S.S.S.R. 9: 238 (1946). Perennial, geophyte. Western Tien Shan, Western Pamir-Alay. Shrubland, Grassland, Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** 3 km south of Saurbel Pass,

26.04.1958, *Li, Zakirov 98* (TASH); Mt. Beshbarmak, 30.04.1996, *Beshko 96017* (herbarium of the Nuratau Nature Reserve).

Tulipa L.

47. *Tulipa affinis* Botschantz., Bot. Mater. Gerb. Inst. Bot. Zool. Akad. Nauk Uzbeksk. S.S.R. 16: 6 (1961). Perennial, geophyte. Nuratau, Kuhistan (subendemic). Forest, Shrubland, Grassland, Rocky areas. Foothills, montane zone. Occasional. Native. UzbRDB 3, IUCN RL VU. **Occurrence records:** **I-4-a Nuratau Range:** Mts. Koytash, near the village Shurkundi, 01.08.1934, *Botschantzev* (TASH); Mts. Koytash, watershed crest near Amandara, 05.08.1934, *Botschantzev* (TASH); Mts. Koytash, 2–3 km south-west of village Kokbulak, 18.07.1937, *Demurina 595* (TASH); Nuratau Range, Farish District, 07.05.1941, *Momotov 168* (TASH); Koblatysay, 07.04.1952, *Zaprometova* (TASH); south-west of village Kokbulak, 24.04.1956, *Zakirov 47* (TASH); 3 km north of Saurbel Pass, 27.04.1958, *Li, Zakirov 176* (TASH); southern slope of Mt. Zargar, 06.04.1979, *Pimenov, Kljuykov, Boryaev, Baranova, Vassiljeva 102* (MW); Sentob Pass, 12.05.1984, *Petrochenko 84035, 84036* (herbarium of the Nuratau Nature Reserve); Bolosay, 26.04.1992, *Beshko 92080, 92081* (herbarium of the Nuratau Nature Reserve); valley Fuzhaksay, 19.04.1993, *Beshko 93013* (herbarium of the Nuratau Nature Reserve); watershed crest between Hayatsay and Andygensay, 19.04.1993, *Beshko 93070* (herbarium of the Nuratau Nature Reserve); Karysay, Pubsay, 16.03.1993, *Beshko 93031* (herbarium of the Nuratau Nature Reserve); Mt. Hayatbashi, north slopes, 06.05.2005, *Tojibaev* (TASH); Tykchasay, Loloi, 25.04.2007, *Beshko 07020, 07021* (herbarium of the Nuratau Nature Reserve); Mts. Koytash, «holy place» above the village Sulukli, 25.04.2012, *Batashov* (TASH); Nuratau Nature Reserve, Tykchasay, Parrandoz, 07.05.2012, *Beshko* (TASH); western part of the range Nuratau, Pistalisay, 19.03.2013, *Tojibaev, Shomurodov, Beshko, Batashov* (TASH); Nuratau Nature Reserve, Gurdara, 10.04.2013, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 14.04.2013, *Beshko* (www.plantarium.ru); Farish district, Uzbekistan, 40.304983° N, 67.252211° E, 20.04.2013, *Lougarou* (www.inaturalist.org); Nuratau Nature Reserve, Madjrumsay, 18.04.2019, *Beshko* (TASH); Nuratau Nature Reserve, Gurdara, 17.03.2019, *Beshko NB2019001* (TASH); 2 km east of Saurbel Pass, 06.04.2019, *Beshko NB2019015* (TASH); Nuratau Nature Reserve, Madjrumsay, 23.03.2020, *Beshko NB2020006* (TASH); Nuratau Nature Reserve, upper reaches of Andygensay, Sukhta, 24.03.2020, *Beshko NB2020013* (TASH); Mt. Kichik Fazilman, near the Fazilman Lake, 06.05.2020, *Akbarov, Turdiev, Juramurodov 6052020112* (TASH); Nuratau Nature Reserve, Gurdara, about 850 m a.s.l., 15.04.2022, *Turdiev* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, about 1300 m a.s.l., 14.05.2024, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, Novi Khushk, 14.05.2024, *Beshko, Volis, Azimov, Sindirov* (TASH). **I-4-b Aktau Range:** near the village Andak, 01.05.1925, *Popov 33, 34, 35* (TASH). **I-4-b Karachatau Range:** 2 km north-east of the village Kauncha, 07.07.1937, *Demurina 451* (TASH); 3–5 km south-east of the village Kursafar, 07.07.1937, *Demurina 559* (TASH). **I-4-b Mt. Kokcha:** Kokchatau, 14.04.1938, *Granitov, Evstafiev* (TASH). **I-4-c North-Nuratau insular low mountains:** between mountains Kaunchi and Pistalitau, 10.07.1934, *Botschantzev* (TASH); Pistalitau, 18.08.2013, *Tojibaev* (TASH).

48. *Tulipa buhseana* Boiss., Diagn. Pl. Orient., ser. 2, 4: 98 (1859). Perennial, geophyte. Irano-Turanian. Desert. Plain. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** piedmont plain of Nuratau Range, 01.03.2006, *Malzev* (TASH); Jizzakh Region, piedmont plain 10 km north of the village Osmansay, 31.03.2012, *Beshko* (TASH); piedmont plain of Nuratau, along the road from the town Nurata to Baymurat, 05.04.2012, *Tojibaev* (TASH). **I-4-b Aktau Range:** piedmont plain of Nuratau 5–6 km east of the town Nurata, 19.03.2013, *Tojibaev, Shomurodov, Beshko, Batashov* (TASH). **I-4-b Karatau Range:** western part of Karatau Range, piedmont plain, 22.03.2013, *Tojibaev, Shomurodov, Beshko, Batashov* (TASH). **I-4-b Mt. Kokcha:** southern piedmonts of remnant mountains Kokchatau, 22.03.2013, *Tojibaev, Shomurodov, Beshko, Batashov* (TASH). **I-4-c North-**

Nuratau insular low mountains: Jizzakh District, mountains Kalmante, 12.04.1915, *Spiridonov* 85 (LE); piedmont plain between Mts. Koytash and Pistalitau, 31.03.2012, *Beshko* 300 (TASH); southern piedmont plain of Pistalitau, 18.03.2013, *Tojibaev, Shomurodov, Beshko, Batashov* (TASH); Uchkulach, 17.04.2012, *Batashov* 00144 (TASH); Pistalitau, 20.04.2012, *Batashov* 00143 (TASH).

49. *Tulipa korolkowii* Regel, Trudy Imp. S.-Peterburgsk. Bot. Sada 3(2): 295 (1875). Perennial, geophyte. Western Tien Shan, Pamir-Alay. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Occasional. Native. UzbRDB 3, IUCN RL NT. **Occurrence records: Nuratau Range:** in solo lutoso desertis inter Turkestaniam et Khiwam prope Farisch, 1873?, *Korolkow & Krause* (LE); near town Jizzakh, 04.04.1921, *Korovin* 57 (TASH); Karasay, 14.04.1954, *Zaprometova* (TASH); Alaysay, 25.03.1958, *Galkina* (TASH); Karasay, 14.04.1954, *Zaprometova* (TASH); 3 km south of village Midzhigan, 15.05.1958, *Li, Zakirov* 580 (TASH); 2 km north of Saurbel Pass, 27.04.1958, *Li, Zakirov* 139, 158 (TASH); 2 km south of the village Ustakhan, 25.05.1958, *Li, Zakirov* 813 (TASH); Mts. Nuratau, plateau, 10.05.1958, *Li, Zakirov* 466 (TASH); Kyzylcha, 12.04.1960, *Leonova* (LE); near Mt. Zargar, 27.04.1979, *Pimenov, Kljuykov, Boryaev, Baranova, Vassiljeva* 67 (MW); Hayatsay, 21.04.1983, *Fominykh* 83036, 83047 (herbarium of the Nuratau Nature Reserve); Hayatsay, Andebaraut, 28.04.1983, *Petrochenko* 83048 (herbarium of the Nuratau Nature Reserve); Sentobsay, 12.05.1984, *Petrochenko* 84037 (herbarium of the Nuratau Nature Reserve); Hayatsay, 15.04.1992, *Beshko* 92024, 92025 (herbarium of the Nuratau Nature Reserve); Fuzhaksay, 19.04.1993, *Beshko* 93009 (herbarium of the Nuratau Nature Reserve); Karysay, Pubsay, 16.03.1993, *Beshko* 93032 (herbarium of the Nuratau Nature Reserve); watershed between Hayatsay and Andygensay, 03.05.1993, *Beshko* 93011 (herbarium of the Nuratau Nature Reserve); Mt. Hayatbashi, south-eastern slope, 06.05.2005, *Tojibaev* (TASH); near Mt. Hayatbashi, 13.05.2009, *Beshko* (www.plantarium.ru); Hayatsay, Novi Khushk, 06.05.2012, *Beshko* (TASH); Asrafsay, 06.04.2013, *Tojibaev* (TASH); Gurdara, 10.04.2013, *Beshko* (www.plantarium.ru); Farish district, Uzbekistan, 40.315602° N, 67.249431° E, 20.04.2013, *Lougarou* (www.inaturalist.org); watershed between Sobsay and Sentobsay, 09.05.2013, *Beshko* (TASH); Pistalisay, 19.03.2013, *Tojibaev, Shomurodov, Beshko, Batashov* (TASH); Nuratau Nature Reserve, Madjrumsay, 25.03.2016, *Usmonov* (www.plantarium.ru); Nuratau Nature Reserve, watershed crest between Hayatsay and Madjrumsay, 09.05.2014, *Beshko* (www.plantarium.ru, www.inaturalist.org); Tykchasay, 18.04.2017, *Beshko* (www.plantarium.ru); southern slope of Nuratau, upper reaches of Ustuksay, 31.03.2018, *Beshko* (www.plantarium.ru); Hayatsay, near the village Upper Hayat, 17.03.2019, *Beshko* (TASH); foothills of Nuratau, between villages Egiz-Bulak and Karatash, 25.03.2019, *Beshko* (TASH); Nuratau Nature Reserve, Madjrumsay, eastern slope, 18.04.2019, *Beshko* (TASH); Nuratau Nature Reserve, Madjrumsay, western slope, 18.04.2019, *Beshko* (TASH); Nuratau Nature Reserve, Madjrumsay, 23.03.2020, *Beshko* NB2020007 (TASH); Nuratau Nature Reserve, upper reaches of Andygensay, Sukhta, 24.03.2020, *Beshko* NB2020012 (TASH); Hayatsay, 30.05.2020, *Beshko* (www.plantarium.ru); Jizzakh Region, Farish District, Nuratau Nature Reserve, Hayatsay, 40.51342° N, 66.73936° E, 24.04.2024, *Beshko* (www.inaturalist.org); upper reaches of Sentobsay, about 1400 m a.s.l., 24.04.2024, *Turdiyev* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 1570 m a.s.l., 07.07.2024, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** valley Chashma, 03.04.1963, *Khaydarov* 276 (TASH); mountains Bakhiltai, 07.04.1963, *Khaydarov* 315 (TASH); mountains Aktau, 06.04.1963, *Khaydarov* 295 (TASH); upper reaches of Pitau, 26.05.1964, *Zuckerwanik* 231 (TASH); mountains Bakhiltai, 10.05.2013, *Beshko* (TASH); northern slope of Aktau Range, Charkhansay, about 700 m a.s.l., 17.05.2024, *Beshko* (www.plantarium.ru, www.inaturalist.org). **I-4-b Karatau Range:** near Karakarga Pass, 17.04.2012, *Beshko* (www.plantarium.ru); Karakarga Pass, 19.03.2013, *Tojibaev, Shomurodov, Beshko, Batashov*; descent from Karakarga Pass to the town Navoi, 08.04.2013, *Tojibaev*; dry valley 2.5 km west of Karakarga Pass, 04.05.2013, *Tojibaev, Beshko, Batashov, Azimova* (TASH). **I-4-b Khobduntau Range:** reported by Kudrjashev in “Vegetation of the Khobduntau and Karachatau Mountains” (1929, p. 60). **I-4-c North-Nuratau insular low**

mountains: Pistalitau, 08.04.1911, *Dimo, Sprygin, Shulga* (TASH); Pistalitau, 09.04.1913, *Kultiasow* (TASH); piedmonts of Egarbelistag, near the Carbonat JSC quarry, 03.05.2013, *Tojibaev, Beshko, Batashov, Azimova* (TASH); central part of Pistalitau, 18.03.2013, *Tojibaev, Shomurodov, Beshko, Batashov* (TASH); the crest of Egarbelistag, 1.5 km west of the Carbonat JSC quarry, 27.04.2020, *Beshko, Shomurodov, Adilov* (plant community description).

50. *Tulipa lehmanniana* Merckl., Beitr. Fl. Russl.: 337 (1852). Perennial, geophyte. Irano-Turanian. Desert. Plain, foothills. Rare. Native. UzbRDB 3, IUCN RL NT. **Occurrence records:** **I-4-a Nuratau Range:** piedmont plain at the western part of Nuratau range, along the road P-57, 17.04.2012, *Beshko* (www.plantarium.ru). **I-4-b Karatau Range:** mountains Karatau, eastern part, 20.05.1936, *Kharchenko 1121* (TASH); valley Bakachinak, 05.05.1955, *Momotov, Li 117* (TASH); between Kanimekh and Kokcha, surroundings of the well Yangi, 15 km north of Kanimekh, 22.04.1965, *Adylov, Shorakhimov 2476* (TASH); western part of Karatau Range, piedmont plain, 22.03.2013, *Tojibaev, Shomurodov, Beshko, Batashov* (TASH). **I-4-b Mt. Kokcha:** western part of Kokchatau, 22.03.2013, *Tojibaev, Shomurodov, Beshko, Batashov* (TASH). **I-4-c North-Nuratau insular low mountains:** piedmonts of Pistalitau, 07.04.1911, *Dimo, Sprygin, Shulga 335* (TASH); southern piedmonts of remnant mountains Pistalitau, 18.03.2013, *Tojibaev* (TASH); piedmont plain near the western part of Pistalitau, 26.03.2019, *Beshko* (www.plantarium.ru); piedmont plain near the western part of Pistalitau, 24.04.2020, *Beshko* (www.plantarium.ru).

51. *Tulipa micheliana* Hoog, Gard. Chron., ser. 3, 31: 350 (1902). Perennial, geophyte. Hyrcanian, Mountain Middle Asian. Desert, Shrubland, Grassland, Rocky areas. Plain, foothills, montane zone. Rare. Native. UzbRDB 3, IUCN RL VU. **Occurrence records:** **I-4-a Nuratau Range:** Kyzylcha State Farm, 10.04.1951, *Novikova* (TASH); Nurata District, Kyzylcha State Farm, piedmont plain, 10.04.1951, *Zaprometova* (TASH); valley 2.5 km south-east of Kyzylcha State Farm, 21.04.1954, *Zaprometova* (TASH); Mt. Zargar, 2 km NE of the village Urtasay, 11.05.1957, *Momotov, Li 234* (TASH); valley 1 km west of Kyzylcha State Farm, 11.04.1958, *Galkina* (TASH); Alaysay, 11.04.1958, *Galkina* (TASH); Gatchasay, 26.04.1958, *Zaprometova* (TASH); piedmont plain of Nuratau, lower reaches of Ukhumsay, 14.04.1994, *Beshko 94001, 94002* (Herbarium of the Nuratau Nature Reserve); northern piedmont plain of Nuratau Range, 29.03.2009, *Beshko* (www.plantarium.ru); northern piedmont plain of Nuratau Range (Farish Steppe), 26.03.2011, *Davkaev* (www.plantarium.ru); Pistalisay, 19.03.2013, *Tojibaev, Shomurodov, Beshko, Batashov* (TASH); Sobsay, 09.05.2013, *Beshko* (TASH); Jizzakh Region, Farish District, northern piedmont plain of Nuratau Range (Farish Steppe), 13.04.2014, *Beshko* (www.plantarium.ru); foothills of Nuratau, between villages Egiz-Bulak and Karatash, 25.03.2019, *Beshko* (TASH). **I-4-b Aktau Range:** mountains Bakhiltai, 10.05.2013, *Beshko* (TASH). **I-4-b Karatau Range:** Karakarga Pass, 24.04.1987, *Pimenov, Vassiljeva 49* (MW); southern slope of Karatau Range, near Karakarga Pass, 19.03.2013, *Tojibaev, Shomurodov, Beshko, Batashov* (TASH); western part of Karatau Range, watershed, 22.03.2013, *Tojibaev, Shomurodov, Beshko, Batashov* (TASH); Bukhara Region, Gizhduvan District, western part of Karatau Range, about 400 m a.s.l., 13.04.2025, *Beshko* (www.plantarium.ru, www.inaturalist.org). **I-4-b Mt. Kokcha:** Kokchatau, 23.04.1955, *Momotov, Li 24* (TASH); north slopes of remnant mountain Kokchatau, surroundings of the well Tashkak, 12.04.1964, *Adylov, Shoraimov 2308* (TASH); remnant mountains Kokchatau, 23.03.1958, *Adylov, Shoraimov 670* (TASH); remnant mountain Kokchatau, southern slope, 22.03.2013, *Tojibaev, Shomurodov, Beshko, Batashov* (TASH). **I-4-c North-Nuratau insular low mountains:** remnant mountain Uchkulach, west of village Uchkulach, 04.04.2012, *Batashov* (TASH); eastern part of the range Pistalitau, 06.04.2012, *Batashov* (TASH); eastern part of Balyklitau, 06.04.2012, *Batashov* (TASH); central part of Pistalitau, watershed, 18.03.2013, *Tojibaev, Shomurodov, Beshko, Batashov* (TASH); Egarbelistag, near the Carbonat JSC quarry, 03.05.2013, *Tojibaev, Beshko, Batashov, Azimova* (TASH); southern piedmonts of Pistalitau, 24.04.2020, *Beshko* (www.plantarium.ru).

52. *Tulipa sogdiana* Bunge, Beitr. Fl. Russl.: 338 (1852). Perennial, geophyte. Turanian. Desert. Plain, foothills. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** northern piedmont plain of Nuratau Range (Farish Steppe), 26.03.2011, *Davkaev* (www.plantarium.ru). **I-4-b Mt. Kokcha:** near the village Kokcha, 22.03.1958, *Adylov* 632 (TASH); slopes of Mt. Kokchatau, 25.03.1958, *Adylov* 647a (TASH); southern slope of remnant mountain Kokchatau, 24.04.1965, *Adylov*, *Shoraimov* 2491 (TASH).

53. *Tulipa turkestanica* Regel, Trudy Imp. S.-Peterburgsk. Bot. Sada 3(2): 296 (1875). Perennial, geophyte. Western Tien Shan, Western Pamir-Alay. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Kyzylchali, 24.03.1913, *Korovin* (TASH); surroundings of Jizzakh, on the stony slopes in the valley of river Sanzar, 06.03.1925, *Vvedensky* (TASH); 4 km north-west of Milyutinskaya Station, May 1930, *Tarasevich* 52 (TASH); on the way from village Kokbulak to Amandara, 05.08.1934, *Botschantzev* (TASH); Mts. Koytash, 2–3 km north-west of village Kokbulak, 18.07.1937, *Demurina* 598 (TASH); Kyzylcha, piedmont plain, 02.03.1952, *Zaprometova* (TASH); Koblatysay, 30.03.1952, *Zaprometova* (TASH); valley 2.5 km south-east of Kyzylcha State Farm, 15.04.1954, *Zaprometova* (TASH); Kyzylcha State Farm, 01.04.1957, *Novikova* (TASH); Kyzylcha State Farm, experimental plot, 23.03.1958, *Galkina* (TASH); piedmont plain near Kyzylcha State Farm, May 1958, *Galkina* (TASH); lower reaches of Ukhumsay, 31.03.1984, *Petrochenko* 84038 (herbarium of the Nuratau Nature Reserve); Hayatsay, Andebaraut, 16.04.1984, *Petrochenko* 84039 (herbarium of the Nuratau Nature Reserve); Hayatsay, Zamezhak, 09.04.1984, *Petrochenko* 84040 (herbarium of the Nuratau Nature Reserve); Hayatsay, Andebaraut, 23.04.2007, Beshko 07027 (herbarium of the Nuratau Nature Reserve); Hayatsay, 27.03.2011, *Davkaev* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 14.04.2013, *Beshko* (www.plantarium.ru); Pistalisay, 19.04.2013, *Tojibaev* (TASH); Pistalisay, 19.03.2013, *Tojibaev*, *Shomurodov*, *Beshko*, *Batashov* (TASH); middle part of Pistalisay, 40°42'08"N, 66°04'53"E, 19.03.2013, *Beshko* (TASH); upper reaches of Sobsay, near Sob Pass, 31.03.2018, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Gurdara, 17.03.2019, *Beshko* (TASH); 2 km east of Saurbel Pass, 06.04.2019, *Beshko* (TASH); Mt. Karatash, 05.04.2019, *Beshko* (TASH); Nuratau Nature Reserve, Madjrumsay, western slope, 23.03.2020, *Beshko* NB2020005 (TASH); Nuratau Nature Reserve, Hayatsay, Andebaraut, 24.03.2020, *Beshko* NB2020011 (TASH); Nuratau Nature Reserve, northern slope of Mt. Hayatbashi, 1950 m a.s.l., 19.05.2021, *Beshko*, *Madaminov* NB2021236 (TASH); Nuratau Nature Reserve, lower reaches of Madjrumsay, 955 m a.s.l., 23.03.2024, *Beshko* (www.plantarium.ru, www.inaturalist.org). **I-4-b Aktau Range:** surroundings of Nurata, *Iris* steppe west of the town, 23.04.1913, *Korovin* (TASH); Mt. Takhku-tau, 07.05.1913, *Korovin* (TASH); 7–9 km south of village Chuya, 01.07.1937, *Demurina* 402 (TASH); near the village Chuya, 01.08.1937, *Mironov* 63 (TASH); near the pass Tikalik, 3 km south of village Sarygul, 12.05.1957, *Momotov*, *Li* 316 (TASH); piedmont plain near district center Nurata, 11.03.1963, *Markova* (TASH). **I-4-b Karatau Range:** near Karakarga Pass, 19.03.2013, *Tojibaev*, *Shomurodov*, *Beshko*, *Batashov* (TASH). **I-4-b Khobduntau Range:** reported by Kudrjashev in “Vegetation of the Khobduntau and Karachatau Mountains” (1929, p. 60). **I-4-c North-Nuratau insular low mountains:** Pistalитай, 2011, *Batashov* (TASH); Balyklitau, 2011, *Batashov* (TASH); Pistalитай, northern slope, 03.04.2012, *Batashov* (TASH); Pistalитай, Chimbkurgan, 18.04.2012, *Batashov* (TASH); the crest of Egarbelistag, 1.5 km west of the Carbonat JSC quarry, 27.04.2020, *Beshko*, *Shomurodov*, *Adilov* (plant community description).

Orchidaceae Juss.

Anacamptis Rich.

54. *Anacamptis laxiflora* subsp. *dielsiana* (Soó) H.Kretzschmar, Eccarius & H.Dietr. (*Orchis pseudolaxiflora* Czerniak.), Orchid Gen. *Anacamptis* *Orchis* Neotinea, ed. 2: 98 (2007). Perennial,

geophyte. Caucasian, Irano-Turanian. Wetlands (inland). Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Ustuksay, 02.06.1954, *Burygin* 349, 352 (TASH).

Dactylorhiza Neck. ex Nevski

55. *Dactylorhiza incarnata* subsp. *cilicica* (Klinge) H.Sund. (*Dactylorhiza umbrosa* (Kar. & Kir.) Nevski, *Orchis umbrosa* Kar. & Kir.), Europ. Medit. Orchid.: 45 (1975). Perennial, geophyte. Caucasian, Irano-Turanian. Wetlands (inland). Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Narvansay, 07.05.1956, *Zakirov* 132 (TASH); Sentobsay, 10.05.1958, *Li, Zakirov* 455 (TASH); 2 km from the village Narvan, 21.05.1958, *Li, Zakirov* 708, 709 (TASH); Karl Marx State Farm, Narvansay, 23.05.1967, *Perelygina* (TASH); plateau near Kichik Fazilmantau, 15.06.1969, *Mambetjumaev* 186 (TASH); Bolosay, 11.06.1993, *Beshko* 93054–93057 (herbarium of the Nuratau Nature Reserve); Bolosay, 10.06.1996, *Beshko* 96126 (herbarium of the Nuratau Nature Reserve); Farish District, village Nurak, 27.04.2008, *Tillaev* (www.plantarium.ru); middle reaches of Ustuksay, 09.06.2013, *Beshko* (TASH); Nuratau Nature Reserve, Madjrumsay, 20.05.2017, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, lower reaches of Madjrumsay, 40.57345° N, 66.71457° E, 02.05.2025, *Beshko* (TASH, www.inaturalist.org). **I-4-b Khobduntau Range:** Gumsay, 2.5 km from the village Gumsay, 27.06.1929, *Kudrjashev* (TASH).

Epipactis Adans.

56. *Epipactis persica* (Soó) Hausskn. ex Nannf., Bot. Not. 1946: 2 (1946). Perennial, geophyte. Tethyan. Wetlands (inland). Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Nature Reserve, Madjrumsay, 13.09.2014, *Beshko* (TASH); Nuratau Nature Reserve, Madjrumsay, 29.05.2016, *Beshko* (TASH); Nuratau Nature Reserve, lower reaches of Madjrumsay, 16.09.2023, *Beshko* (TASH).

Ixioliriaceae Nakai

Ixiolirion Herb.

57. *Ixiolirion tataricum* (Pall.) Schult. & Schult. f., Syst. Veg. 7: 752 (1829). Perennial, geophyte. Tethyan. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Nurata, Kara-Yuzgan, 25.04.1913, *Korovin* 96a (TASH); Urganchi – Ak-Chap, 01.05.1913, *Korovin* 150 (TASH); Khanbandy – Chuya, shistaceous mountain slopes, 02.05.1913, *Korovin* 210 (TASH); Mt. Mirishkar, 05.05.1913, *Korovin* 302a (TASH); Nuratau Range, Farish District, 26.04.1941, *Momotov* 57 (TASH); Koblatysay, 07.04.1952, *Zaprometova* (TASH); surroundings of Kyzylcha State Farm, 29.04.1952, *Zaprometova* (TASH); near Kyzylcha State Farm, 28.04.1954, *Zaprometova* (TASH); southern slopes of Nuratau, Ustuksay, 03.06.1954, *Burygin* 323 (TASH); Narvansay, 07.05.1956, *Zakirov* 113, 132 (TASH); Mt. Zargar 3 km NE of village Urtasay, 11.05.1957, *Momotov* 247 (TASH); Hayatsay, 28.05.1969, *Mambetjumaev* 67 (TASH); Hayatsay, 20.04.1983, *Fominykh* 83042 (herbarium of the Nuratau Nature Reserve); Karysay, 04.05.1984, *Petrochenko* 84042, 84043 (herbarium of the Nuratau Nature Reserve); Hayatsay, 24.05.1984, *Petrochenko* 84041 (herbarium of the Nuratau Nature Reserve); Hayatsay, May 1991, *Maximova* 91011 (herbarium of the Nuratau Nature Reserve); Hayatsay, village Upper Hayat, field station of Nuratau Nature Reserve, 27.04.2008, *Beshko* (www.plantarium.ru); Hayatsay, field station of nature reserve, 14.05.2008, *Beshko* 08014, 08015 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 28.04.2009, *Beshko* (www.plantarium.ru); Farish District, foothills of Nuratau, near the village Anamuna, 01.05.2014, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Madjrumsay, 18.04.2017, *Beshko* (www.plantarium.ru); Hayatsay, 05.05.2020, *Akbarov, Turdiev, Juramurodov* 5052020054 (TASH);

Jizzakh Region, Farish District, Hayatsay, village Upper Hayat, field station of nature reserve, 40.5274° N, 66.77489° E, 22.04.2023, *Beshko* (www.inaturalist.org); Jizzakh Region, Farish District, Hayatsay, 40.52523° N, 66.76339° E, 26.04.2024, *Beshko* (www.inaturalist.org); Jizzakh Region, Farish District, Hayatsay, village Upper Hayat, field station of nature reserve, 40.52765° N, 66.77522° E, 27.04.2024, *Beshko* (www.inaturalist.org); Jizzakh Region, Farish District, surroundings of village Ukhum, 40.51571° N, 66.78761° E, 12.05.2024, *langli* (www.inaturalist.org). **I-4-b Aktau Range:** Koshrabad – Shurcha, 19.04.1913, *Teplov 6, 10* (TASH); near the town Nurata, *Iris* steppe west of town, 23.04.1913, *Korovin 34* (TASH); Nurata, north slopes of Nuratau mountains, 23.04.1913, *Korovin 30a* (TASH); mountain slopes between the town Nurata and well Pashat, 24.04.1913, *Korovin 56* (TASH); Nurata, near well Pashat, 24.04.1913, *Korovin* (TASH); well Pashat – Kara-Yuzgan, 25.04.1913, *Korovin 91a* (TASH); 15 km south of district center Nurata, piedmont plain, 15.04.1952, *Zaprometova* (TASH); Aktau, 09.04.1963, *Khaydarov 338* (TASH); Navoi Region, Nurata District, surroundings of Karakarga Pass, 40.38301° N, 65.51359° E, 18.04.2013, *Christian Bravard (louguru)* (www.inaturalist.org). **I-4-b Karatau Range:** mountains Karakarga, near the pass Jizlan, 22.04.1913, *Korovin 15* (TASH); Navoi Region, Nurata District, near the town Nurata, 40.5473° N, 65.68822° E, 18.04.2013, *Christian Bravard (louguru)* (www.inaturalist.org); Navoi Region, Nurata District, lower reaches of Sarmyshsay, 40.25007° N, 65.43639° E, 19.04.2024, *jeanjacquesgodon* (www.inaturalist.org); **Bukhara Region, Gzhduvan District, western part of Karatau Range,** 40.47158° N, 65.1076° E, 21.04.2024, *Beshko* (www.inaturalist.org). **I-4-b Mt. Kokcha:** Bukhara Region, Gzhduvan District, western piedmonts of the Kokchatau remnant mountain, 40.55548° N, 64.97005° E, 12.04.2025, *Beshko* (www.inaturalist.org). **I-4-b Khobduntau Range:** Milyutinskaya Station, Gallaaral State Farm, 200 m west of the water tower, April 1930, *Tarasevich 23, 28* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 07.04.1911, *Dimo, Sprygin, Shulga 1130, 1133* (TASH); mountains Pistalitau, 17.04.2012, *Batashov* (TASH).

Iridaceae Juss.

Crocus L.

58. *Crocus korolkowii* Maw & Regel, Descr. Pl. Nov. 7: 213 (1879). Perennial, geophyte. Irano-Turanian. Desert, Shrubland, Grassland. Plain, foothills, montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** near town Jizzakh, 06.03.1925, *Vvedensky* (TASH, MW). **I-4-b Aktau Range:** near the village Khassanata, 11.03.2022, *Turdiyev* (www.plantarium.ru); **I-4-b Khobduntau Range:** town Gallaaral, 22.02.2006, *Gaziev* (www.plantarium.ru); near the village Saraybuloq, 11.03.2022, *Turdiyev* (www.plantarium.ru).

Iris L.

59. *Iris falcifolia* Bunge, Beitr. Fl. Russl.: 329 (1852). Perennial, geophyte. Middle Asian. Desert. Plain, foothills. Rare. Native. **Occurrence records:** **I-4-b Karatau Range:** Bukhara Region, Gzhduvan District, southern foothills of Karatau Range, about 370 m a.s.l., 21.04.2024, *Beshko* (www.plantarium.ru). **I-4-b Mt. Kokcha:** remnant mountain Kokcha, southern piedmonts, 14.04.1938, *Granitov, Evstafiev* (TASH); northern slope of remnant mountain Kokchatau, 12.05.1964, *Adylov, Shoraimov 2291* (TASH); Kokchatau, 22.03.2013, *Tojibaev, Shomurodov, Beshko, Batashov* (TASH).

60. *Iris hippolyti* (Vved.) Kamelin, Redk. Ischez. Vidy Fl. SSSR ed. 2: 102 (1981) (*Juno hippolyti* Vved.). Perennial, geophyte. Kokcha, Karatau (endemic). Shrubland, Rocky areas. Foothills. Rare. Native. UzbRDB 1. **Occurrence records:** **I-4-b Karatau Range:** surroundings of Karakarga Pass, 03.04.2022, *Tojibaev, Jabborov, Madaminov* (TASH); Bukhara Region, Gzhduvan District, western part of Karatau Range, about 400 m a.s.l., 13.04.2025, *Beshko* (www.plantarium.ru). **I-4-b Mt. Kokcha:** remnant mountain Kokchatau, 14.04.1964, *Adylov, Shoraimov 2294* (TASH); southern slope

of Mt. Kokchatau in surroundings of Zafarobod, 22.03.2013, *Shomurodov* (TASH); Kokchatau, 11.04.2015, *Shomurodov, Batashov* (TASH).

61. *Iris longiscapa* Ledeb, Fl. Ross. 4: 93 (1852). Perennial, geophyte. Irano-Turanian. Desert. Plain. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Nurata – Urganchi, *Iris* formation, 1913, *Korovin 151a, 159* (TASH). **I-4-b Aktau Range:** south-west of district center Nurata, piedmont plain, 15.04.1952, *Zaprometova* (TASH). **I-4-c North-Nuratau insular low mountains:** piedmonts of Pistalitau, 07.04.1911, *Dimo, Sprygin, Shulga 1126* (TASH).

62. *Iris maracandica* (Vved.) Wendelbo, Bot. Not. 128: 216 (1975) (*Juno maracandica* Vved.). Perennial, geophyte. Nuratau, Kuhistan (subendemic). Shrubland, Grassland, Rocky areas. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** rocks near Tamerlane's Gate, 03.04.1921, *Vvedensky 1921* (TASH); near town Jizzakh, 04.04.1921, *Korovin 62, 72* (TASH); Nuratau Range, Farish District, 02.05.1941, *Momotov* (TASH); Nuratau Range, territory of Nurata State Farm, 13.04.1943, *Djanaeva 17* (TASH); Koblatysay, 07.04.1952, *Zaprometova* (TASH); valley 2.5 km south-east of Kyzylcha State Farm, 15.04.1954, *Zaprometova* (TASH); Koblatysay, 27.03.1955, *Zaprometova* (TASH); north-east of the village Koytash, 30.04.1956, *Zakirov 108* (TASH); Kichiksay, 08.05.1956, *Zaprometova* (TASH); Alaysay, 25.03.1958, *Zaprometova 100* (TASH); Alaysay, 25.03.1958, *Galkina* (TASH); 1 km west of Kyzylcha State Farm, 11.04.1958, *Galkina* (TASH); Gatchasay, 03.04.1964, *Markova* (TASH); Gurdara, 15.04.1984, *Petrochenko 84004–84007* (herbarium of the Nuratau Nature Reserve); Hayatsay, 11.04.1992, *Beshko 92003–92006* (herbarium of the Nuratau Nature Reserve); village Sentob, 18.04.2012, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, top of Mt. Hayatbashi, 07.05.2012, *Beshko* (TASH); Jizzakh Region, Farish District, Nuratau Nature Reserve, Hayatsay, 40.51365° N, 66.73427° E, 12.04.2013, *Beshko* (www.inaturalist.org); Hayatsay, Novi Daroz, 13.04.2013, *Beshko* (TASH); Nuratau Nature Reserve, Hayatsay, 14.04.2013, *Beshko* (www.plantarium.ru); Farish district, Uzbekistan, 40.309511° N, 67.248871° E, 20.04.2013, *Lougarou* (www.inaturalist.org); Nuratau Nature Reserve, Madjumsay, lower reaches, 25.03.2016, *Beshko, Usmonov* (TASH); Osmansay, upstream of the village Baland Osman, 05.04.2019, *Beshko, Adylov* (TASH); Jizzakh Region, Farish District, Nuratau Nature Reserve, Hayatsay, 40.51612° N, 66.74879° E, 14.04.2021, *Ortikov* (www.inaturalist.org); Nuratau Nature Reserve, Gurdara, 04.04.2022, *Beshko* (TASH, www.plantarium.ru, www.inaturalist.org); Navoi Region, Nurata District, surroundings of Fazilman Lake, 40.55579° N, 66.6006° E, 24.04.2024, *Turdiyev* (www.inaturalist.org); Jizzakh Region, Farish District, Asrafsay, 40.55604° N, 66.8304° E, 22.03.2025, *bee-together* (www.inaturalist.org); Nuratau Nature Reserve, western slope of Mt. Hayatbashi, 40.50815° N, 66.71878° E, 01.05.2025, *Beshko* (TASH, www.inaturalist.org). **I-4-b Aktau Range:** Chashma, 12 km north of district center Nurata, 27.03.1963, *Markova* (TASH). **I-4-b Karatau Range:** 2.5 km south-west of the ruins of the village Sarmysh, 06.05.1955, *Momotov, Li 197* (TASH); 1 km north of the ruins of the village Sarmysh, 05.05.1955, *Momotov, Li 175* (TASH); surroundings of Karakarga Pass, 03.04.2022, *Tojibaev, Jabborov, Madaminov* (TASH). **I-4-c North-Nuratau insular low mountains:** Balyklitau, 1958, *Vvedensky, Nabiev* (TASH); mountains Pistalitau, Jizzakh Region, Farish District, 03.04.2012, *Batashov 0234, 0236* (TASH).

63. *Iris narbutii* O.Fedtsch., Izv. Imp. Obshch. Lyubit. Estestv. Moskovsk. Univ. 103: 147 (1902) (*Juno narbutii* (O.Fedtsch.) Vved.). Perennial, geophyte. Western Tien Shan, Pamir-Alay. Desert, Shrubland, Grassland. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** north slopes of Nuratau Mts., 23.04.1913, *Korovin 28* (TASH); Kyzylchali, 28.04.1913, *Korovin* (TASH); hills along the river Sanzar near town Jizzakh, 1–4.04.1921, *Korovin 4, 18* (TASH); 5–6 km west of the village Guzhum, 23.07.1937 *Demurina 718* (TASH); Nurata District, Kyzylcha State Farm, foothills, 07.04.1951, *Novikova* (TASH); Jizzakh Region, foothills, 28.03.1981, *Mukhina* (TASH); near the village Mulla, 28.03.1981, *Mukhina 81084–81086* (herbarium of the

Nuratau Nature Reserve); Kachaksay, 09.04.1981, *Mukhina* (TASH); near the village Mulla, 31.03.1984, *Petrochenko 84008–84011* (herbarium of the Nuratau Nature Reserve); foothills of Nuratau, 29.03.2009, *Beshko* (www.plantarium.ru); northern piedmont plain of Nuratau Range, 26.03.2011, *Beshko* (www.plantarium.ru); foothills of Nuratau, 26.03.2011, *Gaziev* (www.plantarium.ru); Pistalisay, 19.03.2013, *Tojibaev, Beshko, Shomurodov, Batashov* (TASH); Koshrabad District, plateau in the western part of Nuratau, near the village Jambulak, 08.04.2013, *Beshko* (TASH); northern piedmont plain of Nuratau Range (Farish Steppe), between villages Egiz-Bulak and Karatash, along the road P-36, 04.04.2014, *Beshko* (www.plantarium.ru); northern piedmont plain of Nuratau Range (Farish Steppe), surroundings of village Tulibay, 10.04.2014, *Beshko* (www.plantarium.ru); Jizzakh Region, Farish District, piedmont plain between villages Egiz-Bulak and Karatash, along the road P-36, 40.35441° N, 67.46771° E, 18.03.2019, *Beshko* (www.inaturalist.org); Jizzakh Region, Farish District, northern piedmont plain of Nuratau Range (Farish Steppe), 40.6431° N, 66.80458° E, 23.03.2024, *Beshko* (www.inaturalist.org). **I-4-b Aktau Range:** mountain slopes between the town Nurata and well Pashat, 24.04.1913, *Korovin 82* (TASH); Mt. Takhku-tau, 07.05.1913, *Korovin* (TASH); 2 km west of district center Nurata, 16.03.1963, *Markova* (TASH). **I-4-b Karatau Range:** western part of Karatau Range, 22.03.2013, *Beshko* (TASH); surroundings of Karakarga Pass, 03.04.2022, *Tojibaev, Jabborov, Madaminov* (TASH). **I-4-b Khobduntau Range:** foothills near Kuropatkino railway station, 30.03.1913, *Androssov* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistaltau, 08.04.1915, *Kultiasow 38, 58* (TASH); central part of Pistaltau, 18.03.2013, *Beshko* (www.plantarium.ru); mountains Egarbelistag, 04.04.2014, *Tojibaev, Beshko, Batashov* (TASH).

64. *Iris songarica* Schrenk, Enum. Pl. Nov. 1: 3 (1841). Perennial, hemicryptophyte. Irano-Turanian. Desert, Grassland. Plain, foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** Nurata, Kyzylchali, 28.04.2013, *Korovin* (TASH); Nurata, Khanbandy – Chuya, shistaceous mountain slopes, 02.05.1913, *Korovin 217* (TASH); between villages Dzhush and Ak-Chap, plain, 30.07.1928, *Yakimova, Moskvina 1283* (TASH); Kyzylcha State Farm, clayey desert, 07.05.1951, *Novikova* (TASH); plateau in the western part of Nuratau, near the village Midzhigan, 08.04.2013, *Beshko* (www.plantarium.ru); southern foothills of Nuratau, about 2 km south-east of village Koytash, 06.04.2019, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** Nurata, *Iris* steppe west of town, 23.04.1913, *Korovin 33* (TASH); Nurata, Kara-Yuzgan, 25.04.1913, *Korovin 96* (TASH); 7 km north-east of well Kyzylkuduk, 06.06.1956, *Li 319* (TASH); near the town Nurata, 24.05.1964, *Pryakhin* (TASH); well Uzunkuduk, 28.05.1968, *Khaydarov 1441* (TASH); Navoi Region, Nurata District, northern foothills of Aktau near the village Tutli, 20.07.2012, *Beshko* (TASH); Navoi Region, Nurata valley, 04.05.2013, *Beshko* (www.plantarium.ru). **I-4-b Karatau Range:** mountains Karakarga, 22.04.1913, *Korovin 1, 1a* (TASH); western part of Karatau Range, 22.03.2013, *Beshko* (TASH); northern foothills of Karatau Range, about 3 km west of Karakarga Pass, 04.05.2013, *Beshko* (www.plantarium.ru); Navoi Region, Nurata District, lower reaches of Sarmyshsay, 40.27136° N, 65.53278° E, 19.04.2024, *jeanjacquesgodon* (www.inaturalist.org); Bukhara Region, Gizhduvan District, western part of Karatau Range, about 370 m a.s.l., 40.4733° N, 65.10023° E, 21.04.2024, *Beshko* (www.plantarium.ru, www.inaturalist.org); Bukhara Region, Gizhduvan District, western part of Karatau Range, 40.40608° N, 65.13946° E, 21.04.2024, *Beshko* (www.inaturalist.org). **I-4-b Karachatau Range:** 2.5–3 km north-east of the village Yukary-Kariya, 06.07.1937, *Demurina 545* (TASH).

Asphodelaceae Juss.

Eremurus M.Bieb.

65. *Eremurus inderiensis* (M.Bieb.) Regel, Gartenflora 22: 259 (1873). Perennial, geophyte. Irano-Turanian, Siberian. Desert, Shrubland, Rocky areas. Plain, foothills. Rare. Native. **Occurrence records:** **I-4-b Karatau Range:** Gizhduvan District, 5 km west of Yangikuduk well, 21.05.1956, *Momotov 910* (TASH); Bukhara Region, Gizhduvan District, southern foothills of Karatau Range, about 400 m a.s.l., 40.46505° N, 65.1559° E, 13.04.2025, *Beshko* (field observation). **I-4-b Mt. Kokcha:** central part of Kokchatau, southern slope, 40.52625° N, 65.042361° E, 22.03.2013, *Beshko* (field observation); central part of Kokchatau, 11.04.2015, *Shomurodov et al.* (plant community description, published in “Coenopopulation of rare and endangered plant species of remnant low mountains of Kyzylkum”, 2018, p. 30–31).

66. *Eremurus nuratavicus* Khohkr., Erem. Cult.: 73 (1965). Perennial, geophyte. Nuratau (endemic). Shrubland, Grassland. Montane zone. Rare. Native. UzbRDB 1. **Occurrence records:** **I-4-a Nuratau Range:** Nuratau Nature Reserve, top of Mt. Hayatbashi, 02.06.2013, *Beshko* (TASH); Mt. Hayatbashi, 30.05.2016, *Beshko* (TASH); Nuratau Nature Reserve, upper part of northern slope of Nuratau near Mt. Hayatbashi, 30.05.2016, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, northern slope of Mt. Hayatbashi, 2130 m a.s.l. 40.49657° N, 66.721° E, 05.06.2022, *Beshko* (TASH); Nuratau Nature Reserve, upper part of northern slope of Nuratau near Mt. Hayatbashi, about 2140 m a.s.l., 05.06.2022, *Beshko* (www.plantarium.ru).

67. *Eremurus olgae* Regel, Gartenflora 22: 260 (1873). Perennial, geophyte. Hyrcanian, Mountain Middle Asian. Desert, Shrubland, Grassland, Rocky areas. Foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** Mts. Koytash, southern slope, 23.07.1931, *Kobranova 61* (TASH); 2–3 km south of the pass Karasay, 24.06.1937, *Demurina 269* (TASH); watershed, 12–13 km north-east of the village Urganchi, 26.07.1937, *Demurina 753* (TASH); north-west of the village Dzhush, 29.07.1937, *Mironov 46* (TASH); surroundings of town Jizzakh, Tamerlane's Gate, 10.06.1965, *Pryakhin 983* (TASH); Hayatsay gorge, 10.05.1969, *Mambetjumaev 174* (TASH); Karysay, 10.06.1982, *Mukhina 82033* (herbarium of the Nuratau Nature Reserve); Hayatsay, 14.06.1984, *Petrochenko 84087, 84088* (herbarium of the Nuratau Nature Reserve); Hayatsay, 20.06.1990, *Beshko, Yakovenko 90018* (herbarium of the Nuratau Nature Reserve); Mt. Parrandoz, 22.07.1992, *Beshko 92249–92251* (herbarium of the Nuratau Nature Reserve); Hayatsay, Andebaraut, 02.06.2006, *Beshko 06157* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 09.06.2006, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Karysay, 18.06.2007, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, watershed crest between Hayatsay and Andygensay, 20.06.2007, *Beshko* (www.plantarium.ru); upper reaches of Tykchasay, 21.06.2011, *Beshko* (www.plantarium.ru); Sobsay, 11.06.2013, *Beshko* (www.plantarium.ru); foothills of Nuratau, near the village Sartykan, 31.05.2016, *Beshko* (www.plantarium.ru); near the village Amandara, 18.06.2016, *Beshko* (www.plantarium.ru); Sobsay, 08.06.2018, *Beshko* (www.plantarium.ru); piedmonts of Nuratau Range, 15.06.2019, *Beshko* (www.plantarium.ru); upper reaches of Ustuksay, 12.07.2019, *Beshko* (www.plantarium.ru); foothills between the villages Egiz-Bulak and Amandara, 03.07.2020, *Beshko* (www.plantarium.ru); Navoi Region, Nurata District, near the village Simbulak, 31.05.2023, *Fateryga* (www.plantarium.ru); Navoi Region, Nurata District, upper reaches of Sobsay, near Sob Pass, 40.61059° N, 66.59388° E, 04.07.2024, *Beshko* (www.inaturalist.org); Navoi Region, Nurata District, Sobsay, 40.59759° N, 66.62088° E, 04.07.2024, *Azimov* (www.inaturalist.org); Samarkand Region, Koshrabad District, upper reaches of Ustuksay, 40.5345° N, 66.57053° E, 04.07.2024, *Azimov* (www.inaturalist.org). **I-4-b Aktau Range:** village Angudan, top of the main ridge, 10.06.1928, *Lepeschkin* (TASH); south-west of the pass Takilak, 08.07.1932, *Knorring* (MW); 2–3 km south of the village Kokbulak, 01.07.1937, *Demurina 85* (TASH); in the valley Kokbulak, 01.07.1937, *Demurina 416*, (TASH); south of the well Uzunkuduk, 02.08.1937, *Mironov 85, 87* (TASH); between villages Chuya and Langar, 13.07.1975, *Pimenov, Kljuykov, Baranova, Vassiljeva 746* (MW); piedmonts of the range Aktau, 10.06.2018, *Beshko* (www.plantarium.ru). **I-4-b Karatau Range:** Sarmysh, 05.06.1967,

Pryakhin (TASH). **I-4-b Khobduntau Range:** Mts. Khobduntau, north-western slopes, 30.07.1931, *Kobranova 106* (TASH).

68. *Eremurus pseudolactiflorus* Makhmudjanov & Beshko sp. nov. ined.² Perennial, geophyte. Nuratau (endemic). Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Nature Reserve, Mt. Hayatbashi, scree on the western slope, 07.05.1995, *Beshko 95064* (TASH); watershed Hayat – Fargun, 17.05.1995, *Beshko 95022–95026* (herbarium of the Nuratau Nature Reserve); watershed Hayat – Fargun, 15.05.2007, *Beshko 07015, 07016* (herbarium of the Nuratau Nature Reserve); watershed Hayat – Fargun, 22.05.2011, *Beshko 2011049* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, watershed of Hayatsay and Madjrumsay, 07.05.2012, *Beshko* (TASH); Navoi Region, northern slope of Nuratau, middle part of Sobsay, 08.05.2013, *Beshko* (TASH).

69. *Eremurus regelii* Vved., Trudy Sredne-Aziatsk. Gosud. Univ., Ser. 8b, Bot. 3: 3 (1928). Perennial, geophyte. Mountain Middle Asian. Shrubland, Grassland, Rocky areas. Montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Khanbandy – Chuya, shistaceous mountain slopes, 02.05.1913, *Korovin 216* (TASH); Koshrabad, Mt. Mirishkar, 05.05.1913, *Korovin 345* (TASH); Nuratau Range, Farish District, 05.05.1941, *Momotov 111* (TASH); Fazilmantau, 15.06.1969, *Mambetjumaev 202* (TASH); Mt. Parrandoz, 06.06.1984, *Petrochenko 84022, 84092* (herbarium of the Nuratau Nature Reserve); Tykchasay, 08.06.1992, *Beshko 92086, 92087* (herbarium of the Nuratau Nature Reserve); Ukhum Pass, 19.06.1992, *Beshko 92315* (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** Mt. Takhku-tau, 07.05.1913, *Korovin 430* (TASH); Yangokly, 19-21.05.1941, *Zakirov, Niyazov* (SAM).

70. *Eremurus robustus* (Regel) Regel, Gartenflora 22: 257 (1873). Perennial, geophyte. Mountain Middle Asian. Shrubland, Grassland, Rocky areas. Montane zone. Rare. Native. UzbRDB 3. **Occurrence records: I-4-a Nuratau Range:** Koshrabad, Mt. Mirishkar, 05.05.1913, *Korovin 318* (TASH); Ustakhansay, 17.06.1996, *S. Michel 96048* (herbarium of the Nuratau Nature Reserve).

71. *Eremurus soogdianus* (Regel) Benth. & Hook. f., Gen. Pl. 3: 787 (1883). Perennial, geophyte. Western Tien Shan, Western Pamir-Alay. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** watershed at upper reaches of Sentobsay, 27.07.1937, *Demurina 724* (TASH); Nuratau Range, Farish District, 15.05.1941, *Momotov* (TASH); Ustuksay, 18.05.1954, *Zaprometova 386* (TASH); Sentobsay, 26.05.1956, *Zaprometova* (TASH); Yangi-Hayat, 28.05.1969, *Mambetjumaev 88* (TASH); Mts. Koytash, Mt. Piyazli, 30.05.1976, *Pimenov, Kljuykov, Baranova, Vassiljeva 199, 271* (MW); Karysay, 19.05.1983, *Fominykh 83034, 83080* (herbarium of the Nuratau Nature Reserve); Hayatsay, 28.05.1990, *Beshko, Yakovenko 90019, 90020* (herbarium of the Nuratau Nature Reserve); Hayatsay, 09.06.1992, *Beshko 92084, 92085* (herbarium of the Nuratau Nature Reserve); Bolosay, 08.05.1992, *Beshko 92433* (herbarium of the Nuratau Nature Reserve); Hayatsay, Khotunon, 23.05.2006, *Beshko 06055* (herbarium of the Nuratau Nature Reserve); Sobsay, near Sob Pass, 07.06.2013, *Beshko* (www.plantarium.ru); Ustuksay, 08.06.2013, *Beshko* (www.plantarium.ru); Hayatsay, 30.05.2016, *Beshko* (www.plantarium.ru); Jizzakh Region, Farish District, Nuratau Nature Reserve, Hayatsay, 40.52159° N, 66.74548° E, 05.06.2022, *Beshko* (www.inaturalist.org). **I-4-b Aktau Range:** Aktau, near the village Langar, Yangokly, 21.05.1941, *Zakirov, Niyazov* (TASH, SAM); piedmont valley 2 km south-east of the village Kambay, 22.06.1937, *Demurina 265* (TASH); 8 km south-west of the village Chuya, 29.06.1937, *Demurina 307* (TASH); 2 km south-east of the village Chuya, 29.06.1937, *Demurina 348* (TASH); near the village

² In the Red Data Book of Uzbekistan (2009, 2019) this species was listed as *Eremurus lactiflorus*, in “Flora of Central Asia: the Nuratau Mountains” (Beshko, 2020) it was reported as *Eremurus hilariae*. Recent molecular-phylogenetic study showed that this is a new species closely related to *E. lactiflorus* and *E. hilariae*. The work is underway to describe this species (a draft manuscript is ready and will be submitted for publication soon).

Chuya, 01.08.1937, *Mironov* 72 (TASH); 10 km south-east of the town Nurata, northern slope of Bakhiltau, 23.05.1964, *Pryakhin* (TASH); Navoi Region, Nurata District, Charkhansay, 40.46265° N, 66.79945° E, 17.05.2024, *Beshko* (www.inaturalist.org); [same locality], 17.05.2024, *Beshko*, *Volis*, *Azimov*, *Sindirov* (TASH); Navoi Region, Nurata District, Ambarsay, 40.44556° N, 66.92941° E, 18.05.2024, *Beshko* (www.inaturalist.org); Navoi Region, Khatyrchi District, surroundings of the pass Langar, 40.34295° N, 66.01468° E, 18.05.2024, *Beshko* (www.inaturalist.org). **I-4-b Karatau Range:** 1 km north of the ruins of the village Sarmysh, 05.05.1965, *Momotov*, *Li* 162 (TASH); Sarmysh, 05.06.1967, *Pryakhin* (TASH); Navoi Region, Nurata District, Sarmyshsay, 40.29295° N, 66.60306° E, 15.05.2018, *Oboturov* (*qarbon*) (www.inaturalist.org).

72. *Eremurus turkestanicus* Regel, *Gartenflora* 22: 260 (1873). Perennial, geophyte. Western Tien Shan, Western Pamir-Alay. Shrubland, Grassland, Rocky areas. Montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Ukhum Pass, 16.05.1982, *Mukhina* 82034 (herbarium of the Nuratau Nature Reserve); Tykchasay, 08.06.1992, *Beshko* 92088 (herbarium of the Nuratau Nature Reserve); Bolosay, 13.05.2000, *Beshko* 00014, 00015 (herbarium of the Nuratau Nature Reserve); Hayatsay, Khotunon, 23.05.2006, *Beshko* 06046 (herbarium of the Nuratau Nature Reserve); Hayatsay, 22.05.2008, *Beshko* (www.plantarium.ru); Tykchasay, 11.05.2010, *Beshko* (www.plantarium.ru); watershed crest between valleys Hayatsay and Tykchasay, 02.06.2013, *Beshko* (www.plantarium.ru); Hayatsay, 26.05.2017, *Beshko* (www.plantarium.ru, www.inaturalist.org); Nuratau Nature Reserve, Karysay, Pubsay, 40.47995° N, 66.8074° E, 28.05.2023, *Beshko* (www.inaturalist.org).

Amaryllidaceae J.St.-Hil.

Allium L.

73. *Allium aktauense* F.O.Khass. & Esankulov, *Stapfia* 103: 97 (2015). Perennial, geophyte. Aktau (endemic). Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-b Aktau Range:** the pass Langar, north slopes, 01.05.2015, *Khassanov*, *Esankulov* (TASH); surroundings of the pass Langar, 18.05.2024, *Beshko*, *Volis*, *Azimov* (TASH).

74. *Allium altissimum* Regel, *Trudy Imp. S.-Peterburgsk. Bot. Sada* 8: 666 (1884). Perennial, geophyte. Hyrcanian, Mountain Middle Asian. Forest, Wetlands (inland). Montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** the gorge Gurdara near the village Sarymsak, 23.06.1971, *Kamelin*, *Botschantzev* (LE); surroundings of the village Sentob, 24.06.1971, *Botschantzev*, *Kamelin* (LE); upper reaches of Ustuksay, 17.05.1983, *Zuckerwanik* 380 (TASH); Hayatsay, 05.06.1983, *Petrochenko* 83002 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 05.07.1995, *Beshko* (TASH); Hayatsay, 20.05.2006, *Beshko* (www.plantarium.ru); Hayatsay, 17.05.2007, *Beshko* (www.plantarium.ru); Hayatsay, 29.05.2016, *Uralov* (www.plantarium.ru); Madjrumsay, 20.05.2017, *Beshko* (www.plantarium.ru); Hayatsay, 30.08.2020, *Beshko* (www.plantarium.ru).

75. *Allium barszewskii* Lipsky, *Trudy Imp. S.-Peterburgsk. Bot. Sada* 18: 114 (1900). Perennial, geophyte. Irano-Turanian. Shrubland, Grassland, Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** northern slope of Mts. Koytash, south of the central estate of the Kirov collective farm, 20.06.1971, *Botschantzev*, *Kamelin* 260 (LE); near the pass Parrandoz, 11.05.2010, *Beshko* (www.plantarium.ru); Koshrabad District, main watershed of Nuratau Range, between Sentobsay and Ustuksay, 11.06.2013, *Beshko* (TASH); stony slopes of Mt. Kichik Fazilman near the Fazilman Lake, 06.05.2020, *Akbarov*, *Turdiyev*, *Juramurodov* 6052020104 (TASH). **I-4-b Aktau Range:** between Langar and Tutaksay, 09.06.1951, *Neustrujeva-Knorr*, *Cvetkova* 210 (LE).

76. *Allium borszczowii* Regel, Acta Horti Petropolit. 3(2): 74 (1875). Perennial, geophyte. Turanian. Desert, Shrubland. Plain, foothills. Rare. Native. **Occurrence records: I-4-b Karatau Range:** Bukhara Region, Gizhduvan District, Nuratau mountains, western part of Karatau Range, 25.05.2024, Beshko (TASH, www.plantarium.ru).
77. *Allium caeruleum* Pall., Reise Russ. Reich 2: 737 (1773). Perennial, geophyte. Euro-Siberian, Irano-Turanian. Shrubland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Northern slope of Mts. Koytash, south of the central estate of the Kirov collective farm, 20.06.1971, Botschantzev, Kamelin 229 (LE); Nuratau Nature Reserve, Madjrumsay, 29.05.2016, Beshko (www.plantarium.ru).
78. *Allium caesium* Schrenk, Bull. Cl. Phys.-Math. Acad. Imp. Sci. Saint-Pétersbourg 2: 113 (1844). Perennial, geophyte. Altay, Middle Asian. Forest, Shrubland, Rocky areas, Wetlands (inland). Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** gorge Gurdara in surroundings of the village Sarymsak, 23.06.1971, Botschantzev, Kamelin 318 (LE); Mts. Koytash, upstream of the village Shurkundi, 25.05.1938, Baranov 4 (TASH); Tykchasay, 28.05.1983, Fominykh 83033 (herbarium of the Nuratau Nature Reserve); Tykchasay, 17.04.1984, Petrochenko 84087 (herbarium of the Nuratau Nature Reserve); Hayatsay, 22.06.1992, Beshko 92362, 92363 (herbarium of the Nuratau Nature Reserve); Hayatsay, Andebaraut, 22.05.2006, Beshko 06328, 06329 (herbarium of the Nuratau Nature Reserve); Karysay, Pubsay, 20.06.2009, Beshko 09033 (herbarium of the Nuratau Nature Reserve); upper reaches of Hayatsay, Alichak, 27.06.2012, Beshko (TASH).
79. *Allium cupuliferum* Regel, Trudy Imp. S.-Peterburgsk. Bot. Sada 3(2): 234 (1875). Perennial, geophyte. Nuratau, Kuhistan (subendemic). Shrubland, Grassland, Rocky areas. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** mountains near Tamerlane's Gate gorge, left bank of river Sanzar, 03.05.1921, Kultiasow (TASH); Nuratau Range, Farish District, 20.05.1941, Momotov (TASH); Mt. Zargar, 2 km north-east of the village Urtasay, 11.05.1957, Momotov, Li 238 (TASH); 2 km north of Saurbel Pass, 27.04.1958, Li, Zakirov 151 (TASH); 3 km south-east of the village Upper Ukhum on the way to Ukhum Pass, 29.04.1958, Li, Zakirov 229 (TASH); Tykchasay, 3–7 km south of the village Upper Ukhum, 02.05.1958, Li, Zakirov 284 (TASH); Sentob, 0.5 km south of the village Yukary-Kurgan, 11.05.1958, Li, Zakirov 486 (TASH); eastern part of Nuratau Range, along the road Farish – Karabagana, 20 km from Farish, 17.05.1961, Vlasova (TASH); gorge Alichaksay, 26.05.1969, Mambetjumaev 43 (TASH); gorge Gurdara near the village Sarymsak, 23.06.1971, Kamelin, Botschantzev (LE); Hayatsay, 15.05.1984, Petrochenko 84016–84018 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Bolosay, 26.04.1992, Beshko 284 (TASH); Gurdara, 08.06.1994, Beshko 94055, 94056 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 05.05.2006, Beshko (www.plantarium.ru); Nuratau Nature Reserve, Tykchasay, 25.04.2007, Beshko (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, Novi Khushk, 06.05.2012, Beshko (TASH); upper reaches of Sobsay, 09.05.2013, Beshko (TASH); Nuratau Nature Reserve, Madjrumsay, 18.04.2019, Beshko (www.plantarium.ru); Nuratau Nature Reserve, northern slope of Mt. Hayatbashi, 1950 m a.s.l., 19.05.2021, Beshko, Madaminov NB2021235 (TASH); Nuratau Nature Reserve, Hayatsay, 05.05.2020, Akbarov, Turdiev, Juramurodov 5052020053 (TASH); surroundings of village Ukhum, Ukhumsay, 05.05.2020, Akbarov, Turdiev, Juramurodov 5052020058 (TASH); Nuratau Nature Reserve, Hayatsay, Novi Khushk, 14.05.2024, Beshko (TASH). **I-4-b Aktau Range:** near the village Andak, 01.05.1925, Popov 28; mountains Bakhiltai, 10.05.2013, Beshko (TASH); mountains Bakhiltai, Charkhansay, about 900 m a.s.l., 10.05.2013, Beshko (www.plantarium.ru); Kattasay, 07.05.2020, Akbarov, Turdiev, Juramurodov 7052020146 (TASH). **I-4-c North-Nuratau insular low mountains:** piedmonts of Egarbelistag, near the Carbonat JSC quarry, 03.05.2013, Tojibaev, Beshko, Batashov, Azimova (TASH).

80. *Allium drepanophyllum* Vved., Byull. Sredne-Aziatsk. Gosud. Univ. 19: 120 (1934). Perennial, geophyte. Western Tien Shan, Western Pamir-Alay. Desert, Shrubland, Grassland, Rocky areas. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** north slopes of Nuratau Mts., 23.04.1913, *Korovin 30* (TASH); Nurata, Kyzylchali, 28.04.1913, *Korovin 135, 139* (TASH); Mts. Koytash, Bogdon – Farish, 19.06.1931, *Kobranova* (TASH); 4 km south of the village Tolubay, 16.04.1962, *Karimov* (TASH). **I-4-b Aktau Range:** mountain slopes between the town Nurata and well Pashat, 24.04.1913, *Korovin 82* (TASH); mountains Aktau (Bakhiltau), 05.04.1963, *Khaydarov 705* (TASH); north-west of district center Nurata, 13.04.1964, *Markova* (TASH); upper reaches of river Bitau, 26.05.1964, *Zuckerwanik 228, 240* (TASH). **I-4-b Karatau Range:** 2.5 km south-west of the ruins of the village Sarmysh, 06.05.1955, *Momotov, Li 182* (TASH).

81. *Allium eremoprasum* Vved., Bot. Mater. Gerb. Glavn. Bot. Sada R.S.F.S.R. 5: 92 (1924). Perennial, geophyte. Aktau, Zirabulak-Ziadin Mts. (subendemic). Rocky areas. Foothills, montane zone. Rare. Native. UzbRDB 2. **Occurrence records: I-4-b Aktau Range:** between Langar and Tutaksay, 09.06.1951, *Neustrujeva-Knorring, Cvetkova 70* (LE); the pass Tikalik, 14.06.1951, *Gorokhova* (TASH); near the well Charkhana, 29.05.1963, *Khaydarov 1627* (TASH); mountains Bakhiltau, 10.05.2013, *Beshko* (TASH); mountains Bakhiltau, Charkhansay, 10.05.2013, *Beshko* (www.plantarium.ru); northern slope of Aktau Range, Charkhansay, about 770 m a.s.l., stony slope, 17.05.2024 *Beshko* (www.plantarium.ru, www.inaturalist.org); surroundings of the pass Langar, 18.05.2024, *Beshko, Volis, Azimov* (TASH).

82. *Allium filidens* Regel, Trudy Imp. S.-Peterburgsk. Bot. Sada 3(2): 174 (1875). Perennial, geophyte. Middle Asian. Desert, Shrubland, Grassland, Rocky areas. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** northern slope of Mts. Koytash near the village Karatash, 25.05.1914, *Mikhelson* (LE); Farish District, 23.05.1941, *Momotov* (TASH); Sentob, 0.5 km south of the village Yukary-Kurgan, 11.05.1958, *Li, Zakirov 487* (TASH); gorge Gurdara near the village Sarymsak, 23.06.1971, *Botschantzev, Kamelin 365* (LE); Hayatsay gorge, 10.06.1969, *Mambetjumaev 176* (TASH); surroundings of village Sentob, 24.06.1971, *Botschantzev, Kamelin 419* (LE); 2–3 km south-west of the village Kulbasay, 27.06.1973, *unknown collector* (TASH); Navoi Region, Kichiksay, 19.06.2002, *Beshko 02116* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 30.05.2006, *Beshko* (www.plantarium.ru); Hayatsay, Novi Khushk, 07.06.2006, *Beshko 06180, 06181* (herbarium of the Nuratau Nature Reserve); piedmont plain of Nuratau Range, between the village Osmansay and Yangiabad, 8 km north of Osmansay, 13.05.2012, *Beshko* (TASH); Nuratau Nature Reserve, Hayatsay, Andebaraut, 25.06.2012, *Beshko* (TASH); Sobsay, 2 upstream of the village Sob, 08.05.2013, *Beshko* (TASH); Nuratau Nature Reserve, Madjrumsay, 29.05.2016, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** near the village Shamaly, 29.05.1925, *Popov 337* (TASH); Kshi-Angudan, 10.06.1928, *Lepeschkin*; Tutaksay, 17.06.1951, *Neustrujeva-Knorring, Cvetkova 279* (LE). **I-4-b Khobduntau Range:** plain between mountains Khobduntau and Karachatau, 2 km west of Kuropatkino railway station, 14.06.1929, *Kudrjashev* (TASH). **I-4-b Mt. Kokcha:** Mt. Kokcha, 07.08.1934, *Sakhobutdinov, Neuymina 84* (TASH).

83. *Allium griffithianum* Boiss., Diagn. Pl. Orient., ser. 2, 4: 117 (1859). Perennial, geophyte. Irano-Turanian. Plain, foothills, montane zone. Desert, Shrubland, Grassland, Rocky areas. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Urganchi, 01.05.1913, *Korovin, Vvedensky 169* (TASH); Dzhush – Koshrabad, *Iris* steppe, 03.05.1913, *Korovin 250b* (TASH); plain north of the spring Yangaly, 10.05.1939, *Mikhaylova, Popova* (TASH); Mt. Piyazli, 24.04.1941, *Bukasov* (TASH); valley 2.5 km south-east of Kyzylcha state farm, 27.04.1954, *Zaprometova* (TASH); Koblatysay, 06.05.1957, *Zaprometova* (TASH); Mt. Zargar 2 km north-east of the village Urtasay, 11.05.1957, *Momotov, Li 238a* (TASH); Mt. Zargar, 3 km north-east of the village Urtasay, 11.05.1957, *Momotov, Li 246* (TASH); Gatchasay, 13.04.1958, *Zaprometova 427* (TASH); 2 km west of the village Shurcha,

26.04.1958, *Li, Zakirov 57* (TASH); 4 km north-east of the village Deristan, 28.04.1958, *Li, Zakirov* (TASH); 5 km south-east of the village Upper Ukhum, near Ukhum Pass, south-south-east of the village Hayat, 30.04.1958, *Li, Zakirov 269* (TASH); 6 km south of the village Upper Ukhum, 03.05.1958, *Li, Zakirov 306* (TASH); near the pass through Pistalisay, 07.05.1958, *Li, Zakirov 410* (TASH); 3 km south of the village Midzhigan, 15.05.1958, *Li, Zakirov 584* (TASH); Uruskuduk, 25.04.1963, *Khaydarov 1122* (TASH); Gallaaral State Farm-2, eastern part of Nuratau Range, southern slopes of Mts. Koytash, 14.05.1967, *Uzgiprozem, pasture department* (TASH); Hayatsay gorge, 30.05.1969, *Mambetjumaev 117* (TASH); foothills near the village Mulla (behind Eski Farish), 25.04.1979, *Kreuzberg* (TASH); north slope of Nuratau Range south-west of town Jizzakh, Tamerlane's Gate, 26.04.1979, *Pimenov, Kljuykov, Boryaev, Baranova, Vassiljeva 52* (MW); Mt. Parrandoz, 19.05.1983, *Fominykh 83031* (herbarium of the Nuratau Nature Reserve); Madjrumsay, 09.05.1984, *Petrochenko 84014, 84015* (herbarium of the Nuratau Nature Reserve); Karysay, Pubsay, 06.06.1990, *Beshko, Yakovenko 90015* (herbarium of the Nuratau Nature Reserve); Bolosay, 26.04.1992, *Beshko 92307, 92308* (herbarium of the Nuratau Nature Reserve); lower reaches of Sanguzarsay (Nurata State Farm), 07.05.1992, *Beshko 92449* (TASH); near the village Eski Forish, 29.04.1996, *H. Ulrich 96018* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Tykchasay, 25.04.2007, *Beshko* (www.plantarium.ru); foothills of Nuratau between villages Uchma and Safarota, 19.04.2012, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, Andebaraut, 25.06.2012, *Beshko* (TASH); Hayatsay, 05.05.2020, *Akbarov, Turdiev, Juramurodov 5052020014* (TASH). **I-4-b Aktau Range:** stony slopes in the valley Kokbulak, 01.07.1937, *Demurina 411* (TASH); 3–6 km from district center Nurata, 13.04.1963, *Markova* (TASH); Koshrabad II state farm, surroundings of the village Kadak, 16.04.1963, *unknown collector* (TASH); mountains Bakhiltai, 15.04.1963, *Khaydarov 366* (TASH); the spring Bitav, 18.04.1963, *Khaydarov* (TASH); Kattasay, 07.05.2020, *Akbarov, Turdiev, Juramurodov 7052020157* (TASH). **I-4-b Karatau Range:** valley Bakachinak, 05.05.1955, *Momotov, Li 122* (TASH); 2.5 km south-west of the ruins of the village Sarmysh, 06.05.1955, *Momotov, Li 132* (TASH); valley Karakarga, 15.09.2012, *Tojibaev, Karimov, Batashov* (TASH). **I-4-b Karachatau Range:** 2.5–3 km north-east of the village Yukary-Kariya, 06.07.1937, *Demurina 538* (TASH); 2 km east of the village Kursafar, 08.07.1937, *Demurina 462* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 07.04.1911, *Dimo, Sprygin, Shulga 1120* (LE); western slopes of mountains Pistalitau, 12.04.1915, *Spiridonov 82* (LE); between lake Tuzkan and the village Kok-Tyube, 09.04.1911, *Dimo, Sprygin, Shulga 1115* (TASH); Pistalitau, 07.04.1915, *Kultiasow 28* (TASH); southern piedmonts of remnant mountains Pistalitau, 26.04.2020, *Beshko* (www.plantarium.ru).

84. *Allium gusaricum* Regel, Trudy Imp. S.-Peterburgsk. Bot. Sada 10: 349 (1887). Perennial, geophyte. Nuratau, Kuhistan (subendemic). Rocky areas. Montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** Mts. Koytash, 28.05.1941, *Lepeschkin* (TASH); 2 km south of the village Ustakhan, 25.05.1958, *Li, Zakirov 812* (TASH); Hayatsay, ascent to Mt. Hayatbashi, 26.07.1982, *Shermatov, Kazakbaev, Levichev, Tagaev 81* (TASH); watershed Hayat – Andygen, 18.07.1992, *Beshko 92190* (TASH); Nuratau Nature Reserve, upper reaches of Hayatsay, 20.06.2007, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, Andebaraut, 25.06.2012, *Beshko* (TASH); upper reaches of Hayatsay, Alichak, 27.06.2012, *Beshko* (TASH); Nuratau Nature Reserve, Hayatsay, 27.06.2012, *Beshko* (www.plantarium.ru); middle reaches of Sobsay, 11.06.2013, *Beshko* (TASH); Nuratau Nature Reserve, watershed of Hayatsay, 1335 m a.s.l., 16.06.2019, *Beshko* (TASH). **I-4-b Aktau Range:** near the village Andak, 01.05.1925, *Popov 22* (TASH); mountains Aktau, 28.05.1963, *Khaydarov 1483* (TASH).

85. *Allium habibii* F.O.Khass., Oprod. Rast. Sred. Azii 11: 453 (2015). Perennial, geophyte. Aktau (endemic). Shrubland, Rocky areas. Montane zone. Rare. Native. **Occurrence records:** **I-4-b Aktau Range:** Bakhiltai, 15.05.2010, *Shomurodov* (TASH).

86. *Allium inconspicuum* Vved., Bot. Mater. Gerb. Glavn. Bot. Sada R.S.F.S.R. 5: 93 (1924). Perennial, geophyte. Western Tien Shan, Western Pamir-Alay. Shrubland, Rocky areas. Foothills. Rare. Native. **Occurrence records:** **I-4-b Aktau Range:** surroundings of Nurata, stony slope, 14.05.1957, *Momotov, Li* 388 (TASH). **I-4-b Karatau Range:** valley Karakarga, below Karakarga Pass, 11.05.2014, *Tojibaev and others* (TASH). **I-4-b Mt. Kokcha:** remnant mountain Kokcha, 14.04.1938, *Granitov, Evstafiev* (TASH). **I-4-c North-Nuratau insular low mountains:** remnant mountain Egarbelistag, near the Carbonat JSC quarry, 03.05.2013, *Tojibaev, Beshko, Batashov, Azimova* (TASH).

87. *Allium isakulii* R.M.Fritsch & F.O.Khass., Pl. Life S.-W. & C. Asia 5: 65 (2000). Perennial, geophyte. Nuratau Mts., Mogoltau Range (subendemic). Shrubland, Rocky areas. Foothills, montane zone. Rare. Native. UzbRDB 1. **Occurrence records:** **I-4-a Nuratau Range:** Mts. Koytash, between Sarymsakly and Tutly, 29.05.1940, *Gomolitsky, Dolgikh* 82 (TASH); pass 2–3 km south-east of Kyzylcha State Farm, 20.05.1955, *Zaprometova* (TASH); Gatchasay, 31.05.1957, *Zaprometova* (TASH); Sharaussay, 04.06.1957, *Zaprometova* (TASH); southern slopes in upper reaches of Parrandozsay, on the way to Ukhum, 31.05.1964, *Zuckerwanik* 419 (TASH); Nuratau Nature Reserve, 15.05.1983, *Fominykh* (TASH); watershed Hayat – Andygen, 13.06.1990, *Beshko, Yakovenko* 90017 (herbarium of the Nuratau Nature Reserve); watershed Hayat – Andygen, 12.06.1992, *Beshko* (TASH); watershed Hayat – Andygen, 13.07.1994, *Beshko* 94099 (herbarium of the Nuratau Nature Reserve); watershed Hayat – Andygen, 05.06.2006, *Beshko* 06119, 06120 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Madjrumsay, 29.05.2016, *Beshko* (TASH); Nuratau Nature Reserve, Madjrumsay, 20.05.2017, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** 3 km south of the spring Pashat, 04.06.1936, *Kharchenko* (TASH); near the well Charkhana, 29.05.1963, *Khaydarov* 1660 (TASH); sources of the river Bitau, 27.05.1964, *Zuckerwanik* 269 (TASH); east of the town Nurata, valley Ingichka, 12.07.1970, *Botschantzev* (LE); mountains Bakhiltai, 10.05.2013, *Beshko* (TASH); Navoi Region, Nuratau mountains, northern slope of Aktau Range, Charkhansay, about 690 m a.s.l., 17.05.2024, *Beshko* (www.plantarium.ru); [same locality], 17.05.2024, *Beshko, Volis, Azimov, Sindirov* (TASH). **I-4-b Karatau Range:** valley Karakarga, descent from Karakarga Pass, 04.05.2013, *Tojibaev, Beshko, Batashov, Azimova* (TASH).

88. *Allium jodanthum* Vved., Opred. Rast. Sred. Azii 2: 312 (1971). Perennial, geophyte. Western Tien Shan, Western Pamir-Alay. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** Ustuksay, 03.06.1954, *Burygin* 338 (TASH); piedmont plain between Yangikishlak and Ukhum, 04.05.1958, *Li, Zakirov* 521 (TASH); 7 km south-east of the farmstead of Kirov state farm, plain between Pistalitau and Nuratau, 28.05.1958, *Li, Zakirov* 839 (TASH); upper reaches of Ustuksay, surroundings of Fazilman Lake, 28.05.1964, *Zuckerwanik* 335 (TASH); Mt. Parrandoz, 06.06.1984, *Petrochenko* 84012, 84013 (herbarium of the Nuratau Nature Reserve); Karysay, Pubsay, 06.06.1990, *Beshko, Yakovenko* 90024 (herbarium of the Nuratau Nature Reserve); watershed Hayat – Andygen, 12.06.1992, *Beshko* 92172 (herbarium of the Nuratau Nature Reserve); Asrafsay, 04.06.1996, *Beshko* 96104 (herbarium of the Nuratau Nature Reserve); Madjrumsay, upper reaches of Fargun, 15.05.2007, *Beshko* 07013 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, upper reaches of Andygensay, Sukhta, 15.05.2007, *Beshko* (www.plantarium.ru); foothills near the village Sayyod, 12.05.2012, *Beshko* (TASH); Talabaysay, left tributary of Kulbasay, 8 km south-west of Yangikishlak, 27.05.2012, *Beshko* (TASH); Nuratau Nature Reserve, Hayatsay, 30.05.2016, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Mt. Hayatbashi, 2145 m a.s.l., 19.05.2021, *Beshko, Madaminov* NB2021242 (TASH).

89. *Allium kysylkumi* Kamelin, Bot. Zhurn. 65: 1459 (1980). Perennial, geophyte. Kyzylkum Relic Mountains, Aktau (subendemic). Desert, Shrubland. Plain, foothills. Rare. Native. **Occurrence records:** **I-4-b Aktau Range:** mountains Aktau near the village Shamaly, 24.05.1925, *Popov* 337 (TASH). **I-4-b Karatau Range:** surroundings of Kanimekh, 7 km north, 15.07.1934, *Tyshchenko* 180 (TASH); hills

6 km north of Kanimekh, 12.08.1937, *Anfilov, Ivanova 45a* (TASH); surroundings of the well Yangi, 15 km north of the village Kanimekh, 24.04.1965, *Adylov, Shorakhimov 2472* (TASH). **I-4-b Mt. Kokcha:** Mt. Kokcha, 17.08.1934, *Sakhobutdinov, Neuymina 849* (TASH); southern slope of remnant mountain Kokchatau, 24.04.1965, *Adylov, Shorakhimov 2482* (TASH).

90. *Allium longicuspis* Regel, Trudy Imp. S.-Peterburgsk. Bot. Sada 3(2): 45 (1875). Perennial, geophyte. Hyrcanian, Mountain Middle Asian. Forest, Shrubland, Rocky areas, Wetlands (inland). Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** gorge Gurdara near the village Sarymsak, 23.06.1971, *Botschantzev, Kamelin 335* (LE); upper reaches of Ustuksay, 10.06.2013, *Beshko* (TASH); Nuratau Nature Reserve, Hayatsay, 05.05.2020, *Akbarov, Turdiev, Juramurodov 5052020039* (TASH); Nuratau Nature Reserve, Gurdara, 24.04.2025, *Beshko, Khabibullaev* (TASH).

91. *Allium nuratavicum* (R.M.Fritsch & Beshko) Beshko (*Allium cupuliferum* subsp. *nuratavicum* R.M.Fritsch & Beshko), Biodivers., Conservation & Sustain 2: 406 (2022). Perennial, geophyte. Nuratau (endemic). Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Sentobsay, 14.05.1995, *Beshko* (TASH, GAT); upper reaches of Sentobsay, main watershed, 24.06.1996, *Beshko 96044* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Mt. Hayatbashi, 07.07.1998, *Beshko 98053* (TASH); upper reaches of Hayatsay, Alichak, 15.05.2007, *Beshko 07014* (herbarium of the Nuratau Nature Reserve, www.plantarium.ru).

92. *Allium oreodictyum* Vved., Byull. Sredne-Aziatsk. Gosud. Univ. 19: 119 (1934). Perennial, geophyte. Western Pamir-Alay. Shrubland, Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Kyzylcha State Farm, 2 km south-east of the village Balga-Bay, 14.05.1958, *Makarchuk 27* (TASH); northern slope of Mts. Koytash, south of the central estate of the Kirov collective farm, 20.06.1971, *Botschantzev, Kamelin 241* (LE, TASH). **I-4-b Aktau Range:** Tutak, 22.06.1951, *Gorokhova* (TASH).

93. *Allium popovii* Vved., Trudy Turkestansk. Nauchn. Obshch. 1: 124 (1923). Perennial, geophyte. Western Tien Shan, Western Pamir-Alay. Desert, Shrubland, Grassland, Rocky areas. Plain, foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** near Kyzylcha State Farm, 24.05.1928, *Lepeschkin* (TASH); near the well Uruskuduk, 25.04.1963, *Khaydarov 1117* (TASH); Kyzylcha State Farm, 1.5 km from the village Gillagan, 27.05.1963, *Makarchuk* (TASH); piedmont plain near Kyzylcha State Farm, 06.04.1964, *Markova* (TASH); piedmont sagebrush desert near Kyzylcha State Farm, 14.07.1964, *Vvedensky 118* (TASH); Koblatysay, 15.06.2019, *Beshko* (TASH). **I-4-b Aktau Range:** 3 km south-east of the spring Pashat, 04.06.1936, *Kharchenko 1202* (TASH); near the village Chuya, 01.08.1937, *Petrov 62* (TASH). **I-4-b Karatau Range:** hills 6 km north of Kanimekh, 12.08.1937, *Anfilov, Ivanova 45* (TASH); Bukhara Region, Gizhduvan District, Nuratau mountains, western part of Karatau Range, 25.05.2024, *Beshko* (TASH, www.plantarium.ru).

94. *Allium praemixtum* Vved., Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk S.S.S.R. 9: 241 (1946). Perennial, geophyte. Western Tien Shan, Western Pamir-Alay. Rocky areas. Montane zone. Occasional. Native. UzbRDB 1. **Occurrence records: I-4-a Nuratau Range:** gorge Gurdara near the village Sarymsak, 23.06.1971, *Kamelin, Botschantzev* (LE); Gurdara, 19.05.1995, *Beshko 95103* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Gurdara, 03.05.2012, *Beshko* (TASH); Mts. Koytash, Mt. Piyazli, May 2013, *Batashov* (TASH); Nuratau Nature Reserve, gorge Gurdara, 10.04.2013, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, lower reaches of Madjrumsay, in the lateral dry valley upstream of Archasay, 25.03.2016, *Beshko* (TASH). **I-4-b Aktau Range:** east of town Nurata, valley Ingichka, 12.07.1970, *Botschantzev 134* (LE); mountains Bakhiltai, 10.05.2013, *Beshko* (TASH); Ambarsay, 10.06.2018, *Beshko* (www.plantarium.ru); northern slope of Aktau Range, Charkhansay, about 800 m a.s.l., 17.05.2024, *Beshko* (www.plantarium.ru); [same locality], 17.05.2024, *Beshko, Volis, Azimov, Sindirov* (TASH).

95. *Allium protensum* Wendelbo (*Allium schubertii* Zucc.), Bot. Not. 121: 276 (1968). Perennial, geophyte. Middle Asian. Shrubland, Rocky areas. Foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** surroundings of the well Kozybay, 05.05.1939, *Mikhaylova, Popova* (TASH); Kyzylcha State Farm, Ukansay, 17.04.1951, *Novikova* (TASH); Kyzylcha State Farm, 17.04.1951, *Novikova* (TASH); Kichiksay, 20.06.2002, *Beshko 02110* (herbarium of the Nuratau Nature Reserve). **I-4-b Mt. Kokcha:** southern slope of remnant mountain Kokchatau, 18.05.1964, *Adylov, Shorakhimov 2404* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 07.04.1915, *Kultiasow 38* (TASH); mountains Balyklitau south of the village Chimkurgan, 31.05.1958, *Vvedensky, Nabiev* (TASH); Pistalitau, 20.04.2012, *Batashov* (TASH).
96. *Allium stephanophorum* Vved., Bot. Mater. Gerb. Glavn. Bot. Sada R.S.F.S.R. 5: 94 (1924). Perennial, geophyte. Western Tien Shan, Western Pamir-Alay. Shrubland, Grassland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** mountains near Jizzakh, 01.05.1921, *Kultiasow* (TASH); Mts. Koytash, 2-3 km to north-west of the village Kokbulak, 18.07.1937, *Demurina 596* (TASH); Mts. Koytash, west of the village Jizzaklik, near Bereshek, 28.05.1940, *Gomolitsky, Dolgikh 41* (TASH); Nuratau Range, Farish District, 23.05.1941, *Momotov* (TASH); Gatchasay, 16.05.1955, *Zaprometova* (TASH); the pass 3 km south-east of Kyzylcha State Farm, 20.05.1955, *Zaprometova* (TASH); west of the village Ustakhan, 25.05.1958, *Li, Zakirov* (TASH).
97. *Allium stipitatum* Regel, Trudy Imp. S.-Peterburgsk. Bot. Sada 7: 546 (1881). Perennial, geophyte. Irano-Turanian. Forest, Shrubland, Grassland, Wetlands (inland). Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Kichiksay, 15.06.1956, *Zaprometova 221* (TASH); Alichaksay, 24.05.1969, *Mambetjumaev 42* (TASH); upper reaches of Bolosay, 24.05.1995, *Beshko 95092, 95093* (TASH, herbarium of the Nuratau Nature Reserve). **I-4-b Khobduntau Range:** Gumsay, 2 km from the village Khobdun, 27.06.1929, *Kudrjashev* (TASH).
98. *Allium suworowii* Regel, Gartenflora 30: 356 (1881). Perennial, geophyte. Mountain Middle Asian. Forest, Shrubland, Grassland, Rocky areas, Wetlands (inland), Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** 3 km south of Saurbel Pass, 26.04.1958, *Li, Zakirov 94* (TASH); south-west of town Jizzakh, gorge of river Sanzar, 26.04.1979, *Pimenov, Kljuykov, Boryaev, Baranova, Vassiljeva 37* (MW); Yangikishlak, near the office of Nuratau Nature Reserve, 12.04.1998, *Beshko 98003* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Bolosay, 28.04.1998, *Beshko 98015* (TASH); Yongoklisay, 27.04.2006, *Beshko* (www.plantarium.ru); Ilonchisay, 29.04.2011, *Beshko* (www.plantarium.ru); upstream of the village Katta Bogdon, near the summer camp «Zangori Olov», 12.05.2012, *Beshko* (TASH); Koshrabad District, near the village Aktash, 06.05.2020, *Akbarov, Turdiev, Juramurodov 6052020140* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 07.04.1911, *Dimo, Sprygin, Shulga* (TASH); Pistalitau, 18.04.2012, *Batashov* (TASH).
99. *Allium svetlanae* Vved., Bot. Mater. Gerb. Inst. Bot. Akad. Nauk Uzbeksk. S.S.R. 20: 40 (1982). Perennial, geophyte. Nuratau (endemic). Wetlands (inland), Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Ustuksay, 12.07.1956, *Vvedensky 87* (TASH, LE); middle reaches of Ustuksay, 09.06.2013, *Beshko* (TASH, www.plantarium.ru); Ustuksay, 1400 m a.s.l., 04.07.2024, *Beshko* (TASH, www.plantarium.ru).
100. *Allium taeniopetalum* Popov & Vved., Byull. Sredne-Aziatsk. Gosud. Univ. 19: 130 (1934). Perennial, geophyte. Western Tien Shan, Western Pamir-Alay. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, 28.05.1941, *Lepeschkin* (TASH); Mt. Piyazli, 24.04.1941, *Bukasov* (TASH); Kyzylcha State Farm, 01.05.1951, *Novikova* (TASH); Kyzylcha State Farm, valley near state farm, 17.04.1958, *Galkina* (TASH); Ambulatory valley, the pass, 20.05.1960, *Zaprometova 188* (TASH); Koshrabad

State Farm, 11.05.1963, *unknown collector* (TASH); Kansay [Ukansay], 09.05.1966, *Markova* (TASH); southern slopes of Ustuksay, grown in Tashkent botanical garden, 03.05.1967, *Filimonova 84* (TASH); Madjrumsay gorge, 19.06.1969, *Mambetjumaev 216* (TASH); northern slope of Nuratau Range, the gorge Gurdara near the village Sarymsak, stony slopes and rocks, 23.06.1971, *Botschantzev, Kamelin 344* (LE); near the village Koytash, 28.06.1971, *Botschantzev, Kamelin 598* (LE); Hayatsay, 07.1976, *Abrazimov* (LE); Nuratau Nature Reserve, Parrandoz, 09.06.1982, *Mukhina* (TASH); Hayatsay, 28.05.1990, *Beshko, Yakovenko 90016* (herbarium of the Nuratau Nature Reserve); watershed Hayat – Andygen, 12.05.1992, *Beshko 92173* (herbarium of the Nuratau Nature Reserve); Gurdara, 07.06.1994, *Beshko 94042, 94043* (herbarium of the Nuratau Nature Reserve); Bolosay, 24.05.1995, *Beshko 95100* (herbarium of the Nuratau Nature Reserve); upper reaches of Kyzylkiyasay, 06.06.2009, *Beshko* (www.plantarium.ru); Karysay, gorge Pub, Parrandoz, 20.06.2009, *Beshko 09023* (TASH); Gurdara, 03.05.2012, *Beshko* (TASH); Hayatsay, 30.05.2016, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Karysay, rocky massif Parrandoz, 28.05.2023, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** village Chuya, 01.06.1951, *Gorokhova* (TASH); mountains Aktau, 28.05.1963, *Khaydarov 1483* (TASH); northern slope of Aktau Range, Charkhansay, about 800 m a.s.l., 17.05.2024, *Beshko* (www.plantarium.ru); northern slope of Aktau Range, gorge Ambarsay, about 840 m a.s.l., 18.05.2024, *Beshko* (www.plantarium.ru). **I-4-c North-Nuratau insular low mountains:** mountains Pistalitau, 22.04.1986, *Pimenov, Kljuykov, Vassiljeva, Melibaev 119* (MW); Pistalitau, 01.05.2012, *Batashov* (TASH); remnant mountain Egarbelistag, near the Carbonat JSC quarry, 03.05.2013, *Tojibaev, Beshko, Batashov, Azimova* (TASH).

101. *Allium turkestanicum* Regel, Trudy Imp. S.-Peterburgsk. Bot. Sada 3(2): 197 (1875). Perennial, geophyte. Irano-Turanian. Shrubland, Rocky areas. Foothills, montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** Madjrumsay, 19.06.1969, *Mambetjumaev 215* (TASH); Madjrumsay, 11.07.1992, *Beshko* (TASH); Madjrumsay, middle reaches, 28.05.2016, *Beshko* (TASH); Nuratau Nature Reserve, Madjrumsay, 29.05.2016, *Beshko* (www.plantarium.ru).

102. *Allium verticillatum* Regel, Trudy Imp. S.-Peterburgsk. Bot. Sada 3(2): 103 (1875). Perennial, geophyte. Western Tien Shan, Pamir-Alay. Desert, Shrubland, Grassland. Foothills, montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** Nurata, Urganchi, 01.05.1913, *Korovin* (TASH); on the way from the village Kokbulak to the village Amandara, 05.08.1934, *Botschantzev* (TASH); upper reaches of Osmansay, 07.08.1934, *Botschantzev* (TASH); near the village Uzunbulak, 08.08.1934, *Botschantzev* (TASH); foothills 1.5 km north of the village Guzhum, 04.07.1937, *Makarchuk 514* (TASH); Mts. Koytash, 2–3 km north-west of the village Kokbulak, 18.07.1937, *Demurina 599* (TASH); 5–6 km west of the village Guzhum, 23.07.1937, *Demurina 719* (TASH); pass near the sources of river Guzhum, 23.07.1937, *Demurina 688* (TASH); Mts. Koytash, Bereshek, 28.05.1940, *Gomolitsky, Dolgikh 46* (TASH); Nuratau Range, Farish District, 21.05.1941, *Momotov* (TASH); about 1 km west of Saurbel Pass, 06.06.2009, *Beshko* (www.plantarium.ru); between the village Anamuna and Karatash, piedmpnts of Mt. Karatash, 10.05.2010, *Beshko* (www.plantarium.ru); Saurbel Pass, 27.05.2012, *Beshko* (TASH). **I-4-b Aktau Range:** 7–9 km south of village Chuya, 01.07.1937, *Demurina 405* (TASH); piedmont plain 2 km north-east of the village Kaunchi, 07.07.1937, *Demurina 442* (TASH); near the village Langar, Yangokly, 19–21.05.1941, *Zakirov, Niyazov* (TASH); pass Tikalik, 14.05.1951, *Gorokhova* (TASH); mountains Aktau, 29.05.1963, *Khaydarov 1621* (TASH); mountains Bakhiltai, 10.05.2013, *Beshko* (TASH); Navoi Region, Nuratau mountains, northern slope of Aktau Range, Charkhansay, about 690 m a.s.l., 17.05.2024, *Beshko* (TASH, www.plantarium.ru). **I-4-b Karachatau Range:** 2.5–3 km north-east of the village Yukary-Kariya, 06.07.1937, *Demurina 539* (TASH).

103. *Allium xiphopetalum* Aitch. & Baker, Trans. Linn. Soc. London, Bot. 3: 118 (1888). Perennial, geophyte. Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas. Foothills, montane zone.

Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** south-eastern slopes of mountains Nuratau, 05.04.1915, *Spiridonov 51* (LE); Farish District, 07.05.1941, *Momotov 186* (TASH); 6 km north of Kyzylcha State Farm, 03.05.1956, *unknown collector* (TASH); Gallaaral State Farm, farm 2, Budenovsky foothills, 16.05.1973, *Butkov 1* (TASH); piedmont plain, lower reaches of Ukhumsay, 18.05.2006, *Beshko* (TASH); northern piedmont plain of Nuratau Range (Farish Steppe), 27.04.2007, *Beshko* (www.plantarium.ru); foothills near Yangikishlak, 13.05.2012, *Beshko* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 12.04.1915, *Spiridonov 81* (LE); plain between mountains Nuratau and Balyklitau, 13.05.1928, *Sovetkina 162* (TASH); Balyklitau, south of the village Chimgurgan, 30.05.1958, *Vvedensky, Nabiev* (TASH); Pistalitau, 02.06.2012, *Batashov 0575* (TASH); northern piedmonts of Pistalitau Range, 24.04.2020, *Beshko* (www.plantarium.ru).

Ungernia Bunge

104. *Ungernia oligostroma* Popov & Vved., Rast. Zapovedn. Guralash i Zaaminsk. Lesnich.: 6 (1936). Perennial, geophyte. Nuratau, Kuhistan (subendemic). Shrubland, Grassland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** 1.5 km north of the village Guzhum, 04.07.1937, *Makarchuk 515* (TASH); 2–3 km east-north-east of Ukhum Pass, 29.07.1939, *Demurina 813* (TASH); Nuratau Range, Farish District, 07.05.1941, *Momotov 170* (TASH); gorge Gurdara near the village Sarymsak, 23.06.1971, *Botschantzev, Kamelin 385* (LE); upper reaches of Asrafsay, August 1984, *Saenko 84044* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Mt. Dushokh, 24.07.1994, *Beshko* (TASH); Hayatsay, Andebaraut, 03.07.2006, *Beshko 06267, 06268* (herbarium of the Nuratau Nature Reserve); Hayatsay, Andebaraut, 14.07.2006, *Beshko 06270* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 14.07.2006, *Beshko* (www.plantarium.ru); Hayatsay, 27.03.2011, *Davkaev* (www.plantarium.ru); Nuratau Nature Reserve, Bolosay, 23.07.2010, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 26.07.2012, *Beshko* (TASH); Hayatsay, 24.07.2015, *Beshko* (www.plantarium.ru); Karysay, northern piedmonts of rocky massif Parrandoz, 16.07.2017, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** east of town Nuratau, valley Ingichka, 12.07.1970, *Botschantzev* (LE).

Asparagaceae Juss.

Asparagus L.

105. *Asparagus brachyphyllus* Turcz., Bull. Soc. Imp. Naturalistes Moscou 13: 78 (1840). Perennial, geophyte. Palearctic. Shrubland, Rocky areas. Foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Kichiksay, 15.06.1956, *Zaprometova* (TASH).

Typhaceae Juss.

Typha L.

106. *Typha angustifolia* L., Sp. Pl.: 971 (1753). Perennial, hydrophyte. Pluriregional. Wetlands (inland), Artificial aquatic. Plain, foothills. Rare. Native. **Occurrence records: I-4-b Khobduntau Range:** surroundings of Marjonbulak, 02.07.2021, *Beshko* (www.plantarium.ru).

Juncaceae Juss.

Juncus L.

107. *Juncus articulatus* L., Sp. Pl.: 327 (1753). Perennial, hydrophyte. Pluriregional. Wetlands (inland), Artificial aquatic. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a**

Nuratau Range: Mts. Koytash south-west of the village Savryuk, 20.07.1931, *Kobranova 164* (TASH); Nuratau Nature Reserve, Hayatsay, about 1300 m a.s.l., 05.08.1980, *Mukhina 142* (TASH); Karysay, Pubsay, 30.06.1995, *Beshko 95110* (herbarium of the Nuratau Nature Reserve); Bolosay, 10.06.1996, *Beshko 96094* (herbarium of the Nuratau Nature Reserve); Sentobsay, 09.09.1996, *Beshko 96066* (herbarium of the Nuratau Nature Reserve); near the village Anamuna, Farish District, 03.06.2003, *Beshko* (TASH); Hayatsay, field station, 22.06.2007, *Beshko 07023* (herbarium of the Nuratau Nature Reserve); lower reaches of Madjrumsay, 13.09.2014, *Beshko* (TASH); Madjrumsay, 29.05.2016, *Beshko* (www.plantarium.ru); Temirqovusay, 40°38'57" N, 66°22'38" E, 11.07.2019, *Beshko* (TASH); surroundings of Fazilman Lake, 40°32'37" N 66°35'55" E, 1645 m a.s.l., 12.07.2019, *Beshko* (TASH); Samarkand Region, Koshrabad District, surroundings of Fazilman Lake, 40.54855° N, 66.58932° E, 04.07.2024, *Beshko* (www.inaturalist.org). **I-4-b Aktau Range:** mountains Aktau, village Angudan, 20.06.1928, *Lepeschkin* (TASH).

108. *Juncus bufonius* L., Sp. Pl.: 328 (1753). Annual, hydrophyte. Pluriregional. Wetlands (inland), Artificial aquatic. Plain, foothills, montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** plateau Fazilmantau, 15.06.1969, *Mambetjumaev 193* (TASH); upper reaches of Tykchasay, 02.06.2013, *Beshko* (TASH); northern shore of Fazilman Lake, 40.552165° N, 66.588563° E, 1650 m, 01.07.2024, *Volkova, Dadykin* (IBIW 78489).

109. *Juncus compressus* Jacq., Enum. Stirp. Vindob.: 60, 235 (1762). Perennial, hydrophyte. Palearctic. Wetlands (inland), Artificial aquatic. Foothills, montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** Madjrumsay, 29.05.2016, *Beshko* (TASH, www.plantarium.ru).

110. *Juncus gerardi* Loisel., J. Bot. (Desvaux) 2: 284 (1809). Perennial, hydrophyte. Pluriregional. Wetlands (inland), Artificial aquatic. Plain, foothills, montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** reported by Zakirov in «Botanical geography of low mountains of Kyzylkum and Nuratau Range» (1971, p. 54). **I-4-b Aktau Range:** Khatyrchi District, 20.05.1928, *Lepeschkin* (TASH); Khatyrchi District, 18.08.1928, *Lepeschkin* (TASH).

111. *Juncus inflexus* L., Sp. Pl.: 326 (1753). Perennial, hydrophyte. Pluriregional. Wetlands (inland), Artificial aquatic. Plain, foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** Mts. Koytash south-west of the village Savryuk, 20.07.1931, *Kobranova 165, 167* (TASH); Nuratau Nature Reserve, Hayatsay, 05.08.1980, *Mukhina 122* (TASH); Hayatsay, 07.07.1990, *Beshko, Yakovenko 90013* (herbarium of the Nuratau Nature Reserve); Asrafsay, 11.06.1995, *Beshko 95065, 95066* (herbarium of the Nuratau Nature Reserve); Karysay, Pubsay, 30.06.1995, *Beshko 95112, 95113* (herbarium of the Nuratau Nature Reserve); Hayatsay, Andebaraut, 03.08.2006, *Beshko 06280, 06281* (herbarium of the Nuratau Nature Reserve); Jizzakh Region, Farish District, Nuratau Nature Reserve, Madjrumsay, 40.5851° N, 66.729° E, 16.09.2023, *Beshko* (www.inaturalist.org); Samarkand Region, Koshrabad District, Ustuksay, 40.55509° N, 66.56286° E, 06.07.2024, *Beshko* (www.inaturalist.org). **I-4-b Khobduntau Range:** valley Almaly, 13.06.1929, *Kudrjashev* (TASH); valley Bodbod, 20.06.1929, *Kudrjashev* (TASH).

112. *Juncus rechingeri* Snogerup, Fl. Iranica 75: 19 (1971). Annual, hydrophyte. Tethyan. Wetlands (inland), Artificial aquatic. Plain, foothills, montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** reported in «Conspectus Florae Asiae Mediae», vol. 5 (1976, p. 103).

113. *Juncus sphaerocarpus* Nees, Flora 1: 521 (1818). Annual, hydrophyte. Euro-Siberian, Irano-Turanian. Wetlands (inland), Artificial aquatic. Plain, foothills. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** Fazilmantau, 15.06.1969, *Mambetjumaev 193* (TASH); surroundings of Fazilman Lake, 08.06.2013, *Beshko* (TASH); middle reaches of Ustuksay, 09.06.2013, *Beshko* (TASH).

Cyperaceae Juss.

Blysmus Panz. ex Schult.

114. *Blysmus compressus* (L.) Panz. ex Link, Hort. Berol. 1: 278 (1827). Perennial, hydrophyte. Palearctic. Wetlands (inland). Foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** upper reaches of Sentobsay, 28.05.2003, *Beshko 03089* (herbarium of the Nuratau Nature Reserve). **I-4-b Khobduntau Range:** valley Bodbod, 20.06.1929, *Kudrjashev* (TASH).

Bolboschoenus (Aschers.) Palla

115. *Bolboschoenus maritimus* (L.) Palla, Syn. Deut. Schweiz. Fl., ed. 3: 2532 (1905). Perennial, hydrophyte. Pluriregional. Wetlands (inland), Artificial aquatic. Plain, foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** piedmont plain of Mts. Koytash, 2 km west of the village Ok-tom, 19.05.2010, *Beshko 10008, 10009* (TASH, herbarium of the Nuratau Nature Reserve); Samarkand Region, Koshrabad District, Ustusay, 40.53831° N 66.54024° E, 06.07.2024, *Beshko* (TASH, www.inaturalist.org, www.plantarium.ru). **I-4-c North-Nuratau insular low mountains:** piedmont plain of Pistalitu, 04.05.2012, *Batashov 25a* (TASH).

116. *Bolboschoenus schmidii* (Raymond) Holub, Folia Geobot. Phytotax. 8: 176 (1973). Perennial, hydrophyte. Irano-Turanian. Wetlands (inland), Artificial aquatic. Foothills. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** northern slope of Mts. Koytash, near the village Karatash, 25.05.1914, *Mikhelson* (LE).

Carex L.

117. *Carex diluta* M.Bieb., Fl. Taur.-Caucas. 2: 388 (1808). Perennial, hydrophyte. Euro-Siberian, Irano-Turanian. Wetlands (inland). Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Ustusay, 02.06.1954, *Burygin 339, 341* (TASH); Ustusay, 12.07.1956, *Vvedensky 88* (TASH); 3 km north of the village Narvan, bank of Narvansay, 22.05.1958, *Li, Zakirov 718* (TASH); Tykchasay, 25.05.1982, *Mukhina 82044, 82045* (herbarium of the Nuratau Nature Reserve); Bolosay, 10.06.1996, *Beshko 96129* (herbarium of the Nuratau Nature Reserve).

118. *Carex divisa* Huds., Fl. Angl.: 348 (1762). Perennial, hydrophyte. European, Tethyan. Wetlands (inland), Artificial aquatic. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** near the village Shurkundi, 25.05.1938, *Botschantzev* (TASH); Nuratau Range, Farish District, 21.05.1941, *Momotov* (TASH); Alaysay, 25.03.1958, *Zaprometova 80* (TASH); Mts. Koytash, southern slope, surroundings of Koytash, 28.06.1971, *Botschantzev, Kamelin* (LE); Nuratau Nature Reserve, Madjrumsay, 06.06.2022, *Beshko* (TASH). **I-4-b Aktau Range:** Khatyrchi District, 20.05.1928, *Lepeschkin* (TASH).

119. *Carex melanostachya* M.Bieb. ex Willd., Sp. Pl., ed. 4, 4: 299 (1805). Perennial, hydrophyte. Euro-Siberian, Irano-Turanian. Wetlands (inland). Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** upstream of the village Shurkundi, 28.05.1938, *Botschantzev 2* (TASH); Jizzakh Region, Farish District, Hayatsay, the village Upper Hayat, 40.52728° N, 66.77562° E, 27.04.2024, *Beshko* (www.inaturalist.org).

120. *Carex oederi* Retz. (*Carex serotina* Mérat), Fl. Scand. Prodr.: 179 (1779). Perennial, hydrophyte. Circumtemperate. Wetlands (inland). Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, southern slope, surroundings of Koytash, 28.06.1971, *Botschantzev, Kamelin* (LE); surroundings of Fazilman Lake, 40°32'37" N 66°35'55" E, 1645 m a.s.l., 12.07.2019, *Beshko* (TASH).

121. *Carex orbicularis* Boott, Proc. Linn. Soc. London 1: 254 (1845). Perennial, hydrophyte. Irano-Turanian, Caucasian, Oriental. Wetlands (inland), Artificial aquatic. Plain, foothills, montane zone.

Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** 3 km north of the village Narvan, bank of Narvansay, 22.05.1958, *Li, Zakirov 717* (TASH); Mts. Koytash, southern slope, surroundings of Koytash, 28.06.1971, *Botschantzev, Kamelin* (LE); Karysay, Pubsay, 30.06.1995, *Beshko 95111* (herbarium of the Nuratau Nature Reserve); Hayatsay, 25.04.1996, *H. Ulrich 96003* (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** mountains Aktau, 06.04.1963, *Khaydarov 293* (TASH).

122. *Carex pachystylis* J.Gay, Ann. Sci. Nat., Bot., sér. 2, 10: 301 (1838). Perennial, geophyte. Eastern Tethyan. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Dominant. Native. **Occurrence records: I-4-a Nuratau Range:** Gallaaral District, Gallaaral State Farm, 3rd farm, Karakuduk, 05.06.1934, *Rybakov* (TASH); Mts. Koytash, 5 km north-east of the village Narvan, 19.07.1937, *Demurina 623* (TASH); near the village Karakuduk, steep gravelly slopes, 21.07.1937, *Mironov 22* (TASH); watershed in the upper reaches of Sentobsay, 27.07.1937, *Demurina 788* (TASH); Nuratau Range, Farish District, 29.04.1941, *Bukasov* (TASH); Nuratau Range, Farish District, 06.05.1941, *Momotov* (TASH); [same locality], 10.05.1941, *Momotov* (TASH); [same locality], 15.05.1941, *Momotov* (TASH); [same locality], 19.05.1941, *Momotov* (TASH); Kyzylcha State Farm, experimental plot, 02.04.1950, *Zaprometova* (TASH); surroundings of Kyzylcha State Farm, piedmont plain, 15.02.1952, *Zaprometova* (TASH); 4 km north of Kyzylcha State Farm, piedmont plain, 11.04.1952, *Zaprometova* (TASH); piedmont plain north of Nuratau Range, near Kyzylcha State Farm, 01.04.1958, *Zaprometova 232* (TASH); 4 km east-north-east of the village Midzhigan, 15.05.1958, *Li, Zakirov 594* (TASH); Hayatsay, valley, 29.03.1979, *unknown collector 49* (TASH); Hayatsay, 20.04.1983, *Fominykh 83055* (herbarium of the Nuratau Nature Reserve); Hayatsay, Novi Daroz, 22.04.2006, *Beshko 06020, 06021* (herbarium of the Nuratau Nature Reserve); Hayatsay, Khokjo, 20.05.2006, *Beshko 06065* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Gurdara, 17.03.2019, *Beshko* (www.inaturalist.org, www.plantarium.ru); [same locality], 40.51853° N, 66.91726° E, 04.04.2022, *Beshko* (www.inaturalist.org); Nuratau Nature Reserve, Hayatsay, 23.04.2025, *Beshko* (TASH). **I-4-b Aktau Range:** 4–6 km south of village Chuya, 29.06.1937, *Demurina 355* (TASH); mountains Aktau, 1.5 km south of village Sarygul, 12.05.1957, *Momotov, Li 337* (TASH); piedmont plain near district center Nurata, 11.03.1963, *Markova* (TASH); piedmont plain near district center Nurata, 21.05.1963, *Markova* (TASH). **I-4-b Karatau Range:** mountains Karakarga near the pass Jizlan, 22.04.1913, *Korovin 15a* (TASH); station Karmana – mountains Karakarga, *Iris*-sagebrush steppe, 22.04.1913, *Korovin 16a* (TASH); Nurata valley, spring 1913, *Korovin* (TASH); surroundings of Kanimekh, 5 km north of town, 15.07.1934, *Tyshchenko 83, 84* (TASH); 2.5 km south-west of ruins of the village Sarmysh, 06.05.1955, *Momotov, Li 208* (TASH); in Sarmyshsay, on the top of hill, 26.05.1965, *Pryakhin* (TASH). **I-4-b Mt. Kokcha:** slopes of Mt. Kokchatau, 25.03.1958, *Adylov 655* (TASH). **I-4-b Karachatau Range:** foothills, 10 km east of the village Bulakbashi, 06.07.1937, *Demurina 438* (TASH); southern slope, 1 km north-east of the village Ingichka, 07.07.1937, *Demurina 5516* (TASH). **I-4-b Khobduntau Range:** Kuropatkino Railway Station, 27.04.1921, *Drobow* (TASH); southern piedmont plain of Khobduntau near the village Bodbod, 25.06.1929, *Kudrjashev* (TASH); Milyutinskaya Station, Gallaaral State Farm, 1–1.5 km east-north-east from the railway junction № 109, 00.06.1930, *Tarasevich 24* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 08.04.1915, *Kultiasow* (TASH); Pistalitau, 04.05.2012, *Batashov 191* (TASH).

123. *Carex physodes* M.Bieb., Mém. Soc. Imp. Naturalistes Moscou 2: 104 (1809). Perennial, geophyte. Turanian. Plain. Desert. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Mumincha, 18.06.1962, *Khaydarov 144* (TASH). **I-4-b Karatau Range:** Bukhara Region, Gizhduvan District, Nuratau mountains, western part of Karatau Range, about 370 m a.s.l., 21.04.2024, *Beshko* (www.plantarium.ru).

124. *Carex polyphylla* Kar. & Kir., Bull. Soc. Imp. Naturalistes Moscou 14: 859 (1841). Perennial, hydrophyte. Siberian, Middle Asian. Wetlands (inland), Artificial aquatic. Plain, foothills. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** near the well Ernazar, 04.05.1913, *Teplov* 23 (TASH).

125. *Carex songorica* Kar. & Kir., Bull. Soc. Imp. Naturalistes Moscou 15: 525 (1842). Perennial, hydrophyte. Caucasian, Irano-Turanian. Wetlands (inland), Artificial aquatic. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Nakrutsay, near the village Chalakarga, 23.07.1940, *Gomolitsky, Dolgikh, Arkhireev* 198 (TASH); Nuratau Mts., 03.05.1958, *Li, Zakirov* 313 (TASH); Madjrum say, 06.05.1993, *Beshko* 93069 (herbarium of the Nuratau Nature Reserve); Bolosay, 10.06.1996, *Beshko* 96090, 96130 (herbarium of the Nuratau Nature Reserve). **I-4-b Khobduntau Range:** valley Bodbod, 20.04.1929, *Kudrjashev* (TASH).

126. *Carex stenophylla* Wahlenb., Kongl. Vetensk. Acad. Nya Handl. 24: 142 (1803). Perennial, geophyte. Euro-Siberian, Irano-Turanian. Grassland, Rocky areas, Wetlands (inland), Artificial aquatic. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Kyzylcha, Ukan, 17.04.1951, *Novikova* (TASH); Andygensay, 11.05.1996, *Beshko* 96022 (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** mountains Aktau, 1.5 km south of village Sarygul, 12.05.1957, *Momotov, Li* 336 (TASH). **I-4-b Khobduntau Range:** reported by Kudrjashev in "Vegetation of the Khobduntau and Karachatau Mountains" (1929, p. 60).

127. *Carex subphysodes* Popov ex V.I.Krecz., Trudy Sredne-Aziatsk. Gosud. Univ., Ser. 8b, Bot. 20: 23 (1935). Perennial, geophyte. Turanian. Desert. Plain. Occasional. Native. **Occurrence records: I-4-b Aktau Range:** surroundings of Nurata, *Iris* steppe, west of the town, 23.04.1913, *Korovin* 34 (TASH); between well Pashat and Kara-Yuzgan, 25.04.1913, *Korovin* 191a (TASH).

Cyperus L.

128. *Cyperus flavidus* Retz. (*Pycneus globosus* (All.) Reichenb.), Observ. Bot. 5: 13 (1788). Perennial, hydrophyte. Pluriregional. Wetlands (inland), Artificial aquatic. Plain, foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Madjrum say, 12.07.2007, *Beshko* 07056 (herbarium of the Nuratau Nature Reserve).

129. *Cyperus glaber* L., Mant. Pl. 2: 179 (1771). Annual, hydrophyte. Euro-Siberian, Irano-Turanian. Wetlands (inland). Plain, foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Sob Pass, 04.08.1940, *Gomolitsky, Dolgikh, Arkhireev* 281 (TASH).

130. *Cyperus longus* L., Sp. Pl.: 45 (1753). Perennial, hydrophyte. Old World. Wetlands (inland), Artificial aquatic. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Nakrutsay, near the village Chalakarga, 23.07.1940, *Gomolitsky, Dolgikh, Arkhireev* 202 (TASH); Madjrum say, 31.08.2020, *Beshko* (www.plantarium.ru).

131. *Cyperus rotundus* L., Sp. Pl.: 45 (1753). Perennial, hydrophyte. Tropical & Subtropical Old World. Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Madjrum say, 1 km upstream of the village Madjrum, 13.07.1999, *Beshko* 99036 (TASH).

Eleocharis R.Br.

132. *Eleocharis argyrolepis* Kierulff, A.A.von Bunge, Beitr. Fl. Russl.: 342 (1852). Perennial, hydrophyte. Caucasian, Irano-Turanian. Montane zone. Wetlands (inland), Artificial aquatic. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** northern shore of Fazilman Lake, 40.552165° N, 66.588563° E, 1650 m, 01.07.2024, *Volkova, Dadykin* (IBIW 78484).

133. *Eleocharis quinqueflora* (Hartmann) O.Schwarz. (*E. meridionalis* Zinserl.), Mitt. Thüring. Bot. Ges. 1: 89 (1949). Perennial, hydrophyte. Circumtemperate. Wetlands (inland), Artificial aquatic.

Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, 25.04.1996, *Beshko* 96005 (herbarium of the Nuratau Nature Reserve).

134. *Eleocharis uniglumis* (Link) Schult., Mant. 2: 88 (1824). Perennial, hydrophyte. Circumtemperate. Wetlands (inland), Artificial aquatic. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** surroundings of the village Sentob, 24.06.1971, *Botschantzev, Kamelin* (LE); Madjrumsay, 12.07.2007, *Beshko* 07059 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, lower reaches of Madjrumsay, 06.06.2022, *Beshko* (TASH).

Schoenoplectus (Rchb.) Palla

135. *Schoenoplectus litoralis* (Schr.) Palla (*Scirpus litoralis* Schrad.), Bot. Jahrb. Syst. 10: 299 (1888). Perennial, hydrophyte. Old World. Wetlands (inland), Artificial aquatic. Plain, foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Fazilman Lake, 25.09.2009, *Beshko* (www.plantarium.ru).

Schoenus L.

136. *Schoenus nigricans* L., Sp. Pl.: 43 (1753). Perennial, hydrophyte. Pluriregional. Wetlands (inland). Montane zone. **Occurrence records: I-4-a Nuratau Range:** Yongoklisay, 01.04.2009, *Beshko* (www.plantarium.ru).

Scirpoides Ség.

137. *Scirpoides holoschoenus* (L.) Soják (*Holoschoenus vulgaris* Link.), Cas. Nár. Mus., Odd. Prír. 140: 127 (1972). Perennial, hydrophyte. European, Tethyan. Wetlands (inland). Foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Tashbulaksay, 25.06.2002, *Til Dieterich* 02111 (TASH, herbarium of the Nuratau Nature Reserve); middle reaches of Ustuksay, 09.06.2013, *Beshko* (TASH, www.plantarium.ru).

Trichophorum Pers.

138. *Trichophorum pumilum* (Vahl) Schinz & Thell. (*Baeothryon pumilum* (Vahl) Á. & D. Löve), Vierteljahrsschr. Naturf. Ges. Zürich 66: 265 (1921). Perennial, hydrophyte. Circumtemperate. Wetlands (inland). Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, Andebaraut, 11.05.1996, *Uhlich* 96021 (herbarium of the Nuratau Nature Reserve).

Poaceae Barnhart (Gramineae Juss.)

Achnatherum P.Beauv.

139. *Achnatherum turcomanicum* (Roshev.) Tzvelev (*Achnatherum longearistatum* (Boiss. & Hausskn.) Nevski), Novosti Sist. Vyssh. Rast. 11: 6 (1974). Perennial, hemicryptophyte. Irano-Turanian. Shrubland, Grassland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records: I-4-b Aktau Range:** near the village Langar, valley Yangokly, 20.05.1941, *Zakirov, Niyazov* (TASH); east of town Nurata, valley Ingichka, 12.07.1970, *Botschantzev* (LE).

Aegilops L.

140. *Aegilops crassa* Boiss. ex Hohen., Exsicc. (Pl. Persiae Austr.) 1842: n.º 248 (1845). Annual, therophyte. Caucasian, Irano-Turanian. Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** foothills of Mts. Koytash, near town Jizzakh, 26.05.1931, *Kasimenko* (TASH); Gallaaral District, Karakuduk, 03.06.1934, *Rybakov* (TASH); south of the spring Yangaly, 06.05.1939, *Mikhaylova, Popova* (TASH); plain north of the spring Yangaly, field of Nurata State Farm, 09.05.1939,

Mikhaylova, Popova (TASH); Mts. Koytash, Bereshkek, 28.05.1940, *Gomolitsky, Dolgikh, Arkhireev* 49 (TASH); Farish District, 03.05.1941, *Momotov* (TASH); piedmont plain 4 km north of Kyzylcha State Farm, 02.06.1953, *Zaprometova* (TASH); plain north of Nuratau Mts., 12.05.1958, *Li, Zakirov* 520 (TASH); 3 km south-east of the village Karatepa, plain between Karatepa and Koytash, 29.05.1958, *Li, Zakirov* 854 (TASH); Uruskuduk, 21.05.1963, *Khaydarov* 1321 (TASH); Hayatsay, 14.07.2002, *Beshko* 02047 (herbarium of the Nuratau Nature Reserve); Farish District, foothills near Yangikishlak, 13.05.2012, *Beshko* (TASH). **I-4-b Aktau Range:** Nurata valley, 30 south-east of town Nurata, along the road to Dzhush, 01.06.1963, *Pryakhin* (TASH); **I-4-b Khobduntau Range:** plain between mountains Khobduntau and Karachatau, 06.06.1929, *Kudrjashev* (TASH); Milyutinskaya Station, 3.5 km south-south-west of the village Alyamli I, 00.05.1930, *Tarasevich* 73 (TASH). **I-4-c North-Nuratau insular low mountains:** plain between mountains Koytash and Balyklitau, 23.05.1931, *Kobranova* 409 (TASH).

141. *Aegilops cylindrica* Host., Icon. Descr. Gram. Austriac. 2: 6 (1802). Annual, therophyte. European, Caucasian, Irano-Turanian. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, west of the village Terekli, 25.05.1940, *Gomolitsky, Dolgikh, Arkhireev* 18 (TASH); Hayatsay, Andebaraut, 22.05.2006, *Beshko* 06311, 06312 (herbarium of the Nuratau Nature Reserve).

142. *Aegilops juvenalis* (Thell.) Eig., Repert. Spec. Nov. Regni Veg. Beih. 55: 93 (1929). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Grassland, Artificial terrestrial. Plain, foothills. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Djizak prov., Farish distr., 40.488° N 67.034° E, 28.05.2005, *Belolipov* UZP_00337 (MO, A global database for the distributions of crop wild relatives: <https://www.gbif.org/occurrence/1300516678>).

143. *Aegilops triuncialis* L. (*Ae. squarrosa* L.), Sp. Pl.: 1051 (1753). Annual, therophyte. Tethyan. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Abundant. Native. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, Osmansay, 06.1931, *Kobranova* 481 (TASH); 6 km north of the well Ernazar, 13.05.1957, *Momotov, Li* 367, 369 (TASH); Koblatysay, 20.04.1958, *Zaprometova* (TASH); upper reaches of Ustuksay, 29.05.1964, *Zuckerwanik* 392 (TASH); Nuratau Nature Reserve, Hayatsay, about 1200 m a.s.l., July 1979, *Korshunov* (TASH); [same locality], about 1400 m a.s.l., July 1979, *Korshunov* (TASH); Hayatsay, 18.05.1991, *Maximova* 91022 (herbarium of the Nuratau Nature Reserve); Sanguzarsay, 07.05.1992, *Beshko* 92301 (herbarium of the Nuratau Nature Reserve); Hayatsay, Sangich, 08.06.1992, *Beshko* 92132 (herbarium of the Nuratau Nature Reserve); Hayatsay, village Upper Hayat, 14.05.2005, *Beshko* 05015 (herbarium of the Nuratau Nature Reserve); Hayatsay, Andebaraut, 22.05.2006, *Beshko* 06314 (TASH, herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, about 1000 m a.s.l., 15.05.2024, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** Aktau, 28.05.1963, *Khaydarov* 1434 (TASH); valley Chashma, 13.06.1963, *Khaydarov* 1710 (TASH); near the village Chashma, 05.06.1964, *Pryakhin* (TASH). **I-4-b Karatau Range:** Sarmysh, 05.06.1957, *Momotov, Li* 163 (TASH). **I-4-b Khobduntau Range:** valley Bodbod, 3 km from the village Bodbod, 20.06.1929, *Kudrjashev* (TASH).

Aeluropus Trin.

144. *Aeluropus littoralis* (Gouan.) Parl. (*Aeluropus intermedius* Regel), Fl. Ital. 1: 461 (1850). Perennial, hemicryptophyte. Palearctic. Wetlands (inland), Artificial aquatic Plain, foothills. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** 3 km south-east of the village Karatepa, plain between Karatepa and Koytash, 29.05.1958, *Li, Zakirov* 849 (TASH). **I-4-b Aktau Range:**, salsuginonis vallis fl. Zeravschan pr. p. Chodsha-Kalischan, 06.06.1926, *Popov* 324 (TASH); Khatyrchi District, hillside, loess outcrops, 09.05.1928, *Lepeschkin* (TASH); [same locality], 18.05.1928, *Lepeschkin* (TASH); [same locality], 20.05.1928, *Lepeschkin* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 07.04.1911, *Dimo, Sprygin, Shulga* 577 (TASH); plain

between mountains Koytash and Balyklitau, 23.05.1931, *Kobranova* 394, 422, 423 (TASH); mountains Balyklitau, 23.05.1931, *Kobranova* 439 (TASH).

145. *Aeluropus lagopoides* (L.) Thwaites (*Aeluropus repens* (Desf.) Parl.), Enum. Pl. Zeyl.: 374 (1864). Perennial, hemicryptophyte. Saharo-Arabian, Irano-Turanian, Oriental. Wetlands (inland), Artificial aquatic. Plain, foothills. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Reported by Zakirov in «Vegetation cover of Nuratau Mountains» (1969, p. 20) and «Botanical geography of low mountains of Kyzylkum and Nuratau Range» (1971, p. 52).

Agropyron Gaertn.

146. *Agropyron badamense* Drobow, Repert. Spec. Nov. Regni Veg. 21: 44 (1925). Perennial, hemicryptophyte. Western Tien Shan, Western Pamir-Alay. Grassland, Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Sentobsay, upper reaches, 24.06.1996, *Beshko* 96053 (herbarium of the Nuratau Nature Reserve); watershed of Nuratau Range in the upper reaches of Sentobsay, near Mt. Zargar (Karchigay), 20.06.1998, *Beshko* (herbarium of the Nuratau Nature Reserve, TASH); upper reaches of Ustuksay, 08.06.2013, *Beshko* (www.plantarium.ru).

147. *Agropyron cristatum* (L.) Gaertn., Novi Comment. Acad. Sci. Imp. Petrop. 14(1): 540 (1770). Perennial, hemicryptophyte. Palearctic. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Akbel, 14.06.1963, *Khaydarov* 1735 (TASH).

Agrostis L.

148. *Agrostis gigantea* Roth., Tent. Fl. Germ. 1: 31 (1788). Perennial, hemicryptophyte. Palearctic. Wetlands (inland), Artificial aquatic. Plain, foothills, montane zone. Rare. Native. **Occurrence records: I-4-b Aktau Range:** dry riverbed on piedmont plain near district center Nurata, 16.03.1963, *Markova* (TASH).

149. *Agrostis stolonifera* L., Sp. Pl.: 62 (1753). Perennial, hemicryptophyte. Palearctic. Wetlands (inland), Artificial aquatic. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Savryuksay, 20.07.1931, *Kobranova* 147 (TASH); Mts. Koytash south-west of the village Savryuk, 20.07.1931, *Kobranova* 162, 163 (TASH); Nakrutsay, near the village Chalakarga, 23.07.1940, *Gomolitsky*, *Dolgikh*, *Arkhireev* 205, 207 (TASH); Hayatsay, near the stream, 03.08.1980, *unknown collector* 130 (TASH); Pubsay, 16.08.1980, *unknown collector* 41 (TASH); Asrafsay, 04.06.1996, *Beshko* 96108 (herbarium of the Nuratau Nature Reserve); Hayatsay, Alichak, 25.06.2006, *Beshko* 06349 (herbarium of the Nuratau Nature Reserve). **I-4-b Khobduntau Range:** valley Bodbod, 20.06.1929, *Kudrjashev* (TASH).

Alopecurus L.

150. *Alopecurus arundinaceus* Poir. (*Alopecurus ventricosus* Pers.), J.B.A.M.de Lamarck, Encycl. 8: 766 (1808). Perennial, hemicryptophyte. Palearctic. Wetlands (inland), Artificial aquatic. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Koblatysay, 04.04.1952, *Zaprometova* (TASH); Ustuksay, 02.06.1954, *Burygin* 319 (TASH); Koblatysay, 01.04.1958, *Zaprometova* 273 (TASH).

151. *Alopecurus myosuroides* Huds., Fl. Angl.: 23 (1762). Annual, therophyte. European, Tethyan. Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** lower reaches of Bolosay, 08.05.1992, *Beshko* 92434, 92435 (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** Khatyrchi District, hillside, 05.05.1928, *Lepeschkin* (TASH).

152. *Alopecurus pratensis* L., Sp. Pl.: 60 (1753). Perennial, hemicryptophyte. Circumtemperate. Forest, Grassland, Wetlands (inland), Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** gorge Alichaksay, 27.05.1969, *Mambetjumaev* 50, 55 (TASH); Hayatsay, 30.05.1990, *Beshko, Yakovenko* 90007, 90008 (herbarium of the Nuratau Nature Reserve); upper reaches of Sentobsay, 24.06.1996, *Beshko* 96045 (herbarium of the Nuratau Nature Reserve); Hayatsay, 20.05.2006, *Beshko* 06105 (herbarium of the Nuratau Nature Reserve); Hayatsay, 13.04.2016, *Beshko* (www.plantarium.ru); Hayatsay, 23.04.2025, *Beshko* (TASH).

Apera Adans.

153. *Apera interrupta* (L.) P.Beauv., Ess. Agrostogr.: 31 (1812). Annual, therophyte. European, Tethyan. Grassland, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Gallaaral District, Karakuduk, 09.06.1934, *Rybakov* (TASH); 3 km south-east of the village Karatepa, plain between Karatepa and Koytash, 29.05.1958, *Li, Zakirov* 846 (TASH); Sanguzarsay, 07.05.1992, *Beshko* 92303 (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** Khatyrchi District, foothills, 03.09.1928, *Lepeschkin* (TASH). **I-4-b Khobduntau Range:** Gallaaral District, experimental station of cereal crops, 25.06.1934, *Toporova* (TASH).

Avena L.

154. *Avena barbata* Pott ex Link, J. Bot. (Schrader) 1799(2): 315 (1800). Annual, therophyte. Tethyan, Saharo-Arabian. Shrubland, Grassland, Rocky areas, Artificial terrestrial. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Ustakhansay, 16.06.1996, *S. Michel* 96050 (herbarium of the Nuratau Nature Reserve); middle reaches of Sobsay, 08.05.2013, *Beshko* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 08.04.1915, *Kultiasow* 54 (TASH); remnant mountain Egarbelistag, near the Carbonat JSC quarry, upper part of stony northern slope, 563 m a.s.l. 40.35575° N 67.50249° E, 03.05.2013, *Tojibaev, Beshko, Batashov, Azimova* (TASH).

155. *Avena fatua* L., Sp. Pl.: 80 (1753). Annual, therophyte. Palearctic. Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Yongoklisay, 16.05.2009, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** village Angudan, 10.06.1928, *Lepeschkin* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 07.04.1911, *Dimo, Sprygin, Shulga* 534 (TASH); Pistalitau, 16.04.2011, *Batashov* 78, 89 (TASH); Balyklitau, 20.04.2012, *Batashov* (TASH).

156. *Avena sterilis* L. (*Avena ludoviciana* Durieu, *A. persica* Steud., *A. trichophylla* K.Koch), Sp. Pl. ed. 2: 118 (1762). Annual, therophyte. Tethyan, Saharo-Arabian. Shrubland, Grassland, Rocky areas, Artificial terrestrial. Foothills, montane zone. Occasional. Probably alien. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, southern slope, surroundings of Koytash, 28.06.1971, *Botschantzev, Kamelin* (LE); Mt. Karatash, 15.06.1996, *S. Michel* 96049 (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** near the village Shamaly, 24.05.1925, *Popov* 375 (TASH); village Angudan, 10.06.1928, *Lepeschkin* (TASH). **I-4-b Khobduntau Range:** Gallaaral District, experimental station of cereal crops, 18.06.1934, *Toporova* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 08.04.1915, *Kultiasow* 15 (TASH).

Bothriochloa Kuntze

157. *Bothriochloa ischaemum* (L.) H. Keng, Contr. Biol. Lab. Sci. Soc. China, Bot. Ser. 10: 201 (1936). Perennial, hemicryptophyte. Circumtemperate. Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** 5 km south-east of village Kokbulak, 23.05.1958, *Zakirov* (Vegetation cover of Nuratau Mountains, 1969, p. 82, plant community description №42); Hayat, mountains, 00.08.1980, *unknown*

collector 153 (TASH); village Upper Hayat, 08.08.2006, *Beshko 06360, 06361* (TASH, herbarium of the Nuratau Nature Reserve); Yangikishlak (Farish), on the hill near the former House of Pioneers, 27.06.2008, *Beshko* (www.plantarium.ru). **Karatau Range:** between villages Sarmysh and Tamchi, 05.09.1931, *Tyshchenko 725* (TASH).

Brachypodium P.Beauv.

158. *Brachypodium sylvaticum* (Huds.) P.Beauv., Ess. Agrostogr.: 101, 155 (1812). Perennial, hemicryptophyte. Palearctic. Rocky areas, Wetlands (inland). Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** gorge Gurdara near the village Sarymsak, 23.06.1971, *Botschantzev, Kamelin* (LE); Karysay, Pubsay, 30.06.1995, *Beshko 95108, 95109* (herbarium of the Nuratau Nature Reserve); Madjrumsey, Bedar, 19.07.2011, *Beshko 11079* (TASH, herbarium of the Nuratau Nature Reserve).

Bromus L.

159. *Bromus danthoniae* Trin., Verz. Pfl. Casp. Meer.: 24 (1831). Annual, therophyte. Caucasian, Irano-Turanian, Saharo-Arabian. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Kyzylchali, sagebrush steppe, 28.04.1913, *Korovin 128* (TASH); Urganchi, 01.05.1913, *Korovin 156* (TASH); 12 verst south of town Jizzakh, 11.05.1928, *Sovetkina 135* (TASH); Nuratau Range, Farish District, 03.05.1941, *Momotov* (TASH); [same locality], 05.05.1941, *Momotov 105* (TASH); Kyzylcha State Farm, Ukan, clayey plain, 27.05.1951, *Novikova* (TASH); Kyzylcha State Farm, 02.07.1951, *Zaprometova* (TASH); 6 km north of the well Ernazar, 13.05.1957, *Momotov, Li 363* (TASH); north-west of the village Khukala, 17.05.1958, *Li, Zakirov 147* (TASH); Akbel, 14.06.1963, *Khaydarov 1732* (TASH); Nakrutsay, 30.05.1964, *Zuckerwanik 412* (TASH); Hayatsay gorge, 28.05.1969, *Mambetjumaev 106* (TASH); Hayatsay, 11.05.1991, *Maximova 91029* (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** 2–3 km south-east of the village Kokbulak, 01.07.1937, *Demurina 352* (TASH); sources of river Bitau, 27.05.1964, *Zuckerwanik 320* (TASH); valley Chashma, 13.06.1963, *Khaydarov 1717* (TASH); near the village Chashma, 05.06.1964, *Pryakhin* (TASH). **I-4-b Karatau Range:** 8 km west of Zey-Bulak, 08.05.1936, *Kharchenko 1001, 1002* (TASH); 4.5 km north-east of the village Kyzyl October, 03.05.1955, *Momotov, Li 93* (TASH). **I-4-b Khobduntau Range:** plain between mountains Khobduntau and Karachatau, near the village Gumsay, 11.06.1929, *Kudrjashev* (TASH); north-western slopes, 30.07.1931, *Kobranova 115* (TASH); Gallaaral District, experimental station of cereal crops, near railway station, 14.05.1934, *Toporova* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistaltau, 07.04.1915, *Kultiasow 45* (TASH); mountains Balyklitau, 23.05.1931, *Kobranova 438* (TASH).

160. *Bromus inermis* Leyss., Fl. Halens.: 16 (1761). Perennial, geophyte. Palearctic. Grassland, Wetlands (inland). Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Reported by Zakirov in «Vegetation cover of Nuratau Mountains» (1969, p. 20) and «Botanical geography of low mountains of Kyzylkum and Nuratau Range» (1971, p. 52).

161. *Bromus japonicus* Houtt., Nat. Hist. 2(13): 315 (1782). Annual, therophyte. Palearctic. Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** reported by Zakirov in «Vegetation cover of Nuratau Mountains» (1969, p. 20) and «Botanical geography of low mountains of Kyzylkum and Nuratau Range» (1971, p. 52). **I-4-b Aktau Range:** mountains Aktau, Khatyrchi District, 03.09.1928, *Lepeschkin* (TASH).

162. *Bromus lanceolatus* Roth (*Bromus macrostachys* Desf.), Catal. Bot. 1: 18 (1797). Annual, therophyte. Caucasian, Tethyan. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** fallow

land 12 verst south of Jizzakh, 11.05.1928, *Sovetkina 133* (TASH); Nuratau Range, Farish District, 10.05.1941, *Momotov 196* (TASH); Sanguzarsay, 07.05.1992, *Beshko 92295, 92296, 92305* (herbarium of the Nuratau Nature Reserve); Hayatsay, Zamezhak, 08.06.1992, *Beshko 92118–92120* (TASH, herbarium of the Nuratau Nature Reserve); Hayatsay, Yellow Stone, 12.06.1992, *Beshko 92174* (herbarium of the Nuratau Nature Reserve); Bolosay, 25.06.1992, *Beshko 92521* (herbarium of the Nuratau Nature Reserve); Hayatsay, Khotunon, 23.05.2006, *Beshko 06033* (herbarium of the Nuratau Nature Reserve); Hayatsay, 06.05.2012, *Beshko* (TASH); foothills of Nuratau range near Yangikishlak, 13.05.2012, *Beshko* (TASH); upper reaches of Hayatsay, Alichak, 31.05.2012, *Beshko* (TASH). **I-4-b Khobduntau Range:** plain between mountains Khobduntau and Karachatau, near the village Gumsay, 11.06.1929, *Kudrjashev* (TASH); southern piedmont plain of Khobduntau near the village Beshkutan, 19.06.1929, *Kudrjashev* (TASH).

163. *Bromus moesii* Pénzes (*Bromus sericeus* Drobow), Magyar Bot. Lapok 33: 24 (1934). Annual, therophyte. Irano-Turanian. Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** 6 km north of the well Ernazar, 13.05.1957, *Momotov, Li 371* (TASH); 2 km north of Saurbel Pass, 27.06.1958, *Li, Zakirov 140* (TASH); Mumincha, 18.06.1962, *Khaydarov 143* (TASH); Madjrumsay, 22.05.1994, *Beshko 94075* (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** the spring Bitav, 18.06.1963, *Khaydarov 738* (TASH). **I-4-b Karatau Range:** 4.5 km north-east of the village Kyzyl October, 03.05.1955, *Momotov, Li 91* (TASH); 2.5 km south-west of ruins of the village Sarmysh, 06.05.1955, *Momotov, Li 200* (TASH).

164. *Bromus oxyodon* Schrenk, Enum. Pl. Nov. 2: 1 (1842). Annual, therophyte. Irano-Turanian. Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** Gallaaral District, Karakuduk, 03.06.1934, *Rybakov* (TASH); surroundings of the well Kazybay, gentle foothills, 05.05.1939, *Mikhaylova, Popova* (TASH); Nuratau Range, Farish District, 25.05.1941, *Momotov* (TASH); Gatchasay, 27.04.1952, *Zaprometova* (TASH); Alaysay, 10.05.1957, *Zaprometova* (TASH); 2 km north-west of the village Khukala, 17.05.1958, *Li, Zakirov 611* (TASH); 6 km north-east of the village Khukala, 17.05.1958, *Li, Zakirov 648* (TASH); Gatchasay, 16.05.1960, *Zaprometova, Nikerov 98, 101* (TASH); gorge Alichaksay, 27.05.1969, *Mambetjumaev 51* (TASH); Hayatsay, 28.05.1969, *Mambetjumaev 106* (TASH); Madjrumsay, 22.05.1994, *Beshko 94073* (herbarium of the Nuratau Nature Reserve); Asrafsay, 04.06.1996, *Beshko 96107* (herbarium of the Nuratau Nature Reserve); Hayatsay, 30.05.2003, *Beshko 03004* (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** near the village Shamaly, 24.05.1925, *Popov 340* (TASH); ; valley Chashma, 10.05.1962, *Khaydarov 41* (TASH); sources of river Bitau, 27.05.1964, *Zuckerwanik 310* (TASH). **I-4-b Karatau Range:** 8 km west of Zey-Bulak, 08.05.1936, *Kharchenko 1003* (TASH); mountains Karatau, eastern part, 20.05.1936, *Kharchenko 1106* (TASH). **I-4-b Khobduntau Range:** plain between mountains Khobduntau and Karachatau, 0.5 km north of Kuropatkino Railway Station, 08.06.1929, *Kudrjashev* (TASH); plain between mountains Khobduntau and Karachatau, 1 km north of the village Gumsay, 12.06.1929, *Kudrjashev* (TASH); valley Bodbod, 20.06.1929, *Kudrjashev* (TASH); Gallaaral District, experimental station of cereal crops, near railway station, 14.05.1934, *Toporova, Titov* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistaltau, 08.04.1915, *Kultiasow 60* (TASH).

165. *Bromus pumilio* (Trin.) P.M.Sm. (*Boissiera squarrosa* (Sol.) Nevski), Feddes Repert. Spec. Nov. Regni Veg. 79: 338 (1969). Annual, therophyte. Irano-Turanian, Saharo-Arabian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** Dzhush – Koshrabad, *Iris* steppe, 05.05.1913, *Korovin 260* (TASH); Gallaaral District, Karakuduk, 05.06.1934, *Rybakov* (TASH); Mts. Koytash, on the way to the village Bogdon, 27.04.1941, *Lepeschkin* (TASH); Farish District, 07.05.1941, *Momotov 159*

(TASH); surroundings of Kyzylcha State Farm, 12.05.1951, *Zaprometova* 77 (TASH); Nurata District, Kyzylcha State Farm, 06.06.1951, *Zaprometova* (TASH); Gatchasay, 08.04.1958, *Zaprometova* 369 (TASH); Alaysay, 28.04.1958, *Zaprometova* (TASH); mountains Nuratau, 21.05.1963, *Khaydarov* 1182 (TASH); eastern part of Nuratau Range, Kattasay, 25.05.1967, *Pereylygina* (TASH); Hayat, 31.07.1980, *unknown collector* 95 (TASH); Bolosay, 26.04.1992, *Beshko* 92095 (herbarium of the Nuratau Nature Reserve); Hayatsay, 25.05.1993, *Beshko* 93075 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, about 1300 m a.s.l., 15.05.2024, *Beshko* (www.plantarium.ru); Navoi Region, Nurata District, surroundings of Sob Pass, 40.61543° N, 66.57558° E, 04.07.2024, *Beshko* (www.inaturalist.org). **I-4-b Karatau Range:** foothills north of Kanimekh, 25.05.1931, *Tyshchenko* 6 (TASH); 12–13 km north-east of Kanimekh, 18.05.1936, *Tarasevich* 225, 227 (TASH); 8 km south-east of Zey-Bulak, 18.05.1936, *Kharchenko* 1054, 1055, 1056 (TASH). **I-4-b Khobduntau Range:** near the village Khodzha-Kabud, 13.06.1929, *Kudrjashev* (TASH); Gallaaral District, experimental station of cereal crops, 1934, *Toporova* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 09.04.1915, *Popov* (TASH); plain between mountains Koytash and Balyklitau, 23.05.1931, *Kobranova* 397, 398 (TASH).

166. *Bromus racemosus* L. (*Bromus popovii* Drobow), Sp. Pl. ed. 2: 114 (1762). Annual, therophyte. European, Tethyan. Grassland, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** piedmont plain of Mts. Koytash, 2 km west of the village Ok-tom, 19.05.2010, *Beshko* 10005 (TASH, herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** mountains Aktau, Khatyrchi District, 09.04.1928, *Lepeschkin* (TASH).

167. *Bromus scoparius* L., Cent. Pl. I: 6 (1755). Annual, therophyte. Tethyan. Desert, Forest, Shrubland, Grassland, Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Abundant. Native. **Occurrence records:** **I-4-a Nuratau Range:** Hayatsay, 06.05.1992, *Beshko* 92511 (herbarium of the Nuratau Nature Reserve); Hayatsay, 20.05.2006, *Beshko* 06080, 06081 (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** Khatyrchi District, 05.05.1928, *Lepeschkin* (TASH).

168. *Bromus sewerzowii* Regel, Trudy Imp. S.-Peterburgsk. Bot. Sada 7: 601 (1880). Annual, therophyte. Irano-Turanian. Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** 3 km south-east of the village Karatepa, plain between Karatepa and Koytash, 29.05.1958, *Li, Zakirov* 855 (TASH); Bolosay, 10.06.1996, *Beshko* 96084 (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** Khatyrchi District, 05.05.1928, *Lepeschkin* (TASH).

169. *Bromus squarrosus* L., Sp. Pl.: 76 (1753). Annual, therophyte. Euro-Siberian, Irano-Turanian. Desert, Forest, Shrubland, Grassland, Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** Nuratau Nature Reserve, 19.05.1981, *Mukhina* 51411 (TASH).

170. *Bromus sterilis* L., Sp. Pl.: 77 (1753). Annual, therophyte. European, Tethyan. Forest, Shrubland, Grassland, Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** Koblatysay, 04.04.1952, *Zaprometova* (TASH); Hayatsay, 02.05.1992, *Beshko* 92420–92421 (herbarium of the Nuratau Nature Reserve).

171. *Bromus tectorum* L., Sp. Pl.: 77 (1753). Annual, therophyte. Euro-Siberian, Irano-Turanian. Desert, Forest, Shrubland, Grassland, Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Abundant. Native. **Occurrence records:** **I-4-a Nuratau Range:** Payaryk District, between the villages Alma-suvan and Savryuk, 23.07.1931, *Kobranova* 218 (TASH); Badam, west of well Uzunkuduk, 27.05.1939, *Mikhaylova, Popova* (TASH); Nuratau Range, Farish District, 14.05.1941, *Momotov* (TASH); 3 km north-east of the village Kuvakiya at piedmonts of

Mt. Piyazli, 04.06.1941, *Momotov 4* (TASH); Kyzylcha State Farm, Ukan, clayey plain, 27.05.1951, *Novikova* (TASH); Kyzylcha State Farm, 06.06.1951, *Zaprometova* (TASH); Koblatysay, 17.03.1952, *Zaprometova* (TASH); Koblatysay, 04.04.1952, *Zaprometova* (TASH); piedmont plain south of 3 farmstead of Kyzylcha State Farm, 09.04.1953, *Zaprometova 360* (TASH); piedmont plain north of Nuratau Range, near Kyzylcha State Farm, 03.05.1954, *Zaprometova* (TASH); [same locality], 26.05.1954, *Zaprometova* (TASH); Gatchasay, 15.05.1957, *Zaprometova* (TASH); Koblatysay, 30.03.1958, *Zaprometova 35* (TASH); Ukansay, 02.04.1958, *Zaprometova* (TASH); Pistalisay, 24.04.1958, *Zaprometova 49* (TASH); Gatchasay, 16.05.1960, *Zaprometova, Nikerov 99* (TASH); Uruskuduk, 21.06.1962, *Khaydarov 93* (TASH); mountains Nuratau, 00.06.1963, *Khaydarov 248* (TASH); Akbel, 14.06.1963, *Khaydarov 1731* (TASH); Karl Marx State Farm, eastern part of Nuratau Range, basin of Narvansay, 21.05.1967, *Perelygina* (TASH); Nuratau Nature Reserve, Hayatsay, near field station, 03.05.1978, *Korshunov* (TASH); Madjrumsay, 22.05.1994, *Beshko 94073* (herbarium of the Nuratau Nature Reserve); Asrafsay, 04.06.1996, *Beshko 96107* (herbarium of the Nuratau Nature Reserve); Hayatsay, 30.05.2003, *Beshko 03004* (herbarium of the Nuratau Nature Reserve); Jizzakh Region, Farish District, village Upper Hayat, 40.52805° N, 66.77599° E, 27.04.2024, *Beshko* (www.inaturalist.org); Jizzakh Region, Farish District, surroundings of village Ukhum, 40.55149° N, 66.798759° E, 13.05.2024, *langli* (www.inaturalist.org). **I-4-b Aktau Range:** Nurata, 29.04.1913, *Korovin* (TASH); Khatyrchi District, 05.05.1928, *Lepeschkin* (TASH); Khatyrchi District, outskirts of Kuruktepa, 20.05.1928, *Lepeschkin* (TASH); near the town Nurata, 22.05.1964, *Markova* (TASH). **I-4-b Karatau Range:** south of the pass Jizlan, 26.05.1964, *Pryakhin* (TASH). **I-4-b Khobduntau Range:** one of the peaks 3 km opposite the village Gumsay, 11.06.1929, *Kudrjashev* (TASH); near the village Khodzha-Kabud, 1 km to the north, 16.06.1929, *Kudrjashev* (TASH); valley Bodbod, 20.06.1929, *Kudrjashev* (TASH); near the village Bodbod, 21.06.1929, *Kudrjashev* (TASH); Gallaaral District, experimental station of cereal crops, near the railway, 14.05.1934, *Toporova* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistaltau, 07.04.1911, *Dimo, Sprygin, Shulga 531* (TASH); Pistaltau, 07.04.1915, *Kultiasow 37* (TASH); Pistaltau, 08.04.1915, *Kultiasow 19, 62* (TASH); plain between mountains Koytash and Balyklitau, 23.05.1931, *Kobranova 427* (TASH); Balyklitau, 20.04.2012, *Batashov* (TASH).

Calamagrostis Adans.

172. *Calamagrostis pseudophragmites* (Haller f.) Koeler (*Calamagrostis dubia* Bunge), Descr. Gramin.: 106 (1802). Perennial, hemicryptophyte. Palearctic. Wetlands (inland), Artificial aquatic. Plain, foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** Mts. Koytash, Savryuksay, 20.07.1931, *Kobranova 142* (TASH); Bolosay, 10.06.1996, *Beshko 96125* (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** Khatyrchi District, 03.09.1928, *Lepeschkin* (TASH). **I-4-b Khobduntau Range:** valley Bodbod, 20.06.1929, *Kudrjashev* (TASH); Mts. Khobduntau, north-western slopes, 30.08.1931, *Kobranova 102* (TASH).

Cutandia Willk.

173. *Cutandia memphitica* (Spreng.) Benth., J. Linn. Soc., Bot. 19: 118 (1881). Annual, therophyte. Tethyan, Saharo-Arabian. Desert, Artificial terrestrial. Plain. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** piedmont plain near Kyzylcha State Farm, 28.05.1954, *Zaprometova* (TASH).

174. *Cutandia rigescens* (Grossh.) Tzvelev (*Scleropoa rigescens* (Trin.) Nevski), Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk S.S.S.R. 18: 27 (1957). Annual, therophyte. Caucasian, Middle Asian. Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills. Occasional. Native. **Occurrence records:** **I-4-b Aktau Range:** Khatyrchi District, 15.05.1928, *Lepeschkin* (TASH).

Cynodon Rich.

175. *Cynodon dactylon* (L.) Pers., Syn. Pl. 1: 85 (1805). Perennial, hemicryptophyte. Pluriregional. Desert, Forest, Shrubland, Grassland, Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Payaryk District, 1 km south of Ugat, 21.07.1931, *Kobranova 175* (TASH); Nuratau Nature Reserve, Hayat, slope, about 1400 m a.s.l., 01.08.1980, *Mukhina* (TASH); piedmont plain of Nuratau Range, surroundings of the village Ok-tom, 19.05.2010, *Beshko* (www.plantarium.ru); Jizzakh Region, Gallaaral District, southern foothills of Nuratau, near the village Karakchi, 40.07409° N 67.59741° E, 15.07.2023, *Beshko* (www.inaturalist.org). **I-4-b Khobduntau Range:** surroundings of Marjonbulak, 02.07.2021, *Beshko* (www.plantarium.ru). **I-4-c North-Nuratau insular low mountains:** mountains Balyklitau, 23.05.1931, *Kobranova 436* (TASH).

Dactylis L.

176. *Dactylis glomerata* L., Sp. Pl.: 71 (1753). Perennial, hemicryptophyte. Pluriregional. Rocky areas, Wetlands (inland). Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** upper reaches of Madjrumsay, 29.06.2011, *Beshko* (www.plantarium.ru); Madjrumsay, Bedar, 19.07.2011, *Beshko 11083* (herbarium of the Nuratau Nature Reserve).

Digitaria Heist.

177. *Digitaria ischaemum* (Schreb.) Muehl., Descr. Gram.: 131 (1817). Annual, therophyte. Pluriregional. Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** mountains Nuratau, October 1963, *Khaydarov 2000* (TASH); Hayatsay, field station of nature reserve, 01.09.2003, *Beshko 03031, 03032* (herbarium of the Nuratau Nature Reserve).

178. *Digitaria sanguinalis* (L.) Scop., Fl. Carniol., ed. 2, 1: 52 (1771). Annual, therophyte. Pluriregional. Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, field station of nature reserve, 20.09.1999, *Beshko 99001, 99002, 99003* (herbarium of the Nuratau Nature Reserve).

Echinochloa P.Beauv.

179. *Echinochloa crus-galli* (L.) P.Beauv., Ess. Agrostogr.: 53 (1812). Annual, therophyte. Pluriregional. Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Probably alien. **Occurrence records: I-4-a Nuratau Range:** Payaryk District, 1 km south of Ugat, 21.07.1931, *Kobranova 178* (TASH); Hayatsay, field station of nature reserve, 01.09.2003, *Beshko 03048* (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** Khatyrchi District, 09.06.1928, *Lepeschkin* (TASH).

Elymus L.

180. *Elymus drobovii* (Nevski) Tzvelev (*Agropyron drobovii* Nevski), Novosti Sist. Vyssh. Rast. 9: 61 (1972). Perennial, hemicryptophyte. Western Tien Shan, Western Pamir-Alay. Shrubland, Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Bolosay, 30.06.1992, *Beshko 92401* (herbarium of the Nuratau Nature Reserve, TASH).

181. *Elymus lolioides* (P.Candargy) Melderis (*Agropyron lolioides* (Kar. & Kir.) Roshev.), Bot. J. Linn. Soc. 76: 382 (1978). Perennial, hemicryptophyte. Euro-Siberian, Irano-Turanian. Shrubland, Grassland, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** pass near the sources of Guzhumay, 23.07.1937, *Demurina 662, 663, 664* (TASH); Bolosay, 10.06.1996, *Beshko 96074* (herbarium of the Nuratau Nature Reserve). **I-4-b Khobduntau Range:** Gallaaral District, experimental station of cereal crops, 05.06.1934, *Toporova* (TASH).

182. *Elymus repens* (L.) Gould. (*Agropyron repens* (L.) P.Beauv.), Madroño 9: 127 (1947). Perennial, hemicryptophyte. Pluriregional. Forest, Shrubland, Grassland, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, field station, 03.06.2006, *Beshko 06146, 06147* (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** Khatyrchi District, 09.06.1928, *Lepeschkin* (TASH). **I-4-b Khobduntau Range:** Gallaaral District, experimental station of cereal crops, 28.07.1934, *Toporova* (TASH).

Eragrostis Host.

183. *Eragrostis minor* Host. (*Eragrostis poaeoides* Beauv.), Fl. Austriaca 1: 135 (1827). Annual, therophyte. Pluriregional. Forest, Shrubland, Grassland, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Kichiksay, 14.07.1956, *Vvedensky 119* (TASH); mountains Nuratau, October 1963, *Khaydarov 2001* (TASH). **I-4-b Aktau Range:** village Angudan, 10.06.1928, *Lepeschkin* (TASH). **I-4-b Karatau Range:** western slopes of Karatau, valley near the village Eski, Nurata District, 10.07.1931, *Kasimenko 2182* (TASH).

184. *Eragrostis pilosa* (L.) Beauv., Ess. Agrostogr.: 71 (1812). Annual, therophyte. Pluriregional. Grassland, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Reported by Zakirov in «Vegetation cover of Nuratau Mountains» (1969, p. 21) and «Botanical geography of low mountains of Kyzylkum and Nuratau Range» (1971, p. 53).

Eremopyrum Jaub. & Spach

185. *Eremopyrum bonaepartis* (Spreng.) Nevski, Trudy Bot. Inst. Akad. Nauk S.S.S.R., Ser. 1, Fl. Sist. Vyssh. Rast. 1: 18 (1933). Annual, therophyte. Tethyan. Desert, Shrubland, Rocky areas, Artificial terrestrial. Plain, foothills. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Kyzylchali, 28.04.1913, *Korovin* (TASH); Gallaaral District, Karakuduk, 05.06.1934, *Rybakov* (TASH); Badam, west of well Uzunkuduk, 27.05.1939, *Mikhaylova, Popova* (TASH); Farish District, geobotanical description №11, 02.05.1941, *Momotov* (TASH); surroundings of Kyzylcha State Farm, 12.05.1951, *Zaprometova 76* (TASH); Nurata District, Kyzylcha State Farm, 06.06.1951, *Zaprometova* (TASH); piedmont plain 6 km from Kyzylcha State Farm, 14.05.1960, *Zaprometova, Nikerov 28, 31* (TASH); Gatchasay, 16.05.1960, *Zaprometova, Nikerov 114, 121* (TASH); piedmont plain 6 km north-west of Kyzylcha State Farm, 27.05.1960, *Zaprometova, Nikerov 208, 209, 210* (TASH); mountains Nuratau, 04.05.1963, *Khaydarov 59* (TASH); Akbel, 14.06.1963, *Khaydarov 1724* (TASH). **I-4-b Aktau Range:** Nurata, sagebrush steppe 7 verst of the well Pashat, 24.04.1913, *Korovin 41* (TASH); Nurata, 29.04.1913, *Korovin 147* (TASH); near the village Dekhibaland, 28.05.1936, *Kharchenko 1149, 1150* (TASH); valley Chashma, 13.06.1963, *Khaydarov 1718* (TASH). **I-4-b Khobduntau Range:** 1 km north of the Kuropatkino railway station, 08.06.1929, *Kudrjashev* (TASH); Gallaaral District, experimental station of cereal crops, 07.06.1934, *Toporova* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 08.04.1915, *Kultiasow 17* (TASH); plain between mountains Koytash and Balyklitau, 23.05.1931, *Kobranova 404, 411* (TASH).

186. *Eremopyrum distans* (K. Koch) Nevski, Trudy Bot. Inst. Akad. Nauk S.S.S.R., Ser. 1, Fl. Sist. Vyssh. Rast. 1: 18 (1933). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-b Aktau Range:** between well Pashat and Kara-Yuzgan, 25.04.1913, *Korovin 91* (TASH). **I-4-c North-Nuratau insular low mountains:** piedmonts of Pistalitau, 09.04.1911, *Dimo, Sprygin, Shulga 510* (TASH).

187. *Eremopyrum orientale* (L.) Jaub. & Spach, Ill. Pl. Orient. 4: 26 (1851). Annual, therophyte. Tethyan. Desert, Shrubland, Rocky areas, Artificial terrestrial. Plain, foothills. Occasional. Native.

Occurrence records: I-4-a Nuratau Range: south of the spring Yangaly, 06.05.1939, *Mikhaylova, Popova* (TASH); Farish District, foothills near Yangikishlak, 13.05.2012, *Beshko* (TASH).

188. *Eremopyrum triticeum* (Gaertn.) Nevski, Trudy Bot. Inst. Akad. Nauk S.S.S.R., Ser. 1, Fl. Sist. Vyssh. Rast. 1: 18 (1933). Annual, therophyte. Euro-Siberian, Irano-Turanian. Desert, Shrubland, Rocky areas, Artificial terrestrial. Plain, foothills. Rare. Native. **Occurrence records: I-4-b Aktau Range:** Khatyrchi District, 05.05.1928, *Lepeschkin* (TASH).

Festuca L.

189. *Festuca ambigua* Le Gall (*Vulpia ciliata* Dumort.), Fl. Morbihan: 731 (1852). Annual, therophyte. Tethyan. Desert, Shrubland, Grassland, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Madjrumsay, 22.05.1994, *Beshko 94074* (herbarium of the Nuratau Nature Reserve); Hayatsay, Novi Daroz, 07.05.2005, *Beshko 05012* (herbarium of the Nuratau Nature Reserve); Hayatsay, 20.05.2006, *Beshko 06102* (herbarium of the Nuratau Nature Reserve). **I-4-c North-Nuratau insular low mountains:** Pistaltau, 08.04.1915, *Kultiasov 26, 34* (TASH).

190. *Festuca hirtiglumis* (Boiss. & Hausskn.) Sennikov (*Vulpia persica* (Boiss. & Buhse) V.I.Krecz. & Bobrov), Checkl. Vasc. Pl. Tian-Shan: 76 (2021). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills. Abundant. Native. **Occurrence records: I-4-a Nuratau Range:** Gallaaral District, Karakuduk, 08.06.1934, *Rybakov* (TASH); Nuratau Range, floodplain valley north of the village Karatash, 26.06.1941, *Bukasov* (TASH); Nuratau Range, Farish District, 29.06.1941, *Momotov* (TASH); foothills of Nuratau Range, Farish District, Kirov State Farm, 07.05.1943, *Vernik, Raykova 46* (TASH); piedmont plain between Yangikishlak and Ukhum, 04.05.1958, *Li, Zakirov 318* (TASH); 3 km south of village Midzhigan, 15.05.1958, *Li, Zakirov 577* (TASH); 0.5 km west of the village Tegirmanaul, foothills, 16.05.1958, *Li, Zakirov 600, 604* (TASH); Farish District, 4 km north-east of the village Deristan, *Li, Zakirov 227* (TASH). **I-4-b Karatau Range:** mountains Karakarga, the pass Jizlan, 22.04.1913, *Korovin 15c* (TASH). **I-4-b Khobduntau Range:** plain between mountains Khobduntau and Karachatau near Kuropatkino railway station, 27.06.1929, *Kudrjashev* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistaltau, 08.04.1915, *Kultiasov 61* (TASH).

191. *Festuca maritima* L. (*Vulpia unilateralis* (L.) Stace, *Nardurus krausei* (Regel) V.I.Krecz. & Bobrov), Sp. Pl.: 75 (1753). Annual, therophyte. Tethyan. Desert, Shrubland, Rocky areas. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Range, Farish District, 10.05.1941, *Momotov 196/3* (TASH); Sentob, 0.5 km south of the village Yukary-Kurgan, 11.05.1958, *Li, Zakirov 502, 504* (TASH); 3 km east of Narvan, 22.05.1958, *Li, Zakirov 712* (TASH); Sanguzarsay, 07.05.1992, *Beshko 92303* (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** valley between mountains Koytash and Takhku-tau, 31.05.1941, *Lepeschkin* (TASH). **I-4-b Khobduntau Range:** reported by Kudrjashev in “Vegetation of the Khobduntau and Karachatau Mountains” (1929, p. 59).

192. *Festuca myuros* L. (*Vulpia myuros* (L.) C.C.Gmel.), Sp. Pl.: 74 (1753). Annual, therophyte. Euro-Siberian, Tethyan. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** south-west of town Jizzakh, Tamerlane’s Gate, 26.04.1979, *Pimenov, Kljuykov, Boryaev, Baranova, Vassiljeva 47* (MW); Nuratau Nature Reserve, lower reaches of Gurdara, 24.04.2025, *Beshko, Khabibullaev* (TASH).

193. *Festuca orientalis* (Boiss.) B.Fedtsch. (*Lolium subulatum* (Banks & Sol.) Eig.), Izv. Imp. Bot. Sada Petra Velikago 14(Suppl. 2): 87 (1915). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Rocky areas. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Range, Farish District, 02.05.1941, *Momotov* (TASH); Sanguzarsay, 07.05.1992,

Beshko 92299 (herbarium of the Nuratau Nature Reserve); Bolosay, 10.06.1996, *Beshko* 96091 (herbarium of the Nuratau Nature Reserve); Hayatsay, 20.06.2006, *Beshko* 06077, 06078 (herbarium of the Nuratau Nature Reserve). **I-4-b Karatau Range:** dry valley 2.5 km west of Karakarga Pass, 04.05.2013, *Tojibaev, Beshko, Batashov, Azimova* (TASH).

194. *Festuca valesiaca* Schleich. & Gaudin, *Agrost. Helv.* 1: 242 (1811). Perennial, hemicryptophyte. Euro-Siberian, Irano-Turanian. Shrubland, Grassland, Rocky areas. Montane zone. Dominant. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau mountains, northern slope, 02.08.1931, *Kobranova* 509 (TASH); Mts. Koytash, watershed crest, 02.08.1934, *Botschantzev* (TASH); Mts. Koytash, near the village Shurkundi, 25.05.1938, *Botschantzev* (TASH); Hayatsay, 07.07.1990, *Beshko, Yakovenko* 90006 (herbarium of the Nuratau Nature Reserve); Nakrutsay, 19.06.1992, *Beshko* 92291 (herbarium of the Nuratau Nature Reserve); surroundings of the lake Sentobkul (Fazilman), 14.05.1993, *Beshko* 93064 (herbarium of the Nuratau Nature Reserve); Hayatsay, 20.05.2006, *Beshko* 06082 (herbarium of the Nuratau Nature Reserve); Hayatsay, 06.06.2011, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** the top of Mt. Takhku-tau, 07.05.1913, *Korovin* 453 (TASH); near the village Shamaly, 24.05.1925, *Popov* (TASH); 4–6 km south of village Chuya, 29.06.1937, *Demurina* 352 (TASH).

Glyceria R.Br.

195. *Glyceria notata* Chevall. (*Glyceria plicata* (Fr.) Fr.), *Fl. Gén. Env. Paris* 2: 174 (1827). Perennial, hemicryptophyte. Pluri-regional. Wetlands (inland), Artificial aquatic. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** bank of the river Sanzar near Jizzakh, 27.05.1931, *Kasimenko* 2142; Payaryk District, 1 km south of Ugat, 21.07.1931, *Kobranova* 179, 180 (TASH); Hayatsay, 03.08.1980, *unknown collector* 136 (TASH); Bolosay, 30.06.1992, *Beshko* 92497 (herbarium of the Nuratau Nature Reserve); Hayatsay, Alichak, 25.06.2006, *Beshko* 06348 (herbarium of the Nuratau Nature Reserve). **I-4-b Karatau Range:** Sarmysh, 05.05.1967, *students* (TASH). **I-4-b Khobduntau Range:** Jizzakh Region, Gallaaral District, 39.92032° N, 67.51346° E, 02.07.2021, *Beshko* (www.inaturalist.org). **I-4-c North-Nuratau insular low mountains:** Balyklitau, 14.04.2013, *Batashov* (TASH).

Henrardia Hubb.

196. *Henrardia persica* (Boiss.) C.E.Hubb., *Blumea, Suppl.* 3: 17 (1946). Annual, therophyte. Irano-Turanian. Shrubland, Grassland, Rocky areas, Artificial terrestrial. Foothills. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** mountains south-west of town Jizzakh, 02.05.1921, *Kultiasow* 11 (TASH); Badam, west of well Uzunkuduk, 27.05.1939, *Mikheylova, Popova* (TASH); piedmont plain north of Nuratau Range, near Kyzylcha State Farm, 28.05.1954, *Zaprometova* (TASH); Gatchasay, 20.04.1958, *Zaprometova* (TASH); 1 km south of the village Saukbulak, 14.05.1958, *Li, Zakirov* 552, 555 (TASH); Uruskuduk, 25.05.1963, *Khaydarov* 1319 (TASH); Hayatsay gorge, 28.05.1969, *Mambetjumaev* 105 (TASH); Sanguzarsay, 07.05.1992, *Beshko* 92279 (herbarium of the Nuratau Nature Reserve); Hayatsay, Andebaraut, 20.06.2007, *Beshko* 07055 (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** near the village Dekhibaland, 28.05.1936, *Kharchenko* 1155, 1156, 1157, 1158 (TASH); sources of river Bitau, 27.05.1964, *Zuckerwanik* 271 (TASH); 10 south (downstream) of Langar, eastern slope, 10.06.1983, *Rusanovich, Udintseva* (MW). **I-4-b Karatau Range:** dry valley 2.5 km west of Karakarga Pass, 04.05.2013, *Tojibaev, Beshko, Batashov, Azimova* (TASH). **I-4-b Khobduntau Range:** Gallaaral District, experimental station of cereal crops, 13.05.1934, *Toporova* (TASH). **I-4-c North-Nuratau insular low mountains:** plain between mountains Koytash and Balyklitau, 23.05.1931, *Kobranova* 410 (TASH).

Heteranthelium Hochst. ex Jaub. & Spach

197. *Heteranthelium piliferum* (Sol.) Hochst. ex Jaub. & Spach, *Ill. Pl. Orient.* 4: 24 (1850). Annual, therophyte. Tethyan. Desert, Shrubland, Grassland, Rocky areas. Plain, foothills, montane zone.

Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Dzhusk – Koshrabad, 03.05.1913, *Korovin 260* (TASH); near Jizzakh, foothills, 06.05.1928, *Sovetkina 21* (TASH); Mts. Koytash, Bereshek, 28.05.1940, *Gomolitsky, Dolgikh, Arkhireev 48* (TASH); south-eastern part of Mts. Koytash, surroundings of town Jizzakh, 26.05.1931, *Kasimenko* (TASH); Sentobsay, 10.05.1956, *Zaprometova 93* (TASH); Gatchasay, 16.05.1960, *Zaprometova, Nikerov 110* (TASH); Kattasay, 25.05.1967, *Pereygina* (TASH). **I-4-b Aktau Range:** Khatyrchi District, 05.05.1928, *Lepeschkin* (TASH); the spring Bitav, 15.04.1963, *Khaydarov 706* (TASH); upper reaches of river Bitau, 26.05.1964, *Zuckerwanik 264* (TASH); sources of river Bitau, 27.05.1964, *Zuckerwanik 274* (TASH). **I-4-b Karatau Range:** mountains Karatau, eastern part, 20.05.1936, *Kharchenko 1086* (TASH); valley Bakachinak, 05.05.1955, *Momotov, Li 135* (TASH); southern slope of Karatau Range, surroundings of Karakarga Pass, about 700 m a.s.l., 27.04.2024, *Beshko* (www.plantarium.ru, www.inaturalist.org). **I-4-b Khobduntau Range:** valley Almaly, 13.06.1929, *Kudrjashev* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 08.04.1911, *Dimo, Sprygin, Shulga 528* (TASH); Pistalitau, 08.04.1915, *Kultiasow* (TASH).

Hordeum L.

198. *Hordeum brevisubulatum* (Trin.) Link., Linnaea 17: 391 (1844). Perennial, hemicryptophyte. Euro-Siberian, Irano-Turanian. Rocky areas, Wetlands (inland). Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, between the villages Sarymsak and Garaili, 30.07.1931, *Kobranova 231* (TASH); upper reaches of Ustuksay, 29.05.1964, *Zuckerwanik 362* (TASH); shore of Fazilman Lake, 08.06.2013, *Beshko* (TASH).

199. *Hordeum bulbosum* L., Cent. Pl. II: 8 (1756). Perennial, hemicryptophyte. Tethyan. Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Dominant. Native. **Occurrence records: I-4-a Nuratau Range:** Farish District, 07.05.1941, *Momotov 162* (TASH); Hayatsay, 28.05.1969, *Mambetjumaev 105* (TASH); Hayatsay, 20.05.2006, *Beshko 06085* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 12.05.2007, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 22.05.2010, *Beshko* (www.plantarium.ru). **I-4-b Khobduntau Range:** one of the peaks near the village Baz-tau, 16.06.1929, *Kudrjashev* (TASH); valley Bodbod, 20.06.1929, *Kudrjashev* (TASH). **I-4-c North-Nuratau insular low mountains:** Balyklitau, 27.04.2012, *Batashov* (TASH); the crest of Egarbelistag, 1.5 km west of the Carbonat JSC quarry, 27.04.2020, *Beshko, Shomurodov, Adilov* (plant community description).

200. *Hordeum marinum* subsp. *gussoneanum* (Parl.) Thell. (*H. geniculatum* All.), Vierteljahrsschr. Naturf. Ges. Zürich 52: 441 (1908). Annual, therophyte. European, Tethyan. Grassland, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills. Occasional. Native. **Occurrence records: I-4-b Khobduntau Range:** along valley Almaly, 13.06.1929, *Kudrjashev* (TASH).

201. *Hordeum murinum* subsp. *leporinum* (Link) Arcang. (*H. leporinum* Link), Comp. Fl. Ital.: 805 (1882). Annual, therophyte. Tethyan. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Abundant. Native. **Occurrence records: I-4-a Nuratau Range:** 3 km south-east of the village Karatepa, plain between Karatepa and Koytash, 29.05.1958, *Li, Zakirov 845, 858* (TASH); mountains Nuratau, 04.05.1963, *Khaydarov 55, 1177* (TASH); Hayatsay, field station of Nuratau Nature Reserve, 14.05.2005, *Beshko 05013, 05014* (herbarium of the Nuratau Nature Reserve); Hayatsay, Andebaraut, 22.05.2006, *Beshko 06316* (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** Khatyrchi District, 05.05.1928, *Lepeschkin* (TASH); piedmont plain near the town Nurata, 13.04.1963, *Markova* (TASH). **I-4-b Karatau Range:** station Karmana – mountains Karakarga, *Iris*-sagebrush steppe, 22.04.1913, *Korovin 6* (TASH). **I-4-b Khobduntau Range:** Kuropatkino railway station, 8 km east of the station, 00.05.1930, *Tarasevich 67* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 07.04.1911, *Dimo, Sprygin, Shulga 532* (TASH);

Pistalitau, 08.04.1915, *Kultiasow 104* (TASH); plain between mountains Koytash and Balyklitau, 23.05.1931, *Kobranova 412, 413* (TASH).

202. *Hordeum spontaneum* K.Koch, Linnaea 21: 430 (1848). Annual, therophyte. Eastern Tethyan. Shrubland, Grassland, Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** 12 verst south of town Jizzakh, 11.05.1928, *Sovetkina 134* (TASH); Hayatsay, Novi Khushk, 24.05.2006, *Beshko 06324* (herbarium of the Nuratau Nature Reserve); near the village Ok-tom, 15.05.2009, *Beshko* (www.plantarium.ru); foothills of Nuratau, surroundings of district center Yangikishlak, top of the hill, 13.05.2012, *Beshko* (TASH). **I-4-b Aktau Range:** sources of river Bitau, 27.05.1964, *Zuckerwanik 313* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 07.04.1911, *Dimo, Sprygin, Shulga 527, 536* (TASH); Pistalitau, 07.04.1915, *Kultiasow 33, 34* (TASH).

203. *Hordeum vulgare* subsp. *distichon* (L.) Körn., Z. Gesammte Brauwesen 5: 125 (1882). Annual, therophyte. Pluriregional (native to Iraq). Plain, foothills. Artificial terrestrial. Rare. Alien. **Occurrence records: I-4-a Nuratau Range:** Badam, west of well Uzunkuduk, 27.05.1939, *Mikhaylova, Popova* (TASH).

Leymus Hochst.

204. *Leymus angustus* (Trin.) Pilg. (*Elymus angustus* Trin. ex Ledeb.), Bot. Jahrb. Syst. 74: 6 (1947). Perennial, hemicryptophyte. Siberian, Irano-Turanian. Shrubland, Grassland, Rocky areas. Montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Hayat Pass, 03.08.1940, *Gomolitsky, Dolgikh 252* (TASH); Koytash, near the crest, 28.06.1971, *Botschantzev, Kamelin* (LE); upper reaches of Hayatsay, 20.08.1977, *Levichev* (TASH); Hayat, 1700 m, 16.08.1978, *unknown collector* (TASH); the crest between Khotunon and Alichak, 1980, *unknown collector 148* (TASH); Mt. Hayatbashi, 16.06.1990, *Beshko, Yakovenko 90003* (TASH, herbarium of the Nuratau Nature Reserve); Mt. Hayatbashi, 28.06.1994, *Beshko 94035* (herbarium of the Nuratau Nature Reserve); Hayatsay, Alichak, 25.06.2006, *Beshko 06241* (herbarium of the Nuratau Nature Reserve); upper reaches of Hayatsay, 31.05.2009, *Beshko* (www.plantarium.ru); watershed crest between Hayatsay and Madjrumsay, 16.06.2019, *Beshko* (www.plantarium.ru); upper reaches of Sentobsay, on the top of Mt. Zargar (Karchigay), 24.05.2025, *Beshko* (TASH). **I-4-b Aktau Range:** valley Ingichka, 26.06.1971, *Botschantzev, Kamelin 493* (LE).

Lolium L.

205. *Lolium arundinaceum* (Schreb.) Darbysh. (*Festuca arundinacea* Schreb.), Novon 3: 241 (1993). Perennial, hemicryptophyte. Euro-Siberian, Irano-Turanian. Wetlands (inland), Artificial aquatic. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** reported by Zakirov in «Botanical geography of low mountains of Kyzylkum and Nuratau Range» (1971, p. 53). **I-4-b Khobduntau Range:** Milyutinskaya railway station, 05.06.1916, *Androssov* (TASH); valley Bodbod, 21.06.1929, *Kudrjashev* (TASH).

206. *Lolium multiflorum* Lam., Fl. Franç. 3: 621 (1779). Perennial, hemicryptophyte. Pluriregional (native to Mediterranean, Caucasus and Western Irano-Turanian). Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Probably alien. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, field station of nature reserve, 40.52722° N, 66.77478° E, 24.08.2008, *Beshko* (www.inaturalist.org).

207. *Lolium perenne* L., Sp. Pl.: 83 (1753). Perennial, hemicryptophyte. Pluriregional (native to Eurasia). Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Alien. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, field station of nature reserve, 40.52736° N, 66.77465° E, 22.08.2008, *Beshko* (www.inaturalist.org).

Melica L.

208. *Melica altissima* L., Sp. Pl.: 66 (1753). Perennial, hemicryptophyte. Euro-Siberian, Irano-Turanian. Rocky areas, Wetlands (inland). Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** upper reaches of Gurdara, 08.06.1994, *Beshko 94063* (herbarium of the Nuratau Nature Reserve).

209. *Melica persica* Kunth (*M. hohenackeri* Boiss., *M. inaequiglumis* Boiss.), Révis. Gramin. 1: 351 (1830). Perennial, hemicryptophyte. Irano-Turanian. Shrubland, Grassland, Rocky areas. Montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Ukhum Pass, 28.07.1937, *Demurina 771* (TASH); Nakrutsay, 30.05.1964, *Zuckerwanik 410* (TASH); valley Uchma, 01.06.1964, *Zuckerwanik 460* (TASH); Hayatsay, 30.05.1969, *Mambetjumaev 114* (TASH); watershed 1 km west of Saurbel Pass, 8 km south-west of Yangikishlak, 27.05.2012, *Beshko* (TASH). **I-4-b Aktau Range:** Khanbandy – Chuya, 02.05.1913, *Korovin 200* (TASH); near the village Langar, valley Yangokly, 21.05.1941, *Zakirov, Niyazov* (TASH). **I-4-b Karatau Range:** north of the ruins of the village Sarmysh, 05.05.1955, *Momotov, Li 159* (TASH). **I-4-b Khobduntau Range:** valley Bodbod, 21.06.1929, *Kudrjashev* (TASH).

Milium L.

210. *Milium vernale* M.Bieb., Fl. Taur.-Caucas. 1: 53 (1808). Annual, therophyte. European, Tethyan. Forest, Shrubland, Grassland, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** reported in «Conspectus Florae Asiae Mediae», vol. 1 (1971, p. 88). **I-4-b Aktau Range:** valley Petyr, 14.07.1972, *Kamelin* (LE).

Parapholis C.E.Hubb.

211. *Parapholis incurva* (L.) C.E.Hubb., Blumea, Suppl. 3: 14 (1946). Annual, therophyte. European, Tethyan. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Sentob, 0.5 km south of the village Yukary-Kurgan, 11.05.1955, 11.05.2055, *Li, Zakirov 501* (TASH).

Paspalum L.

212. *Paspalum distichum* L., Syst. Nat. ed. 10, 2: 855 (1759). Perennial, hemicryptophyte. Pluriregional (native to America). Wetlands (inland), Artificial aquatic. Plain, foothills. Rare. Alien. **Occurrence records: I-4-b Khobduntau Range:** surroundings of Marjonbulak, 02.07.2021, *Beshko* (www.plantarium.ru).

Phalaris L.

213. *Phalaris arundinacea* L. (*Phalaroides arundinacea* (L.) Rauschert), Sp. Pl.: 55 (1753). Perennial, hemicryptophyte. Circumtemperate. Wetlands (inland), Artificial aquatic. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, upstream of the village Ugat, 01.08.1934, *Botschantzev* (TASH); gorge Gurdara near the village Sarymsak, 23.06.1971, *Botschantzev, Kamelin* (LE).

214. *Phalaris minor* Retz., Observ. Bot. 3: 8 (1783). Annual, therophyte. Tethyan, Saharo-Arabian. Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** mountain range south of the spring Yangaly, 06.05.1939, *Mikhaylova, Popova* (TASH); Nurata State Farm, piedmont plain, 15.06.1949, *Novikova* (TASH); near Kyzylcha State Farm, 06.06.1951, *Zaprometova* (TASH). **I-4-b Aktau Range:** mountains Aktau, Khatyrchi District, 15.05.1928, *Lepeschkin* (TASH).

Phleum L.

215. *Phleum paniculatum* Huds., Fl. Angl.: 23 (1762). Annual, therophyte. Euro-Siberian, Tethyan. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** 6 km north-west of the village Khukala, 17.05.1958, *Li, Zakirov 643* (TASH); 3 km south-east of the village Karatepa, plain between Karatepa and Koytash, 29.05.1958, *Li, Zakirov 850* (TASH); Hayatsay, 20.07.2007, *Beshko* (www.plantarium.ru); Hayatsay, Novi Daroz, 02.06.2009, *Beshko 09024* (TASH, herbarium of the Nuratau Nature Reserve). **I-4-b Khobduntau Range:** southern piedmont of Khobduntau, near the village Bodbod, 21.06.1929, *Kudrjashev* (TASH); Gallaaral District, experimental station of cereal crops, 25.06.1934, *Toporova* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 08.04.1915, *Popov 61* (TASH); Pistalitau, 13.04.2012, *Batashov* (TASH).

Phragmites Adans.

216. *Phragmites australis* (Cav.) Trin. ex Steud., Nomencl. Bot., ed. 2, 2: 324 (1841). Perennial, hemicryptophyte. Pluri-regional. Wetlands (inland), Artificial aquatic. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, Zamezhak, 10.09.1991, *Beshko 91001* (herbarium of the Nuratau Nature Reserve). **I-4-b Khobduntau Range:** Jizzakh Region, Gallaaral District, 39.92032° N, 67.51346° E, 02.07.2021, *Beshko* (www.inaturalist.org). **I-4-c North-Nuratau insular low mountains:** Jizzakh Region, Farish District, northern piedmonts of Pistalitau near the shore of Tuzkan Lake, 40.54829° N, 67.39162° E, 09.05.2024, *Beshko* (www.inaturalist.org); northern piedmonts of Pistalitau near the shore of Tuzkan Lake, 40.5424° N, 67.403589° E, 09.05.2024, *Beshko* (plant community description).

Piptatherum P.Beauv.

217. *Piptatherum ferganense* (Litv.) Roshev., Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk S.S.S.R. 14: 115 (1951). Perennial, hemicryptophyte. Western Tien Shan, Pamir-Alay. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Nature Reserve, Bolosay, 24.05.1995, *Beshko 95090, 95091* (herbarium of the Nuratau Nature Reserve).

218. *Piptatherum holciforme* (M.Bieb.) Roem. & Schult., Syst. Veg., ed. 15 bis 2: 328 (1817). Perennial, hemicryptophyte. Tethyan, Saharo-Arabian. Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-b Aktau Range:** near the village Shamaly, 24.05.1925, *Popov 391, 393* (TASH).

219. *Piptatherum laterale* (Regel) Nevski, Trudy Bot. Inst. Akad. Nauk S.S.S.R., Ser. 1, Fl. Sist. Vyssh. Rast. 4: 217 (1937). Perennial, hemicryptophyte. Irano-Turanian. Shrubland, Grassland, Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Hayat, dry lateral valley, 1500 m a.s.l., 10.08.1978, *unknown collector* (TASH).

220. *Piptatherum latifolium* (Roshev.) Nevski, Trudy Bot. Inst. Akad. Nauk S.S.S.R., Ser. 1, Fl. Sist. Vyssh. Rast. 4: 336 (1937). Perennial, hemicryptophyte. Mountain Middle Asian. Shrubland, Grassland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** gorge Gurdara near the village Sarymsak, 23.06.1971, *Botschantzev, Kamelin* (LE); Karysay, foot of the Beshbarmak rocks, 20.06.1990, *Beshko 9029* (TASH); Madjrum say, 08.07.1990, *Beshko, Yakovenko 90009* (herbarium of the Nuratau Nature Reserve); Karysay, Pubsay, 02.07.1992, *Beshko 92411* (herbarium of the Nuratau Nature Reserve); Mt. Parrandoz, 30.06.1995, *Beshko 95114–95116* (herbarium of the Nuratau Nature Reserve); Andygensay, 07.07.1995, *Beshko 95083–95085* (herbarium of the Nuratau Nature Reserve); Karysay, Pubsay, 20.06.2009, *Beshko 09020* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Gurdara, 03.05.2012, *Beshko* (TASH); Nuratau Nature Reserve, upper reaches of Madjrum say, Devgan, 25.05.2025, *Beshko* (TASH). **I-4-b Aktau**

Range: near the village Langar, valley Yangokly, 21.05.1941, *Zakirov, Niyazov* (TASH); mountains Aktau, 29.05.1963, *Khaydarov 1633* (TASH); mountains Bakhiltau, Charkhansay, 10.05.2013, *Beshko* (TASH).

221. *Piptatherum pamiralaicum* (Grig.) Roshev., Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk S.S.S.R. 14: 123 (1951). Perennial, hemicryptophyte. Pamir-Alay. Shrubland, Grassland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** Mt. Hayatbashi, 16.06.1990, *Beshko, Yakovenko 90010, 90011* (herbarium of the Nuratau Nature Reserve); Karysay, Chashmi Mullo, 30.06.1992, *Beshko 92393* (herbarium of the Nuratau Nature Reserve).

222. *Piptatherum sogdianum* (Grig.) Roshev., Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk S.S.S.R. 14: 116 (1951). Perennial, hemicryptophyte. Hyrcanian, Mountain Middle Asian. Shrubland, Grassland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** Nuratau Nature Reserve, Mt. Dushokh, 17.05.1995, *Beshko 95094* (herbarium of the Nuratau Nature Reserve); Sentobsay, Teraksay, 25.06.1996, *Beshko 96054* (herbarium of the Nuratau Nature Reserve); Andygensay, Sukhta, 05.06.2006, *Beshko 06122* (herbarium of the Nuratau Nature Reserve); watershed 1 km west of Saurbel Pass, 8 km south-west of Yangikishlak, 27.05.2012, *Beshko* (TASH); Karysay, northern slope of rocky massif Parrandoz, 16.07.2017, *Beshko* (TASH); Nuratau Nature Reserve, near the top of Mt. Hayatbashi, 19.05.2021, *Beshko, Madaminov NB2021227* (TASH).

223. *Piptatherum songaricum* (Trin. & Rupr.) Roshev., Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk S.S.S.R. 14: 106 (1951). Perennial, hemicryptophyte. Mountain Middle Asian, Dzungarian. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** Nakrutsay, 30.05.1964, *Zuckerwanik 409* (TASH); Parrandassay, upper reaches, on the way to Ukhum Pass, 31.05.1964, *Zuckerwanik 437* (TASH); Nuratau Nature Reserve, Ukhum Pass, 19.06.1992, *Beshko 92357* (herbarium of the Nuratau Nature Reserve); Bolosay, 30.06.1992, *Beshko 92388* (herbarium of the Nuratau Nature Reserve); Gurdara, 08.06.1994, *Beshko 94062* (herbarium of the Nuratau Nature Reserve); Hayatsay, Alichak, 31.05.2012, *Beshko* (TASH); upper reaches of Hayatsay, Alichak, 27.06.2012, *Beshko* (TASH); Nuratau Nature Reserve, Mt. Hayatbashi, 19.05.2021, *Beshko, Madaminov NB2021228* (TASH). **I-4-b Aktau Range:** near the village Langar, valley Yangokly, 21.05.1941, *Zakirov, Niyazov* (TASH).

Poa L.

224. *Poa annua* L., Sp. Pl.: 68 (1753). Annual, therophyte. Pluriregional. Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** Hayatsay, 25.04.1996, *Beshko 96004* (herbarium of the Nuratau Nature Reserve).

225. *Poa bactriana* Roshev., Bot. Mater. Gerb. Glavn. Bot. Sada R.S.F.S.R. 4: 93 (1923). Perennial, hemicryptophyte. Irano-Turanian. Shrubland, Rocky areas. Montane zone. Rare. Native. **Occurrence records:** **I-4-b Aktau Range:** top of Mt. Takhku-tau, 07.05.1913, *Korovin 433* (TASH).

226. *Poa bulbosa* L., Sp. Pl.: 70 (1753). Perennial, hemicryptophyte. Pluriregional. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Dominant. Native. **Occurrence records:** **I-4-a Nuratau Range:** Payaryk District, 1 km south of Ugat, 21.07.1931, *Kobranova 186* (TASH); Kyzylcha State Farm, Ukan, 17.04.1951, *Novikova* (TASH); Mt. Zargar, 3 km NE of village Urtasay, 11.05.1957, *Momotov, Li 264* (TASH); Nuratau Nature Reserve, Hayat, 03.05.1978, *Korshunov* (TASH); Nuratau Nature Reserve, Hayatsay, about 1200 m a.s.l., 31.08.1980, *Mukhina* (TASH); Hayatsay, field station, 22.04.2005, *Beshko 05006* (herbarium of the Nuratau Nature Reserve); Hayatsay, field station, 21.04.2006, *Beshko 06001* (herbarium of the Nuratau Nature Reserve); Hayatsay, 20.05.2006, *Beshko 06066* (herbarium of the Nuratau Nature Reserve); Tykchasay, surroundings of village Ukhum, 12.05.2019, *Juramurodov 29* (TASH); surroundings of village Ukhum, Ukhumsay, 05.05.2020, *Akbarov, Turdiev, Juramurodov 5052020030* (TASH); Jizzakh Region, Farish

District, Hayatsay, village Upper Hayat, field station of nature reserve, 40.527406° N 66.774812° E, 22.04.2023, *Beshko* (www.inaturalist.org); Jizzakh Region, Farish District, Nuratau Nature Reserve, Hayatsay, 40.512763° N 66.740404° E, 22.04.2023, *Beshko* (www.plantarium.ru, www.inaturalist.org).

I-4-b Aktau Range: near the well Pashat, 24.04.1913, *Korovin 40* (TASH); between well Pashat and Kara-Yuzgan, 25.04.1913, *Korovin 91* (TASH); Nurata, 29.04.1913, *Korovin 146* (TASH); Koshrabad, 06.05.1913, *Korovin 396* (TASH). **I-4-b Karatau Range:** surroundings of town Kanimekh, 5 km to the north, 15.07.1934, *Tyshchenko 102, 103, 104* (TASH). **I-4-b Khobduntau Range:** plain between mountains Khobduntau and Karachatau near Kuropatkino railway station, 06.06.1929, *Kudrjashev* (TASH); experimental station of cereal crops, near the railway, 14.05.1934, *Toporova* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 07.04.1911, *Dimo, Sprygin, Shulga 533, 578* (TASH); Pistalitau, 07.04.1915, *Kultiasow 35, 37* (TASH); plain between mountains Koytash and Balyklitau, 23.05.1931, *Kobranova 407* (TASH); Pistalitau, 16.04.2011, *Batashov* (TASH); northern piedmonts of Pistalitau, 24.04.2020, *Beshko, Shomurodov, Adilov* (plant community description); pass on Pistalitau, 25.04.2020, *Beshko, Shomurodov, Adilov* (plant community description); 5 km north of town Band, between two dumps of the Uchkulach open pit, 26.04.2020, *Beshko, Shomurodov, Adilov* (plant community description); northern piedmonts of remnant mountains Uchkulach, 26.04.2020, *Beshko, Shomurodov, Adilov* (plant community description); the crest of Egarbelistag, 1.5 km west of the Carbonat JSC quarry, 27.04.2020, *Beshko, Shomurodov, Adilov* (plant community description).

227. *Poa diaphora* Trin. (*Eremopoa altaica* (Trin.) Roshev.), Bull. Sci. Acad. Imp. Sci. Saint-Petersbourg 1: 69 (1836). Annual, therophyte. Irano-Turanian. Rocky areas, Wetlands (inland), Artificial aquatic. Plain, foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** Dzhusk – Koshrabad, *Iris* steppe, 03.05.1913, *Korovin 277* (TASH); Ustusay, 03.06.1954, *Burygin 314* (TASH); 6 km north-west of the village Khukala, 17.05.1958, *Li, Zakirov 645* (TASH); Ukhum Pass, 19.06.1992, *Beshko 92466* (herbarium of the Nuratau Nature Reserve); Mt. Hayatbashi, 06.06.1995, *Beshko 95054, 95055* (herbarium of the Nuratau Nature Reserve); upper reaches of Asrafsay, 11.06.1995, *Beshko 95075* (herbarium of the Nuratau Nature Reserve); Hayatsay, upper reaches of Novi Khushk, 31.05.2012, *Beshko* (TASH). **I-4-b Aktau Range:** Khanbandy – Chuya – Dzhusk, 02.05.1913, *Korovin 193* (TASH).

228. *Poa fragilis* Ovcz., Fl. Tadzhiksk. S.S.R. 1: 150 (1957). Perennial, hemicryptophyte. Pamir-Alay. Shrubland, Grassland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** watershed of Hayat and Kachaksay, northern slope, 20.08.1977, *Levichev* (TASH); upper reaches of Sentobsay, main watershed, 18.06.1996, *Beshko 96141* (herbarium of the Nuratau Nature Reserve).

229. *Poa glauca* Vahl (*Poa litwinowiana* Ovcz.), Fl. Dan. 17: 3 (1790). Perennial, hemicryptophyte. Circumtemperate. Shrubland, Grassland, Rocky areas. Montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** Guzhm, 22.08.1980, *unknown collector 129* (TASH); Bolosay, 10.06.1996, *Beshko 96083* (herbarium of the Nuratau Nature Reserve).

230. *Poa nemoralis* L., Sp. Pl.: 69 (1753). Perennial, hemicryptophyte. Circumtemperate. Forest, Rocky areas, Wetlands (inland). Montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** Hayat, altitude 1200 m, 13.07.1978, *unknown collector* (TASH); Hayat, 1900 m a.s.l., dry lateral valley, 13.08.1978, *unknown collector* (TASH); Gurdara, upper reaches, 08.06.1994, *Beshko 94060, 94061* (herbarium of the Nuratau Nature Reserve).

231. *Poa palustris* L., Syst. Nat. ed. 10, 2: 874 (1759). Perennial, hemicryptophyte. Circumtemperate. Wetlands (inland). Foothills, montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** Hayat, 1500 m a.s.l., 16.08.1978, *unknown collector* (TASH).

232. *Poa pratensis* L., Sp. Pl.: 67 (1753). Perennial, hemicryptophyte. Circumtemperate. Forest, Grassland, Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Bolosay, 10.06.1996, *Beshko 96092* (herbarium of the Nuratau Nature Reserve). **I-4-b Khobduntau Range:** reported by Kudrjashev in “Vegetation of the Khobduntau and Karachatau Mountains” (1929, p. 59).

233. *Poa trivialis* L., Sp. Pl.: 67 (1753). Perennial, hemicryptophyte. Palearctic. Forest, Grassland, Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, 30.05.1990, *Beshko, Yakovenko 90012* (herbarium of the Nuratau Nature Reserve); Madjrumsay, 22.05.1994, *Beshko 94071, 94072* (herbarium of the Nuratau Nature Reserve); Bolosay, 10.06.1996, *Beshko 96093* (herbarium of the Nuratau Nature Reserve). **I-4-c North-Nuratau insular low mountains:** Pistalitu, 18.04.2013, *Batashov* (TASH).

234. *Poa versicolor* Besser (*Poa relaxa* Ovcz.), Enum. Pl. Volh.: 41 (1821). Perennial, hemicryptophyte. Euro-Siberian, Irano-Turanian. Shrubland, Grassland, Rocky areas. Montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, Khotunon, 23.05.2006, *Beshko 06064* (herbarium of the Nuratau Nature Reserve).

Polypogon Desf.

235. *Polypogon fugax* Nees ex Steud., Syn. Pl. Glumac. 1: 184 (1854). Annual, therophyte. Irano-Turanian, Oriental. Wetlands (inland), Artificial aquatic. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** gorge Gurdara near the village Sarymsak, 23.06.1971, *Botschantzev, Kamelin* (LE); surroundings of the village Sentob, 24.06.1971, *Botschantzev, Kamelin* (LE); upper reaches of Ustuksay, 22.06.2002, *Beshko 02073* (herbarium of the Nuratau Nature Reserve); bank of Zarbdorsay, near the village Anamuna, 03.06.2003, *Beshko 03008* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, lower reaches of Madjrumsay, 06.06.2022, *Beshko* (TASH). **I-4-b Khobduntau Range:** valley Almaly, 13.06.1929, *Kudrjashev* (TASH).

236. *Polypogon monspeliensis* (L.) Desf., Fl. Atlant. 1: 66 (1798). Annual, therophyte. Tethyan, Paleotropical. Wetlands (inland), Artificial aquatic. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Nakrutsay, near the village Chalakarga, 23.07.1940, *Gomolitsky, Dolgikh, Arkhireev 206* (TASH); Alaysay, 18.07.1956, *Zaprometova 236* (TASH); Andygensay, 13.07.1994, *Beshko 94096–94098* (herbarium of the Nuratau Nature Reserve); Ustuksay, 23.06.2002, *Beshko 02078* (herbarium of the Nuratau Nature Reserve); Navoi Region, Nurata District, Sobsay, 40.6037°N, 66.62982°E, 04.07.2024, *Beshko* (www.inaturalist.org). **I-4-b Karatau Range:** Nurata, Aksakalata, 1941, *Popov* (SAM). **I-4-b Khobduntau Range:** reported by Kudrjashev in “Vegetation of the Khobduntau and Karachatau Mountains” (1929, p. 59).

237. *Polypogon viridis* (Gouan) Breistr. (*P. semiverticillatus* (Forssk.) Hyl.), Bull. Soc. Bot. France 110 (Sess. Extraord.): lxxxix (1966). Annual, therophyte. European, Tethyan. Wetlands (inland), Artificial aquatic. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Payaryk District, near the village Savryukbazar, 25.07.1931, *Kobranova 216* (TASH); gorge Gurdara near the village Sarymsak, 23.06.1971, *Botschantzev, Kamelin* (LE); Gurdara, 08.06.1994, *Beshko 94057–94059* (herbarium of the Nuratau Nature Reserve); Hayatsay, 07.06.2006, *Beshko 06193, 06194* (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** village Angudan, stream in foothills, 10.06.1928, *Lepeschkin* (TASH).

Psilurus Trin.

238. *Psilurus incurvus* (Gouan) Schinz & Thell., Vierteljahrsschr. Naturf. Ges. Zürich 58: 40 (1913). Annual, therophyte. Tethyan. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain,

foothills. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** piedmont plain near Yangikishlak (Farish), 09.05.2010, *Beshko 10006* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, lower reaches of Gurdara, 24.04.2025, *Beshko, Khabibullaev* (TASH).

Puccinellia Parl.

239. *Puccinellia poecilantha* (K.Koch) Grossh., Opred. Rast. Kavk.: 706 (1949). Perennial, hemicryptophyte. Caucasian, Middle Asian. Wetlands (inland), Artificial aquatic. Plain, foothills. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** piedmont plain of Nuratau Range (Farish Steppe), saline depression about 3 km north-west of the village Ok-Tom, 19.05.2010, *Beshko* (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** Khatyrchi District, 09.06.1928, *Lepeschkin* (TASH).

Rhizocephalus Boiss.

240. *Rhizocephalus orientalis* Boiss., Diagn. Pl. Orient. 5: 69 (1844). Annual, therophyte. Caucasian, Middle Asian. Desert, Artificial terrestrial. Plain. Rare. Native. **Occurrence records: I-4-b Aktau Range:** piedmont plain near district center Nurata, 20.04.1964, *Markova* (TASH).

Rostraria Rchb.

241. *Rostraria cristata* (L.) Tzvelev (*Lophochloa cristata* (L.) Hyl.), Novosti Sist. Vyssh. Rast. 7: 47 (1970 publ. 1971). Annual, therophyte. Tethyan, Saharo-Arabian. Desert, Shrubland, Grassland, Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** 3 km south-east of the village Karatepa, plain between Karatepa and Koytash, 29.05.1958, *Li, Zakirov 848* (TASH); Sanguzarsay, 07.05.1992, *Beshko 92437, 92438* (herbarium of the Nuratau Nature Reserve). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 08.04.1915, *Kultiasow 59, 60* (TASH); valley between Nuratau and Balyklitau, 13.05.1928, *Sovetkina 155* (TASH); 0.5 km west of the village Karatepa, mountains Balyklitau, 28.05.1958, *Li, Zakirov 843* (TASH).

Schismus P.Beauv.

242. *Schismus arabicus* Nees, Fl. Afr. Austral. Ill.: 422 (1841). Annual, therophyte. Tethyan. Desert, Shrubland, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** 2 km west of Nurata State Farm, 07.05.1943, *Djanaeva 139* (TASH); Akbel, 14.06.1963, *Khaydarov 1728* (TASH).

Sclerochloa P.Beauv.

243. *Sclerochloa dura* (L.) P.Beauv., Ess. Agrostogr.: 98 (1812). Annual, therophyte. Tethyan. Desert, Shrubland, Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Gatchasay, 14.04.1958, *Zaprometova 450* (TASH); piedmont plain, 21.04.1963, *Markova* (TASH).

Secale L.

244. *Secale cereale* L., Sp. Pl.: 84 (1753). Annual, therophyte. Cultivated worldwide (native to Turkey). Artificial terrestrial. Plain, foothills. Occasional. Alien (introduced). **Occurrence records: I-4-b Karachatau Range:** near the village Payariq, 20.05.1925, *Popov 285* (TASH).

245. *Secale segetale* (Zhuk.) Roshev., Trudy Bot. Inst. Akad. Nauk S.S.S.R., Ser. 1, Fl. Sist. Vyssh. Rast. 6: 143 (1947). Annual, therophyte. Irano-Turanian. Artificial terrestrial. Plain, foothills. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Nurata State Farm, on the way from the well Niyaz to the well Taldy, 23.05.1943, *Djanaeva 220* (TASH); 5.5 km north-north-east of 1-st

department of Nurata State Farm, 05.05.1958, *Li, Zakirov 374* (TASH); 5 km north-west of the well Mezamkuduk, sabulous plain, 06.05.1958, *Li, Zakirov 385* (TASH).

Setaria P.Beauv.

246. *Setaria verticillata* (L.) P.Beauv., Ess. Agrostogr.: 51 (1812). Annual, therophyte. Pluriregional (native to Tropical & Subtropical Old World). Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Probably alien. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, field station, 01.09.2003, *Beshko 03033, 03034* (herbarium of the Nuratau Nature Reserve); village Upper Hayat, field station of Nuratau Nature Reserve, 22.07.2007, *Beshko* (www.plantarium.ru).

247. *Setaria viridis* (L.) P.Beauv., Ess. Agrostogr.: 51 (1812). Annual, therophyte. Pluriregional. Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Payaryk District, 1 km south of Ugat, 21.07.1931, *Kobranova 187* (TASH); Mts. Koytash, northern slope, 29.07.1931, *Kobranova* (TASH); mountains Nuratau, October 1963, *Khaydarov 2002* (TASH); Hayatsay, 04.08.1980, *unknown collector 119* (TASH); Sanguzarsay, 07.05.1992, *Beshko 92304* (herbarium of the Nuratau Nature Reserve); lower reaches of Hayatsay, 22.05.1993, *Beshko 93076* (herbarium of the Nuratau Nature Reserve); village Upper Hayat, field station of Nuratau Nature Reserve, 22.07.2007, *Beshko* (www.plantarium.ru); village Upper Hayat, field station of Nuratau Nature Reserve, 24.08.2008, *Beshko* (www.plantarium.ru). **I-4-b Khobduntau Range:** Gallaaral District, experimental station of cereal crops, 28.07.1934, *Toporova* (TASH).

Sorghum Pers.

248. *Sorghum halepense* (L.) Pers., Syn. Pl. 1: 101 (1805). Perennial, hemicryptophyte. Tethyan, Saharo-Arabian, Oriental. Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Probably alien. **Occurrence records: I-4-a Nuratau Range:** the village Eski Farish, 01.08.2003, *Beshko 03047* (herbarium of the Nuratau Nature Reserve); village Upper Hayat, 08.08.2006, *Beshko 06358, 06359* (TASH, herbarium of the Nuratau Nature Reserve). **I-4-b Khobduntau Range:** surroundings of Milyutinskaya Station, experimental station of cereal crops, 1934, *Toporova* (TASH).

Sporobolus R.Br. (*Crypsis* Ait.)

249. *Sporobolus schoenoides* (L.) P.M.Peterson (*Crypsis schoenoides* (L.) Lam.), Taxon 63: 1234 (2014). Annual, therophyte. Euro-Siberian, Tethyan. Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Sobsay, about 900 m a.s.l., dry bed of temporary stream, 04.07.2024, *Beshko* TASH, (www.inaturalist.org, www.plantarium.ru). **I-4-b Aktau Range:** Khatyrchi District, 03.09.1928, *Lepeschkin* (TASH).

Stipa L.

250. *Stipa arabica* Trin. & Rupr. (*S. caspia* K.Koch, *S. szovitsiana* Trin.), Sp. Gram. Stipac.: 77 (1842). Perennial, hemicryptophyte. Irano-Turanian. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Kyzylcha State Farm, 1951, *Smirnova* (TASH); surroundings of Kyzylcha State Farm, 05.06.1952, *Zaprometova* (TASH); Nakrutsay, 19.06.1992, *Beshko 92352* (herbarium of the Nuratau Nature Reserve); Mt. Dushokh, 11.05.1995, *Beshko 95078* (herbarium of the Nuratau Nature Reserve); watershed between Hayatsay and Andygensay, 05.06.2006, *Beshko 06121* (herbarium of the Nuratau Nature Reserve); Hayatsay, 25.06.2012, *Beshko* (TASH). **I-4-b Aktau Range:** 30 km south-east of the town Nurata along the road to Dzhus, 01.06.1963, *Pryakhin* (TASH). **I-4-b Karatau Range:** surroundings of town Kanimekh, north of the town, 10.07.1934, *Tyshchenko 28* (TASH); surroundings of town Kanimekh, 7 km to the

north, 15.07.1934, *Tyshchenko 186* (TASH). **I-4-b Khobduntau Range:** southern piedmont plain of Khobduntau near the village Beshkutan, 19.06.1929, *Kudrjashev* (TASH).

251. *Stipa capillata* L., Sp. Pl. ed. 2: 116 (1762). Perennial, hemicryptophyte. Euro-Siberian, Irano-Turanian. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** steppe near Parrandoz on the direction to Pubsay, 16.08.1980, *unknown collector 32* (TASH); Mt. Parrandoz, 23.07.1992, *Beshko 92372* (herbarium of the Nuratau Nature Reserve); Mt. Beshbarmak, 15.07.1993, *Beshko 93087* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Karysay, foot of rocky massif Parrandoz, 16.07.2017, *Beshko* (www.plantarium.ru).

252. *Stipa caucasica* Schmalh., Ber. Deutsch. Bot. Ges. 10: 293 (1892). Perennial, hemicryptophyte. Irano-Turanian. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** pass from the village Madjumsay to the village Sentob, 05.09.1932, *Knorring, Emme 164* (MW); Mts. Koytash, watershed crest, 02.08.1934, *Botschantzev* (TASH); Hayat Pass, 03.08.1940, *Gomolitsky, Dolgikh 253* (TASH); Mt. Parrandoz, 23.07.1992, *Beshko 92371* (herbarium of the Nuratau Nature Reserve); Hayatsay, Alichak, 25.06.2006, *Beshko 06346* (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** 5 km south-west of village Chuya, 14.07.1932, *Knorring, Emme 77* (MW); 7–9 km south of village Chuya, 01.07.1937, *Demurina 404* (TASH).

253. *Stipa conferta* Poir. (*Achnatherum caragana* (Trin.) Roshev., *Stipa caragana* Trin.), J.B.A.M.de Lamarck, Encycl., Suppl. 5: 252 (1817). Perennial, hemicryptophyte. Irano-Turanian. Shrubland, Grassland, Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, watershed crest, 02.08.1934, *Botschantzev* (TASH); upper reaches of the stream 5 km north-east of the village Narvan, 19.07.1937, *Demurina 620* (TASH). **I-4-b Aktau Range:** 2–3 km south-east of the village Kokbulak, 01.07.1937, *Demurina 361* (TASH). **I-4-b Karachatau Range:** 1 km south-east of the village Beshbola, 06.07.1937, *Demurina 530a* (TASH).

254. *Stipa hohenackeriana* Trin. & Rupr., Sp. Gram. Stipac.: 80 (1842). Perennial, hemicryptophyte. Euro-Siberian, Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Urganchi, 01.05.1913, *Korovin 152* (TASH); Dzhus – Koshrabad, *Iris* steppe, 03.05.1913, *Korovin 263* (TASH); Jizzakh District, foothills of Nuratau Mts., 13.05.1928, *Sovetkina 163* (TASH); Gallaaral District, Karakuduk, 08.06.1934, *Rybakov* (TASH); pass near the sources of Guzumsay, 23.07.1937, *Demurina 669* (TASH); Mts. Koytash, west of the village Jizzakly, 28.05.1940, *Gomolitsky, Arkhireev 25* (TASH); piedmont plain between Mt. Piyazli and Balykli, 24.04.1941, *Momotov 30* (TASH); Farish District, 02.05.1941, *Momotov* (TASH); Andygensay, Kachak, 15.06.1981, *Mukhina 81129* (herbarium of the Nuratau Nature Reserve); Ukhum Pass, 19.06.1992, *Beshko 92356* (herbarium of the Nuratau Nature Reserve); Bolosay, 30.06.1992, *Beshko 92403* (herbarium of the Nuratau Nature Reserve); Hayatsay, Yellow Stone, 18.07.1992, *Beshko 92194* (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** Koshrabad – Chuya, 06.05.1913, *Korovin* (TASH); 8 km south-west of the village Chuya, 29.06.1937, *Demurina 308, 309* (TASH); Nurata, 1941, *Popov* (SAM); 30 km south-east of the town Nurata, 01.06.1963, *Pryakhin* (TASH); between the town Nurata and the village Gazgan, 25.05.1964, *Pryakhin* (TASH); near the village Chashma, 05.06.1964, *Pryakhin* (TASH). **I-4-b Karatau Range:** surroundings of town Kanimekh, 7 km to the north, 15.07.1934, *Tyshchenko 183* (TASH); south of the pass Jizlan, 26.05.1964, *Pryakhin* (TASH). **I-4-b Khobduntau Range:** Khobduntau, 30.05.1929, *Merkulovich 149* (TASH); east of the village Almaly, 23.06.1929, *Kudrjashev* (TASH); near the village Kazanly, 27.06.1929, *Kudrjashev* (TASH); Khobduntau, mountain top, 28.06.1929, *Kudrjashev* (TASH). **I-4-b Karachatau Range:** 3–5 km south-east of the village Kursafar, 07.07.1937, *Demurina 570* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 08.04.1911, *Dimo, Sprygin, Shulga 525* (TASH); Pistalitau, 08.04.1915, *Kultiasow 14* (TASH);

Pistalitau, 09.04.1915, *Kultiasow* 66 (TASH); plain between mountains Koytash and Balyklitau, 23.05.1931, *Kobranova* 425 (TASH); piedmonts of Pistalitau, near the railway, 15 km east of the village Yangiabad, 13.05.2018, *Beshko* (TASH).

255. *Stipa karataviensis* Roshev., Trudy Pochv.-Bot. Eksped. Izsl. Kolon. Raionov Aziatsk. Rossii, Chast 2, Bot. Izsl. 6: 186 (1909 publ. 1912). Perennial, hemicryptophyte. Western Tien Shan, Nuratau Mts. (subendemic). Shrubland, Rocky areas. Foothills, montane zone. Rare. Native. UzbRDB 3. **Occurrence records: I-4-b Aktau Range:** north of the village Khodzha-Kolishan, Yangokly, 08.06.1926, *Popov* 3/105 (TASH); near the well Charkhana, 29.05.1963, *Khaydarov* 1609 (TASH).

256. *Stipa lipskyi* Roshev., Fl. Asiat. Ross. 12: 153 (1916). Perennial, hemicryptophyte. Middle Asian. Shrubland, Grassland, Rocky areas. Montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Nurata, Kyzylchali, 28.04.1913, *Korovin* 136 (TASH); Mt. Hayatbashi, 08.08.1980, *unknown collector* 106 (TASH); Andygensay, Sukhta, 05.06.2006, *Beshko* 06123 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, about 1575 m a.s.l., 07.07.2024, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** 10 km south of the village Langar, 29.05.1985, *Rusanovich, Shvetsov, Kramarenko* (MW). **I-4-b Karatau Range:** south of the pass Jizlan, 26.05.1964, *Pryakhin* (TASH).

Stipagrostis Nees

257. *Stipagrostis pennata* (Trin.) De Winter (*Aristida pennata* Trin.), Kirkia 3: 135 (1963). Perennial, hemicryptophyte. Irano-Turanian. Desert. Plain. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** piedmont plain 20 km north-east of the village Sarymsak, 30.07.1937, *Demurina* 825 (TASH); Badam, west of well Uzunkuduk, 27.05.1939, *Mikhaylova, Popova* (TASH). **I-4-b Aktau Range:** Nurata, 1913, *Korovin* 97 (TASH); piedmont plain 5–6 km north-west of the village Khodzha-Akhmeti-Kabir, 21.06.1937, *Demurina* 251, 252 (TASH).

Taeniatherum Nevski

258. *Taeniatherum caput-medusae* (L.) Nevski (*T. asperum* (Simonk.) Nevski, *T. crinitum* (Schreb.) Nevski), Trudy Bot. Inst. Akad. Nauk S.S.S.R., Ser. 1, Fl. Sist. Vyssh. Rast. 1: 22 (1933). Annual, therophyte. Tethyan. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Dominant. Native. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, west of the village Jizzakly, 28.05.1940, *Gomolitsky, Dolgikh, Arkhireev* 20 (TASH); Mts. Koytash, Bereshek, 28.05.1940, *Gomolitsky, Dolgikh, Arkhireev* 47 (TASH); Mts. Koytash, 3 km north-east of the village Kuvakiya, piedmont of Mt. Piyazli, 24.04.1941, *Momotov* 5 (TASH); Nuratau Range, Farish District, 07.05.1941, *Momotov* 147 (TASH); between Sharaus and Alaysay, 30.05.1954, *Zaprometova* (TASH); 6 km north of the well Ernazar, 13.05.1957, *Momotov, Li* 370 (TASH); Koblatysay, 20.04.1958, *Zaprometova* (TASH); 2 km north of Saurbel Pass, 27.04.1958, *Li, Zakirov* 141 (TASH); gorge Dukony, 28.05.1969, *Mambetjumaev* 107 (TASH); Hayat, 1500 m a.s.l., dry lateral valley, 16.08.1978, *unknown collector* (TASH); Hayatsay, Andebaraut, 22.05.2006, *Beshko* 06315 (TASH, herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 09.09.2007, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 30.05.2020, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Madjrumsay, 31.08.2020, *Beshko* (www.plantarium.ru); Navoi Region, Nurata District, surroundings of Sob Pass, 40.61538° N, 66.57568° E, 04.07.2024, *Beshko* (www.inaturalist.org); Samarkand Region, Koshrabad District, Ustuksay, 40.52718° N, 66.55666° E, 04.07.2024, *Beshko* (www.inaturalist.org). **I-4-b Aktau Range:** Khanbandy – Chuya, shistaceous mountain slopes, 02.05.1913, *Korovin* (TASH); valley Chashma, 10.05.1962, *Khaydarov* 43 (TASH); the spring Bitav, 15.04.1963, *Khaydarov* 706 (TASH); mountains Aktau, Samarkand Region, 29.04.1963, *Khaydarov* 1649 (TASH). **I-4-b Karatau Range:** 8 km south-east of Zey-Bulak, 18.05.1936, *Kharchenko* 1018, 1019, 1020, 1065 (TASH); on the way to Sarmysh, 05.09.1931,

Tyshchenko 730 (TASH); valley Karakarga, 11.05.2014, *Tojibaev, Sun Hang et al.* 17345 (TASH, KUN). **I-4-b Khobduntau Range:** plain between mountains Khobduntau and Karachatau, hills near the village Khodzha-Kabud, 16.06.1929, *Kudrjashev* (TASH); Gallaaral District, experimental station of cereal crops, 14.05.1934, *Toporova* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 09.04.1915, *Popov* 74 (TASH); plain between mountains Koytash and Balyklitau, 13.05.1931, *Kobranova* 157 (TASH).

Trichopyrum Á.Löve

259. *Trichopyrum intermedium* (Host) Barkworth & D.R.Dewey (*Agropyron intermedium* (Host) Beauv., *A. trichophorum* (Link) K. Richt., *Elytrigia intermedia* (Host) Nevski, *E. trichophora* (Link) Nevski, *Elymus hispidus* (Opiz) Melderis), Amer. J. Bot. 72: 772 (1985). Perennial, hemicryptophyte. Tethyan. Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Foothills, montane zone. Dominant. Native. **Occurrence records:** **I-4-a Nuratau Range:** foothills of Mts. Koytash, near the town Jizzakh, 26.05.1931, *Kasimenko* 1959 (TASH); Nuratau mountains, 20.07.1931, *Kobranova* 25 (TASH); Payaryk District, 1 km south of Ugat, 21.07.1931, *Kobranova* 183, 184 (TASH); Gallaaral District, Karakuduk, 05.06.1934, *Rybakov* (TASH); Farish District, 10.05.1941, *Momotov* 192 (TASH); Nakrutsay, 30.05.1964, *Zuckerwanik* 411 (TASH); Nuratau Nature Reserve, Hayatsay, lower part, about 1300 m a.s.l., 13.07.1978, *Korshunov* (TASH); Nuratau Nature Reserve, Hayatsay, dry lateral valley, about 1500 m a.s.l., 16.08.1978, *Korshunov* (TASH); Hayatsay, 20.06.1990, *Beshko, Yakovenko* 90004, 90005, 90124 (herbarium of the Nuratau Nature Reserve); Bolosay, 10.06.1996, *Beshko* 96072, 96073 (herbarium of the Nuratau Nature Reserve); Hayatsay, Khotunon, 23.05.2006, *Beshko* 06059, 06060 (herbarium of the Nuratau Nature Reserve); Hayatsay, 20.06.2008, *Beshko* (www.plantarium.ru); Bolosay, 01.07.2008, *Beshko* (www.plantarium.ru); about 2 km east of Saurbel Pass, 22.06.2010, *Beshko* (www.plantarium.ru), Amandara, 13.07.2010, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** 2–3 km south of the village Kokbulak, 01.07.1937, *Demurina* 363 (TASH). **I-4-b Khobduntau Range:** surroundings of Kuropatkino railway station, 08.06.1929, *Kudrjashev* (TASH); valley Bodbod, 20.06.1929, *Kudrjashev* (TASH); 2 km from the village Bodbod, 21.06.1929, *Kudrjashev* (TASH); Mts. Khobduntau, 23.06.1929, *Kudrjashev* (TASH); plain near southern piedmonts of Khobduntau, 2 km east of the village Almaly, 24.06.1929, *Kudrjashev* (TASH); Gallaaral District, experimental station of cereal crops, 03.06.1934, *Toporova* (TASH).

Tripidium H.Scholz

260. *Tripidium ravennae* (L.) H.Scholz (*Erianthus ravennae* (L.) P.Beauv.), Willdenowia 36: 664 (2006). Perennial, hemicryptophyte. Tethyan, Saharo-Arabian. Wetlands (inland), Artificial aquatic. Plain, foothills, montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** near the village Eski Farish, 01.08.2003, *Beshko* 03049 (herbarium of the Nuratau Nature Reserve); Kichiksay, 30.10.2019, *Tillaev* (www.plantarium.ru).

Trisetaria Forssk.

261. *Trisetaria loeflingiana* (L.) Paunero (*Trisetum cavanillesii* Trin.), Anales Jard. Bot. Madrid 9: 527 (1950). Annual, therophyte. Tethyan, Paleotropical. Desert, Shrubland, Grassland, Rocky areas. Plain, foothills. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** 3 km north of the village Gum, foothills, 14.05.1958, *Li, Zakirov* 572 (TASH); 0.5 km west of the village Tegirmanaul, foothills, 16.05.1958, *Li, Zakirov* 602 (TASH). **I-4-b Aktau Range:** near district center Nurata, 13.06.1963, *Markova* (TASH).

MAGNOLIOPSIDA (EUDICOTS)

Ceratophyllaceae Gray

Ceratophyllum L.

262. *Ceratophyllum demersum* L., Sp. Pl. 2: 992 (1753). Perennial, hydrophyte. Pluriregional. Wetlands (inland), Artificial aquatic. Plain, foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Fazilman Lake, 09.06.2013, *Beshko* (TASH).

Papaveraceae Juss.

Corydalis DC.

263. *Corydalis ledebouriana* Kar. & Kir., Bull. Soc. Imp. Naturalistes Moscou 14: 377 (1841). Perennial, geophyte. Mountain Middle Asian, Dzungarian. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Koblatysay, 27.03.1955, *Zaprometova* (TASH); southern slope Nuratau near Kyzylcha State Farm, 16.04.1955, *Zaprometova* 4 (TASH); 1.5 km south-west of Saurbel Pass, 27.04.1958, *Zakirov* (TASH).

264. *Corydalis sewerzowii* Regel, Bull. Soc. Imp. Naturalistes Moscou 43(I): 252 (1870). Perennial, geophyte. Western Tien Shan, Western Pamir-Alay. Forest, Shrubland, Grassland, Rocky areas. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Koblatysay, 26.02.1952, *Zaprometova* (TASH); [same locality], 30.03.1952, *Zaprometova* (TASH); [same locality], 07.04.1952, *Zaprometova* (TASH); Koshrabad State Farm, 4 km north-north-west of the village Allaberdy, 23.04.1965, *Perelygina* (TASH); Nuratau Nature Reserve, Hayatsay, valley, about 1000 m a.s.l., 03.04.1979, *Korshunov* (TASH); Hayatsay, 27.03.2011, *Davkaev* (www.plantarium.ru); Nuratau Nature Reserve, Fuzhaksay, 06.04.2012, *Beshko* (TASH); Nuratau Nature Reserve, Hayatsay, Novi Daroz, 06.04.2012, *Beshko* (TASH); Talabaysay (left tributary of Kulbasay), 8 km south-west of district center Yangikishlak, 27.05.2012, *Beshko* (TASH); Sobsay, 16.03.2016, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Madjrumsay, lower reaches, 25.03.2016, *Beshko*, *Usmonov* (TASH); village Upper Hayat, 1200 m a.s.l., 02.04.2017, *Malzev* (TASH); Nuratau Nature Reserve, Gurdara, 17.03.2019, *Beshko* (www.plantarium.ru); watershed crest of Nuratau Range, about 2 km east of Saurbel Pass, 1240 m a.s.l., N 40°20'46" E 67°07'37", 06.04.2019, *Beshko*, *Adilov* 70 (TASH); Madjrumsay, 23.03.2020, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 05.05.2020, *Akbarov*, *Turdiev*, *Juramurodov* 5052020042 (TASH); Nuratau Nature Reserve, Gurdara, 07.03.2021, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, Novi Khushk, 1385 m a.s.l., 40.5122° N, 66.73297° E, 22.04.2023, *Beshko* (TASH); Nuratau Nature Reserve, lower reaches of Madjrumsay, 40.58225°N, 66.72065°E, 23.03.2024, *Beshko* (TASH); Jizzakh Region, Farish District, Nuratau Nature Reserve, Madjrumsay, 40.58167°N, 66.72074°E, 23.03.2024, *Beshko* (www.inaturalist.org); Jizzakh Region, Farish District, Nuratau Nature Reserve, Gurdara, 40.5195°N, 66.91682°E, 24.03.2024, *Beshko* (www.inaturalist.org); Mt. Katta Fazilman, about 1800 m a.s.l., 24.04.2024, *Turdiev* (www.plantarium.ru). **I-4-b Aktau Range:** Mt. Takhkutau, 07.05.1913, *Korovin* 423, 425, 427, 1123 (TASH); 12 km from district center Nurata, Chashma, 27.03.1963, *Markova* (TASH); 18 km from the town Nurata, Ingichkasay, 21.04.1981, *Safraleeva* (TASH); Navoi Region, Khatyrchi District, near the village Aktepa, 40.28006°N, 66.00787°E, 04.06.2021, *Esankulov* (www.inaturalist.org). **I-4-b Karatau Range:** Sarmysh, 40.30485°N, 65.61757°E, 22.03.2025, *nashka1205* (www.inaturalist.org). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 07.04.1911, *Dimo*, *Sprygin*, *Shulga* 449, 1106, 1107 (TASH); Pistalitau, 08.04.1915, *Kultiasow* (TASH); Pistalitau, north slopes, 03.04.2012, *Batashov* 00225 (TASH); southern slope of Pistalitau,

18.03.2013, *Tojibaev, Beshko* (TASH); the crest of Egarbelistag, 1.5 km west of the Carbonat JSC quarry, 27.04.2020, *Beshko, Shomurodov, Adilov* (plant community description).

Fumaria L.

265. *Fumaria vaillantii* Loisel., J. Bot. (Paris) 2: 358 (1809). Annual, therophyte. Euro-Siberian, Tethyan. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Kyzylcha State Farm, piedmont plain, 29.04.1952, *Zaprometova* (TASH); mountains Nuratau, 03.04.1963, *Khaydarov* 288 (TASH); southern slope, 20 km north of the village Dzhush, rainfed fields near the village Ak-Chap, 29.05.1964, *Zuckerwanik* 397 (TASH); Hayatsay, 09.05.1981, *Mukhina* 81095–81097 (herbarium of the Nuratau Nature Reserve); Hayatsay, 06.05.1992, *Beshko* 92414 (herbarium of the Nuratau Nature Reserve); Sobsay, 09.05.2013, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** Koshrabad, *Iris* steppe, 03.05.1913, *Korovin* 70850, 76849 (TASH); piedmont plain near district center Nurata, 04.04.1963, *Markova* (TASH). **I-4-b Khobduntau Range:** Gallaaral, 13.06.1951, *Klyueva* (TASH).

Glaucium Adans.

266. *Glaucium elegans* Fisch. & C.A.Mey., Index Seminum (LE, Petropolitanus) 1: 29 (1835). Annual, therophyte. Caucasian, Irano-Turanian. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Dzhush – Koshrabad, *Iris* steppe, 03.05.1913, *Korovin* 240 (TASH); foothills of Nuratau Range on the latitude of town Jizzakh, 16.05.1928, *Sovetkina* 223 (TASH); valley Uchma, 01.06.1964, *Zuckerwanik, Pazij* 445 (TASH); Hayatsay, 30.05.1981, *Mukhina* 81098, 81099, 81100 (herbarium of the Nuratau Nature Reserve); Hayatsay, Andebaraut, 01.06.1990, *Beshko, Yakovenko* 90032 (herbarium of the Nuratau Nature Reserve); Hayatsay, Bedarak, 02.06.1992, *Beshko* 92360 (herbarium of the Nuratau Nature Reserve); Hayatsay, 01.05.2009, *Beshko* (www.plantarium.ru); Sobsay, 09.05.2013, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** Ak-Chap – Khanbandy – Chuya, 02.05.1913, *Korovin* 195 (TASH). **I-4-b Mt. Kokcha:** remnant mountain Kokcha, 29.04.2013, *Batashov* (TASH).

267. *Glaucium fimbrilligerum* (Trautv.) Boiss., Fl. Orient. 1: 120 (1867). Biennial, therophyte. Irano-Turanian. Shrubland, Rocky areas, Artificial terrestrial. Foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** on the way from Milyutinskaya to the village Yangichayanly, 03.05.1931, *Kasimenko* (TASH); pass on the road from Nakrutsay to Farish, 01.06.1964, *Zuckerwanik, Pazij* 439 (TASH); Saurbel Pass, 06.06.2009, *Beshko* (www.plantarium.ru).

Hypecoum L.

268. *Hypecoum pendulum* L. (*H. parviflorum* Kar. & Kir.), Sp. Pl.: 124 (1753). Annual, therophyte. Tethyan. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** sagebrush desert near the village Kyzylchali, 28.04.1913, *Korovin* (TASH); Urganchi, 01.05.1913, *Korovin* 166 (TASH); Farish District, 26.04.1941, *Momotov* 48 (TASH); fallow land 12 verst south of Jizzakh, 11.05.1928, *Sovetkina* 124 (TASH); surroundings of Kyzylcha State Farm, 02.06.1951, *Zaprometova* (TASH); [same locality], 06.04.1952, *Zaprometova* (TASH); [same locality], 29.04.1952, *Zaprometova* (TASH); Alaysay, 05.05.1956, *Zaprometova* (TASH); piedmont plain near Kyzylcha State Farm, 08.05.1956, *Zaprometova* 160 (TASH); [same locality], 04.05.1957, *Zaprometova* (TASH); [same locality], 28.04.1958, *Zaprometova* (TASH); mountains Nuratau, 01.04.1963, *Khaydarov* 257 (TASH); village Ukhum, 20.04.1982, *Mukhina* 82038, 82039 (herbarium of the Nuratau Nature Reserve); Hayatsay, 15.04.2007, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, about 1200 m a.s.l., 05.05.2012, *Beshko* (TASH). **I-4-b Aktau Range:** Koshrabad – Shurcha, 15.04.1913, *Teplov* 6 (TASH); Nurata, 21.04.1913, *Korovin* (TASH); Nurata, north slopes of Nuratau Mts., 23.04.1913, *Korovin* 30 (TASH); mountain slopes between the town Nurata and well Pashat, 24.04.1913, *Korovin*

821 (TASH); Nurata District, piedmont plain, 06.04.1952, *Novikova* (TASH); Nurata valley 4 km west of the village Kok-Tepa, 12.05.1956, *Momotov* 342 (TASH); valley Chashma, 10.05.1962, *Khaydarov* 121 (TASH); piedmont plain near district center Nurata, 04.04.1963, *Markova* (TASH); mountains Bakhiltau, 16.04.1963, *Khaydarov* 517 (TASH). **I-4-b Khobduntau Range:** Milyutinskaya Station, Gallaaral State Farm, 3 km south-east of the village Kariz, 01.04.1930, *Tarasevich* 26 (TASH). **I-4-c North-Nuratau insular low mountains:** Pistaltau, 07.04.1911, *Dimo, Sprygin, Shulga* 441 (TASH); Pistaltau, 09.04.1915, *Kultiasow* 146 (TASH); piedmont plain at the foot of remnant range Uchkulach, 5–6 km east of the village Uzunkuduk, N 40°32'57" E 67°12'59", 26.03.2019, 26.04.2020, *Beshko, Shomurodov, Adilov, Abduraimov* (plant community description).

269. *Hypecoum trilobum* Trautv., Trudy Imp. S.-Peterburgsk. Bot. Sada 9: 366 (1884). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** Hayatsay, 20.04.1995, *Beshko* 95021 (herbarium of the Nuratau Nature Reserve); Hayatsay, 12.04.2016, *Beshko* (www.plantarium.ru). **I-4-b Khobduntau Range:** Gallaaral District, experimental station of cereal crops, 23.04.1934, *Toporova* (TASH); [same locality], 25.05.1934, *Toporova* (TASH).

Papaver L.

270. *Papaver laevigatum* M.Bieb. (*P. litwinowii* Fedde ex Bornm.), Fl. Taur.-Caucas. 3: 364 (1819). Annual, therophyte. Caucasian, Irano-Turanian. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** Nuratau Range, Farish District, 15.05.1941, *Momotov* (TASH); valley Uchma, 01.06.1964, *Zuckerwanik* 451 (TASH); Hayatsay, 27.04.1983, *Fominykh* 83050 (herbarium of the Nuratau Nature Reserve); Hayatsay, 28.04.2009, *Beshko* (www.plantarium.ru); Hayatsay, surroundings of the village Hayat, 11.05.2019, *Juramurodov* 20 (TASH); [same locality], 12.05.2019, *Juramurodov* 30 (TASH); surroundings of the village Ukhum, Ukhumsay, 05.05.2020, *Akbarov, Turdiev, Juramurodov* 5052020021, 5052020067 (TASH); Hayatsay, outskirts of the village Upper Hayat, 22.04.2023, *Beshko* (www.plantarium.ru).

271. *Papaver pavoninum* Schrenk, Enum. Pl. Nov. 2: 64 (1842). Annual, therophyte. Irano-Turanian. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** Farish District, 26.04.1941, *Momotov* 59 (TASH); Farish District, 02.05.1941, *Momotov* (TASH); Kichiksay, 09.05.1956, *Zaprometova* 80 (TASH); Gatchasay, 28.04.1958, *Zaprometova* (TASH); gorge Yangi-Hayat, 27.05.1969, *Mambetjumaev* 68 (TASH); Hayatsay, 03.05.1981, *Mukhina* 81102 (herbarium of the Nuratau Nature Reserve); Hayatsay, 27.04.1992, *Beshko* 92976, 92077 (herbarium of the Nuratau Nature Reserve); Hayatsay, field station of Nuratau Nature Reserve, 15.05.2007, *Beshko* (www.plantarium.ru); Farish District, the village Nurak, 27.04.2008, *Tillaev* (www.plantarium.ru); northern piedmont plain of Nuratau Range (Farish Steppe), 19.05.2009, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Madjrumsay, 18.04.2019, *Beshko* (www.plantarium.ru, www.inaturalist.org); Jizzakh Region, Farish District, Hayatsay, village Upper Hayat, field station of nature reserve, 40.527574° N, 66.775233° E, 23.04.2023, *Beshko* (www.plantarium.ru, www.inaturalist.org); Jizzakh Region, Farish District, Madjrumsay, 40.5829° N, 66.7252° E, 27.04.2024, *Beshko* (www.inaturalist.org); Jizzakh Region, Farish District, Karysay, 40.5157° N, 66.78761° E, 12.05.2024, *langli* (www.inaturalist.org). **I-4-b Aktau Range:** mountain slopes between the town Nurata and well Pashat, 24.04.1913, *Korovin* 82 (TASH); Koshrabad – Chuya, 06.05.1913, *Korovin* 410 (TASH); valley between ranges Nuratau and Aktau, upstream of the village Yangi-Turmush, 10.05.1956, *Korotkova* 5074 (TASH); sources of river Bitau, 27.05.1964, *Zuckerwanik* 316 (TASH); Navoi Region, Nurata District, north of town Nurata, 40.67387° N, 65.7512° E, 03.05.2022, *vasillkina* 79 (www.inaturalist.org). **I-4-b Karatau Range:** gentle slopes of mountains Karatau, 5 km south-east of the village Zyum, 05.05.1955, *Momotov, Li* 101 (TASH); 3 km north of the village Bakachinak, 05.05.1955, *Momotov, Li* 136 (TASH); valley Sarmysh,

25.04.1965, *Pryakhin* (TASH); piedmonts of Karatau Range, 04.05.2013, *Beshko* (www.plantarium.ru; www.inaturalist.org); **Bukhara Region, Gizhduvan District, western part of Karatau Range**, 40.47036° N, 65.10674° E, **21.04.2024**, *Beshko* (www.inaturalist.org). **I-4-b Khobduntau Range:** Milyutinskaya Station, Gallaaral State Farm, east of the railway junction №109, 05.05.1930, *Tarasevich 47* (TASH); Gallaaral District, experimental station of cereal crops, 1934, *Toporova* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 08.04.1911, *Dimo, Sprygin, Shulga 451* (TASH); steppe between Pistalitau and Tuzkan Lake, 09.04.1911, *Dimo, Sprygin, Shulga 405* (TASH); Pistalitau, 08.04.1915, *Kultiasow* (TASH); Pistalitau, 09.04.1915, *Kultiasow* (TASH); Jizzakh Region, Farish District, eastern part of Pistalitau, 40.46317° N, 67.56648° E, 25.04.2024, *Yusupov* (www.inaturalist.org).

Roemeria Medik.

272. *Roemeria hybrida* (L.) DC., Syst. Nat. 2: 92 (1821). Annual, therophyte. Tethyan. Desert, Shrubland, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** Urganchi – Ak-Chap, *Iris* formation, 01.05.1913, *Korovin 170, 172* (TASH); Nuratau Range, Farish District, 26.04.1941, *Momotov 50* (TASH); near Yangikishlak, 19.04.1995, *Beshko 95107* (herbarium of the Nuratau Nature Reserve); Jizzakh Region, Gallaaral District, north-west of the village Karakchi, 40.11987° N, 67.53228° E, 20.05.2023, *Choriev* (www.inaturalist.org). **I-4-b Aktau Range:** Nuratau Mts., piedmont plain, rainfed croplands near district center Nurata, 12.04.1963, *Markova* (TASH); the spring Bitav, 18.05.1969, *Khaydarov 926* (TASH). **I-4-c North-Nuratau insular low mountains:** valley between Nuratau and Balyklitau, saline depression, 13.05.1928, *Sovetkina 156* (TASH); piedmont plain between Mt. Piyazli and Balykli, 24.04.1941, *Momotov 36* (TASH).

273. *Roemeria refracta* DC., Syst. Nat. 2: 93 (1821). Annual, therophyte. Irano-Turanian. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** Khanbandy – Chuya – Dzhush, shistaceous mountain slopes, 02.05.1913, *Korovin 137b* (TASH); Khanbandy – Chuya, 02.05.1913, *Korovin 221* (TASH); Dzhush – Koshrabad, *Iris* steppe, 03.05.1913, *Korovin 265* (TASH); Gallaaral District, Karakuduk, 03.06.1934, *Rybakov* (TASH); Kyzylcha State Farm, 02.06.1951, *Zaprometova* (TASH); Ambulatory Pass, 01.04.1953, *Zaprometova 268* (TASH); Alaysay, 25.03.1958, *Zaprometova 96* (TASH); Sharaussay, 26.03.1958, *Zaprometova 123* (TASH); Gatchasay, 29.03.1958, *Zaprometova 193* (TASH); gorge Yangi-Hayat, 27.05.1969, *Mambetjumaev 57* (TASH); Nuratau Nature Reserve, Hayatsay, about 1000 m a.s.l., April 1979, *Korshunov* (TASH); Hayatsay, April 1981, *Mukhina 81103* (herbarium of the Nuratau Nature Reserve); Hayatsay, Khotunon, 11.06.1992, *Beshko 92143* (herbarium of the Nuratau Nature Reserve); Sanguzarsay, 07.05.1992, *Beshko 92442* (herbarium of the Nuratau Nature Reserve); Hayatsay, Novi Daroz, 05.05.2006, *Beshko 06333* (herbarium of the Nuratau Nature Reserve); village Sentob, 22.04.2007, *Beshko* (www.plantarium.ru); Hayatsay, field station of Nuratau Nature Reserve, 28.04.2008, *Beshko* (www.plantarium.ru); northern piedmont plain of Nuratau Range (Farish Steppe), 26.04.2020, *Beshko* (www.plantarium.ru); Jizzakh Region, Farish District, surroundings of Yangikishlak (Farish), 40.40495° N, 67.21206° E, 05.05.2021, *Gafforov* (www.inaturalist.org); Jizzakh Region, Farish District, Hayatsay, 40.51861° N, 66.74805° E, 02.06.2022, *Selyutina* (www.inaturalist.org); Jizzakh Region, Farish District, Hayatsay, village Upper Hayat, field station of nature reserve, 40.5286° N, 66.77501° E, 27.04.2024, *Beshko* (www.inaturalist.org); Jizzakh Region, Farish District, Karysay, 40.5157° N, 66.78761° E, 12.05.2024, *langli* (www.inaturalist.org). **I-4-b Aktau Range:** valley Chashma, 10.05.1962, *Khaydarov 119* (TASH); Navoi Region, Nurata District, surroundings of town Nurata, 40.55202° N, 65.68483° E, 18.04.2013, *lougrou* (www.inaturalist.org); Navoi Region, Khatyrchi District, near the pass Langar, 40.33777° N, 66.01472° E, 22.04.2024, *Selyutina* (www.inaturalist.org). **I-4-b Karatau Range:** valley Sarmysh, 25.04.1965, *Pryakhin* (TASH). **I-4-b Khobduntau Range:** plain between mountains

Khobduntau and Karachatau, surroundings of Kuropatkino Railway Station, 08.06.1929, *Kudrjashev* (TASH); surroundings of Milyutinskaya Station, May 1930, *Tarasevich 55* (TASH); Milyutinskaya Station, 3 km south-west of the village Alyamli, May 1930, *Tarasevich 79* (TASH); Gallaaral District, experimental station of cereal crops, 23.04.1934, *Toporova* (TASH); [same locality], 13.05.1934, *Toporova* (TASH); [same locality], 25.05.1934, *Toporova* (TASH); [same locality], 05.06.1934, *Toporova* (TASH); [same locality], 10.06.1934, *Toporova* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 07.04.1911, *Dimo, Sprygin, Shulga 402* (TASH); Mts. Balykli, 25.04.1941, *Bukasov* (TASH); proluvial plain 7 km east of village Yangiabad, rainfed arable land, 26.04.2020, *Beshko, Shomurodov, Adilov* (plant community description); Jizzakh Region, Farish District, eastern part of Pistalitau, 40.50497° N, 67.53616° E, 25.04.2024, *Yusupov* (www.inaturalist.org).

Berberidaceae Juss.

Bongardia C.A.Mey.

274. *Bongardia chrysogonum* (L.) Boiss., Hist. Nat. Vég. 8: 65 (1839). Perennial, geophyte. Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** southern slope, territory of Nurata State Farm, 13.04.1943, *Vernik, Boykova 6* (TASH); foothills of Nuratau Range, Farish District, Kirov State Farm, 10.05.1943, *Vernik, Boykova* (TASH); near Kyzylcha State Farm, 20.04.1954, *Zaprometova* (TASH); Gatchasay, 03.05.1956, *Zaprometova* (TASH); Kyzylcha State Farm, 23.03.1958, *Galkina* (TASH); piedmont plain near Kyzylcha State Farm, 29.03.1958, *Galkina* (TASH); Alaysay, 30.03.1958, *Zaprometova 11* (TASH); 35 km along the road Jizzakh – Farish, 19.04.1981, *Safraliev* (TASH); Andygensay, Kachak, 17.04.1981, *Mukhina 81094* (herbarium of the Nuratau Nature Reserve); foothills between the villages Sartykan and Asraf, 28.03.2009, *Beshko* (www.plantarium.ru); near the village Mikhin, Yongoklisay, 01.04.2009, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Madjrumsay, lower reaches, 25.03.2016, *Beshko, Usmonov* (TASH). **I-4-b Aktau Range:** mountain slopes between the town Nurata and well Pashat, 24.04.1913, *Korovin* (TASH). **I-4-b Karatau Range:** western part of Karatau Range, 22.03.2013, *Beshko* (www.plantarium.ru). **I-4-b Mt. Kokcha:** remnant mountain Kokcha, southern piedmont, 14.04.1938, *Granitov, Evstafiev* (TASH). **I-4-c North-Nuratau insular low mountains:** watershed crest of Egarbelistag, 27.04.2020, *Beshko, Shomurodov, Adilov* (plant community description).

Gymnospermium Spach

275. *Gymnospermium alberti* (Regel) Takht., Bot. Zhurn. 55: 1192 (1970). Perennial, geophyte. Mountain Middle Asian. Shrubland, Rocky areas. Montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** Koshrabad, Mt. Mirishkar, 05.05.1913, *Korovin 69853* (TASH); upper reaches of Yataksay, 30.04.2002, *Beshko 02132* (herbarium of the Nuratau Nature Reserve); Koytash Mts., upper part of the village Narvan, 40.264304° N, 67.276529° E, 22.04.2020, *Turdiev 2204202018* (TASH).

Leontice L.

276. *Leontice ewersmannii* Bunge, Arbeiten Naturf. Vereins Riga 1: 131 (1847). Perennial, geophyte. Irano-Turanian. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** Koshrabad, Mt. Mirishkar, 05.05.1913, *Korovin 304* (TASH); Sanzar river valley near the railway bridge, 03.04.1921, *Vvedensky 150* (TASH); surroundings of the well Kyzyly, 29.05.1939, *Mikhaylova, Popova* (TASH); Kyzylcha State Farm, 25.03.1950, *Zaprometova* (TASH); Koblatysay, 15.05.1953, *Zaprometova* (TASH); Koblatysay, 27.03.1955, *Zaprometova 391* (TASH); 3 km north of Saurbel Pass, 27.04.1958,

Momotov, Li, Zakirov 183 (TASH); Hayatsay, 25.03.1978, *Korshunov 78010, 78011* (herbarium of the Nuratau Nature Reserve); Asrafsay, 28.03.1981, *Mukhina 81091–81093* (herbarium of the Nuratau Nature Reserve); Hayatsay, 11.04.1992, *Beshko 92001, 92002* (herbarium of the Nuratau Nature Reserve); Bolosay, 26.04.1992, *Beshko 92425* (herbarium of the Nuratau Nature Reserve); Tykchasay, 25.04.2007, *Beshko* (www.plantarium.ru); Hayatsay, 25.03.2009, *Beshko* (www.plantarium.ru); Hayatsay, 27.03.2011, *Davkaev* (www.plantarium.ru); Pistalisay, about 660 m a.s.l., 19.03.2013, *Beshko* (www.plantarium.ru; www.inaturalist.org); Madjrumsay, 25.03.2016, *Beshko* (www.plantarium.ru, www.inaturalist.org); Gurdara, 17.03.2019, *Beshko* (www.plantarium.ru, www.inaturalist.org); Jizzakh Region, Farish District, Nuratau Nature Reserve, Madjrumsay, 40.57838° N, 66.70988° E, 23.03.2024, *Beshko* (www.inaturalist.org); Jizzakh Region, Farish District, Nuratau Nature Reserve, Gurdara, 40.5205° N, 66.91812° E, 24.03.2024, *Beshko* (www.inaturalist.org); Jizzakh Region, Farish District, Nuratau Nature Reserve, Hayatsay, 40.52321° N, 66.75803° E, 26.04.2024, *Beshko* (www.inaturalist.org). **I-4-b Aktau Range:** upper reaches of Maydansay, 24.05.1933, *Drobow* (TASH); mountains Nuratau, 3 km NE of Ziadin Station, 23.04.1958, *Li, Zakirov 22* (TASH); village Ingichka, 21.04.1966, *Tulyaganova* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistaltau, 09.04.1915, *Kultiasow 88* (TASH); Jizzakh Region, Farish District, Pistaltau, 40.43931° N, 67.54396° E, 18.03.2013, *Beshko* (www.inaturalist.org); the crest of Egarbelistag, 1.5 km west of the Carbonat JSC quarry, 27.04.2020, *Beshko, Shomurodov, Adilov* (plant community description).

277. *Leontice incerta* Pall., Reise Russ. Reich. 3: 726 (1776). Perennial, geophyte. Turanian. Desert. Plain, foothills. Rare. Native. **I-4-b Mt. Kokcha:** eastern part of Kokchatau, 22.03.2013, *Tojibaev, Shomurodov, Beshko, Batashov* (TASH); remnant mountain Kokchatau, 22.03.2013, *Beshko* (www.plantarium.ru).

Ranunculaceae Juss.

Adonis L.

278. *Adonis parviflora* Fisch. ex DC., Prodr. 1: 24 (1824). Annual, therophyte. Caucasian, Irano-Turanian. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Sharaussay, 05.04.1958, *Zaprometova 304* (TASH); nameless valley, 2 km from Kyzylcha State Farm, 17.04.1958, *Zaprometova* (TASH); Gatchasay, 28.04.1958, *Zaprometova* (TASH); piedmont plain, 12.04.1963, *Markova* (TASH); Hayatsay, 20.04.1983, *Fominykh 83056* (herbarium of the Nuratau Nature Reserve); Gurdara, 11.04.1993, *Beshko 93047* (herbarium of the Nuratau Nature Reserve); Hayatsay 21.04.2006, *Beshko 06002* (herbarium of the Nuratau Nature Reserve); Hayatsay, 22.04.2009, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Mt. Hayatbashi, 2145 m a.s.l., 19.05.2021, *Beshko, Madaminov NB2021225* (TASH). **I-4-b Aktau Range:** mountain slopes between Nurata and well Pashat, 24.04.1913, *Korovin 82* (TASH); south of district center Nurata, 22.05.1974, *Pratov* (TASH). **I-4-b Karatau Range:** station Karmana, mountains Karakarga, 22.04.1913, *Korovin 69762* (TASH).

Anemone L.

279. *Anemone petiolulosa* Juz., Fl. URSS 7: 736 (1937). Perennial, geophyte. Hyrcanian, Mountain Middle Asian. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Kyzylcha State Farm, 04.04.1951, *Novikova* (TASH); Nurata District, near Kyzylcha State Farm, 05.04.1954, *Zaprometova* (TASH); Alaysay, 30.03.1958, *Zaprometova 18* (TASH); Sharaussay, 16.04.1958, *Zaprometova* (TASH); 3 km south of Saurbel Pass, 26.04.1958, *Li, Zakirov 99* (TASH); Sentob, 0.5 km south of the village Yukary-Kurgan, 11.10.1958, *Li, Zakirov 507* (TASH); mountains Nuratau, 16.03.1963, *Markova* (TASH); Nuratau Nature Reserve, 31.03.1981, *Mukhina* (TASH);

Hayatsay, 07.04.1992, *Beshko* 92021 (herbarium of the Nuratau Nature Reserve); Hayatsay, Andebaraut, 05.04.2008, *Beshko* 08002 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayat, 05.04.2008, *Beshko* (www.plantarium.ru); Hayatsay, 27.03.2011, *Davkaev* (www.plantarium.ru); Hayatsay, 08.05.2014, *Tojibaev et al.* 17259 (TASH). **I-4-b Aktau Range:** mountain slopes between Nurata and well Pashat, 24.04.1913, *Korovin* 20532 (TASH); north-west of district center Nurata, Chashma, 27.03.1963, *Markova* (TASH); Samarkand Region, Koshrabad State Farm, 23.04.1965, *Perelygina* (TASH). **I-4-b Karatau Range:** mountains Karakarga, *Iris*-sagebrush steppe, 22.04.1913, *Korovin* (TASH).

Ceratocephala Moench

280. *Ceratocephala falcata* (L.) Pers., Syn. Pl. 1: 341 (1805). Annual, therophyte. European, Tethyan. Plain, foothills, montane zone. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** Farish District, 26.04.1941, *Momotov* 53 (TASH); proluvial plain 2 km north of the well Usarbay, 2 km east of the village Suyunkuduk and 5 km north-west of village Tulibay, N 40°38'13", E 67°01'52", 28.03.2019, *Beshko*, *Shomurodov*, *Adilov*, *Abduraimov* (plant community description). **I-4-b Karatau Range:** mountains Karakarga, the pass Jizlan, 22.04.1913, *Korovin* 15 (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 08.04.1915, *Kultiasow* 99 (TASH); piedmont plain at the foot of remnant range Uchkulach, 5–6 km east of the village Uzunkuduk, N 40°32'57" E 67°12'59", 26.06.2019, *Beshko*, *Shomurodov*, *Adilov*, *Abduraimov* (plant community description).

281. *Ceratocephala testiculata* (Crantz) Besser (*C. orthoceras* DC.), Enum. Pl. Volh.: 70 (1821). Annual, therophyte. Tethyan. Plain, foothills, montane zone. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** Farish District, 07.05.1941, *Momotov* 179 (TASH); Hayatsay, field station of Nuratau Nature Reserve, 21.04.2006, *Beshko* 06007 (herbarium of the Nuratau Nature Reserve); Hayatsay, 10.04.2007, *Beshko* (www.plantarium.ru); Hayatsay, field station of Nuratau Nature Reserve, 23.04.2009, *Beshko* 09010 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Gurdara, 03.05.2012, *Beshko* (TASH); watershed crest of Nuratau Range, about 2 km east of Saurbel Pass, N 40°20'46" E 67°07'37", 06.04.2019, *Beshko*, *Adilov* (plant community description); upper reaches of Osmansay, upstream of the village Baland Osman, N 40°19'20" E 67°17'25", 05.04.2019, *Beshko*, *Adilov* (plant community description); Jizzakh Region, Farish District, Hayatsay, 40.52173° N, 66.75569° E, 03.04.2022, *Beshko* (www.inaturalist.org); Koshrabad District, surroundings of Fazilman Lake, 40.54112° N, 66.59268° E, 24.04.2024, *Selyutina* (www.inaturalist.org). **I-4-b Aktau Range:** Aktau: 2–3 km south of the village Kokbulak, 01.07.1937, *Demurina* 352 (TASH). **I-4-b Karatau Range:** foothills near Sarmysh, 26.04.1965, *Pryakhin* (TASH). **I-4-b Khobduntau Range:** reported by Kudrjashev in “Vegetation of the Khobduntau and Karachatau Mountains” (1929, p. 61). **I-4-c North-Nuratau insular low mountains:** pass on remnant range Pistalitau, N 40°32'35", E 67°23'07", 27.03.2019, *Beshko*, *Shomurodov*, *Adilov*, *Abduraimov* (plant community description).

Clematis L.

282. *Clematis orientalis* L., Sp. Pl. 1: 543 (1753). Shrub, climber, phanerophyte. Euro-Siberian, Irano-Turanian. Forest, Shrubland, Rocky areas, Wetlands (inland), Artificial aquatic. Plain, foothills, montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** Koytash, southern slope, valley of stream, 28.06.1971, *Botschantzev*, *Kamelin* (LE); Hayatsay, 20.09.1980, *Mukhina* 80009 (herbarium of the Nuratau Nature Reserve); Madjrumsey, 24.09.1991, *Beshko*, *Maximova* 91002 (herbarium of the Nuratau Nature Reserve); Sentobsay, 40.58079° N, 66.6575° E, 28.09.2023, *Yusupov* (www.inaturalist.org).

Delphinium L.

283. *Delphinium barbatum* Bunge, Arbeiten Naturf. Vereins Riga 1: 126 (1847). Annual, therophyte. Middle Asian. Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Foothills, montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** valley Bereshek, 21.07.1931, Kobranova (LE); 2 km north-east of the village Dzhush, 05.07.1932, Knorring, Emme 5 (MW); near the village Kariz, 11.07.1932, Knorring, Emme 11 (MW); Koytash, southern slope, 28.06.1971, Botschantzev, Kamelin (LE); Mts. Koytash, Mt. Piyazli, 30.05.1976, Pimenov, Kljuykov, Baranova, Vassiljeva 273 (MW); Nuratau Nature Reserve, Hayatsay, 10.06.1983, Petrochenko 83006 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, Zamezhak, 20.06.1990, Beshko, Yakovenko 90028 (herbarium of the Nuratau Nature Reserve); Nakrutsay, upper reaches, valley, 20.06.1992, Beshko 92286 (TASH); Nuratau Nature Reserve, Hayatsay, 30.05.2006, Beshko (www.plantarium.ru); Sobsay, 11.06.2013, Beshko (www.plantarium.ru); **I-4-b Aktau Range:** 8 km south-west of the village Chuya, 29.06.1937, Demurina 301 (TASH). **I-4-b Karatau Range:** Karakarga Pass, 24.09.2009, Tojibaev (TASH). **I-4-b Karachatau Range:** 1–1,2 km east of the village Kursafar, 08.07.1937, Demurina 462 (TASH). **I-4-b Khobduntau Range:** reported by Kudrjashev in “Vegetation of the Khobduntau and Karachatau Mountains” (1929, p. 61).

284. *Delphinium batalinii* Huth, Bot. Jahrb. Syst. 20: 432 (1895). Perennial, hemicryptophyte. Mountain Middle Asian. Shrubland, Grassland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** 6–7 km west of the village Guzhum, 23.07.1937, Demurina 737 (TASH); Mts. Koytash, 2–3 km north-west of the village Kokbulak, 18.07.1937, Demurina 586 (TASH); Koytash, northern and southern slopes near the crest, 28.06.1971, Botschantzev, Kamelin (LE); Gurdara, 23.06.1971, 28.06.1971, Botschantzev, Kamelin (LE); Nuratau Nature Reserve, Mt. Dushokh, 08.06.1994, Beshko 94034 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Sukhta, 21.07.2007, Beshko (www.plantarium.ru); Nuratau Nature Reserve, top of Mt. Hayatbashi, 23.07.2014, Beshko (TASH, www.plantarium.ru). **I-4-b Aktau Range:** 5 km west of the village Tikalik, 06.07.1932, Knorring, Emme 27 (MW); 4–6 km south of village Chuya, 29.06.1937, Demurina 354 (TASH); 7–8 km south-east of the village Maulyan, 03.07.1937, Demurina 404 (TASH). **I-4-b Karatau Range:** mountains Karatau, the crest of southern ridge, 25.06.1937, Demurina 263 (TASH).

285. *Delphinium biternatum* Huth, Bot. Jahrb. Syst. 20: 422 (1895). Perennial, hemicryptophyte. Irano-Turanian. Shrubland, Grassland, Rocky areas. Montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** Nuratau Nature Reserve, Gurdara, 12.06.1993, Beshko 93089 (herbarium of the Nuratau Nature Reserve); Mt. Parrandoz, 30.06.1995, Beshko 95117 (herbarium of the Nuratau Nature Reserve); Bolosay, 24.05.1995, Beshko 95097 (herbarium of the Nuratau Nature Reserve); upper reaches of Asrafsay, 13.07.1998, Beshko (herbarium of the Nuratau Nature Reserve); rocky massif Parrandoz, 24.06.2010, Beshko (www.plantarium.ru); Nuratau Nature Reserve, Karysay, 25.06.2010, Beshko (www.plantarium.ru).

286. *Delphinium camptocarpum* Fisch. & C.A.Mey. ex Ledeb. (*Consolida camptocarpa* (Fisch. & C.A.Mey. ex Ledeb.) Nevski), Fl. Ross. 1: 58 (1841). Annual, therophyte. Middle Asian. Desert, Shrubland, Rocky areas, Artificial terrestrial. Plain, foothills. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** Gatchasay, 10.05.1957, Zaprometova (TASH); south of the village Kyzylcha, 22.05.1974, Prator (TASH). **I-4-b Aktau Range:** district center Nurata, 07.05.1951, Novikova (TASH).

287. *Delphinium leptocarpum* (Nevski) Nevski (*Consolida leptocarpa* Nevski), Fl. URSS 7: 110 (1937). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Rocky areas, Artificial terrestrial. Plain, foothills. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** Gatchasay, 09.04.1953, Burygin 361 (TASH); Gatchasay, 31.05.1954, Zaprometova 116 (TASH); piedmont plain near Kyzylcha State Farm, 21.05.1957, Zaprometova (TASH); Alaysay, 25.05.1954, Zaprometova 139 (TASH). **I-4-b**

Aktau Range: near the town Nurata, 1964, *Pryakhin* (TASH); south of district center Nurata, 22.05.1974, *Pratov* (TASH). **I-4-b Karatau Range:** Bukhara Region, Gizhduvan District, Nuratau mountains, southern foothills of Karatau Range, about 370 m a.s.l., 21.04.2024, *Beshko* (www.plantarium.ru, www.inaturalist.org).

288. *Delphinium longipedunculatum* Regel & Schmalh., Trudy Imp. S.-Peterburgsk. Bot. Sada 5: 226 (1877). Perennial, hemicryptophyte. Mountain Middle Asian. Shrubland, Grassland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** central estate of Kyzylcha State Farm, 29.05.1951, *Novikova* (TASH); Koblatysay, 27.05.1957, *Zaprometova* (TASH); Koytash, southern slope, below the crest, 28.06.1971, *Botschantzev*, *Kamelin* (LE); Nuratau Nature Reserve, Mt. Hayatbashi, 09.07.1981, *Mukhina 81019–021* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Karysay, Kazhum, 22.07.1992, *Beshko 92473* (herbarium of the Nuratau Nature Reserve); Sentobsay, upper reaches of Kargesay, 13.07.1992, *Beshko 92340–92342* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, Andebaraut, 25.06.2012, *Beshko* (TASH, www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, about 1400 m a.s.l., *Turdiyev* (www.plantarium.ru). **I-4-b Aktau Range:** Aktau, 1964, *Khaydarov 62* (TASH). **I-4-b Karatau Range:** Navoi Region, Nurata District, 40.37878° N, 65.49648° E, 21.05.2022, *Turdiyev* (www.inaturalist.org). **I-4-b Khobduntau Range:** on the watershed, 09.07.1937, *Demurina 466* (TASH).

289. *Delphinium rugulosum* Boiss. (*Consolida rugulosa* (Boiss.) Schrödinger), Ann. Sci. Nat., Bot., ser. 2, 16: 361 (1841). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** Urganchi, 01.05.1913, *Korovin* (TASH); southern slope, 1 km east from the pass through Pistalisay, 08.05.1958, *Li*, *Zakirov 442* (TASH). **I-4-b Aktau Range:** Koshrabad – Shurcha, 16.04.1913, *Teplov 6* (TASH). **I-4-b Karatau Range:** dry valley 2.5 km west of Karakarga Pass, 04.05.2013, *Beshko* (TASH).

290. *Delphinium semibarbatum* Bien. ex Boiss., Fl. Orient. 1: 92 (1867). Perennial, hemicryptophyte. Irano-Turanian. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** town Jizzakh, 13.06.1934, *Gomolitsky 1* (TASH); Mts. Koytash, near the village Jizzakly, 28.05.1940, *Gomolitsky*, *Dolgikh*, *Arkhireev 54* (TASH); Karasay, 13.05.1957, *Zaprometova* (TASH); Koblatysay, 20.05.1957, *Zaprometova 381* (TASH); Sharaussay, 28.05.1957, *Zaprometova 381* (TASH); Kyzylcha State Farm, 03.06.1957, *Zaprometova* (TASH); Kachaksay, 15.07.1981, *Mukhina 81022* (herbarium of the Nuratau Nature Reserve); Mt. Parrandoz, 22.07.1992, *Beshko 92345* (herbarium of the Nuratau Nature Reserve); southern slope of Nuratau Range, upper reaches of Ustuksay, 29.05.2003, *Beshko* (herbarium of the Nuratau Nature Reserve); foothills of Nuratau, surroundings of Yangikishlak (Farish), 30.05.2010, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, Novi Khushk, 24.06.2012, *Beshko* (TASH); Nuratau Nature Reserve, Hayatsay, 25.06.2012, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Madjrumsay, 06.06.2022, *Beshko* (www.plantarium.ru, www.inaturalist.org). **I-4-b Aktau Range:** near the village Langar, valley Yangokly, 19–21.05.1941, *Zakirov*, *Niyazov* (TASH); Pitausay, 26.05.1964, *Zuckerwanik 250* (TASH); near the village Chashma, 06.06.1964, *Pryakhin* (TASH); near the village Bubak, 04.06.1975, *Pryakhin* (TASH); Navoi Region, Nurata District, northern slope of Aktau Range, Charkhansay, about 700 m a.s.l., 40.46369° N, 65.80085° E, 17.05.2024, *Beshko* (www.plantarium.ru, www.inaturalist.org). **I-4-b Khobduntau Range:** between mountains Khobduntau and Karachatau, the village Almaly, 12.05.1929, *Kudrjashev* (TASH); the village Ingichka, 07.07.1937, *Demurina 555* (TASH). **I-4-c North-Nuratau insular low mountains:** remnant uplands north of Nuratau Range, 60 km west of Jizzakh, 26.05.1956, *Zaprometova* (TASH); the crest of Egarbelistag, 1.5 km west of the Carbonat JSC quarry, 27.04.2020, *Beshko*, *Shomurodov*, *Adilov*

(plant community description); Jizzakh Region, Farish District, 4 km north-north-east of the village Uchkulach, 26.05.2023, *Fateryga* (www.plantarium.ru).

Eranthis Salisb.

291. *Eranthis longistipitata* Regel, Bull. Soc. Imp. Naturalistes Moscou 43(I): 244 (1870). Perennial, geophyte. Irano-Turanian. Desert, Forest, Shrubland, Grassland, Rocky areas. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Koblatysay, 06.04.1958, *Zaprometova* 322 (TASH); Sentob, 0.5 km south of the village Yukary-Kurgan, 11.05.1958, *Li, Zakirov* 506 (TASH); southern slope of Mts. Zargar, 26.04.1979, *Pimenov, Kljuykov, Boryaev, Baranova, Vassiljeva* 83 (MW0829076); piedmont plain near Yangikishlak, 21.02.1992, *Beshko* 92311 (herbarium of the Nuratau Nature Reserve); Karysay, Pubsay, 17.04.1992, *Beshko* 92035 (herbarium of the Nuratau Nature Reserve); Hayatsay, 27.03.2011, *Gaziev* (www.plantarium.ru); Hayatsay, right-side slope, 27.03.2011, *Davkaev* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 26.03.2012, *Beshko* (www.plantarium.ru, www.inaturalist.org); Hayatsay, 05.05.2012, Hayatsay, *Beshko* (TASH); Nuratau Nature Reserve, Hayatsay, 29.03.2014, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 13.03.2016, *Beshko* (TASH); piedmont plain between the villages Uchma and Safarota, N 40°31'02", E 67°01'56", 28.03.2019, *Beshko, Shomurodov, Adilov, Abduraimov* (plant community description); upper reaches of Osmansay above the Zangori Olov summer camp, N 40°20'13" E 67°13'22", 05.04.2019, *Beshko, Adilov* (plant community description); watershed of Nuratau Range, about 2 km east of Saurbel Pass, N 40°20'46" E 67°07'37", 06.04.2019, *Beshko, Adilov* (plant community description); upper reaches of Osmansay, upstream of the village Baland Osman, N 40°19'20" E 67°17'25", 05.04.2019, *Beshko, Adilov* (plant community description); Navoi Region, Nurata District, 40.65161° N, 66.55671° E, 26.02.2020, *denisch* (www.inaturalist.org); Madjrumsay, 23.03.2020, *Beshko NB2020008* (TASH); Jizzakh Region, Farish District, Nuratau Nature Reserve, Madjrumsay, 40.58178° N, 66.71274° E, 23.03.2024, *Beshko* (www.inaturalist.org); Jizzakh Region, Farish District, Nuratau Nature Reserve, Gurdara, 40.52° N, 66.91823° E, 24.03.2024, *Beshko* (www.inaturalist.org). **I-4-b Aktau Range:** northern slope of Mt. Takhkuta, 07.05.1913, *Korovin* 455 (TASH); near the pass Tikalik, 3 km south of village Sarygul, 12.05.1957, *Momotov, Li* 306 (TASH). **I-4-b Karachatau Range:** 2 km north-east of the village Kaunchi, 07.07.1937, *Demurina* 450 (TASH). **I-4-c North-Nuratau insular low mountains:** the crest of Egarbelistag, 1.5 km west of the Carbonat JSC quarry, 25.03.2019, *Beshko, Shomurodov, Adilov, Abduraimov* (plant community description).

Halerpestes Green

292. *Halerpestes sarmentosa* (Adams) Kom. Perennial, hydrophyte. Euro-Siberian, Irano-Turanian, Oriental. Plain, montane zone. Wetlands (inland). Rare. Native. **Occurrence records: I-4-a Nuratau Range:** shore of Fazilman Lake, 09.06.2013, *Beshko* (TASH); shore of Fazilman Lake, 09.06.2018, *Beshko* (TASH, www.plantarium.ru); Navoi Region, Nurata District, shore of Fazilman Lake, 40.54868° N, 66.58987° E, 04.07.2024, *Beshko* (www.inaturalist.org). **I-4-b Khobduntau Range:** surroundings of Marjonbulak, bank of stream, 02.07.2021, *Beshko* (www.plantarium.ru).

Nigella L.

293. *Nigella integrifolia* Regel, Bull. Soc. Imp. Naturalistes Moscou 43(I): 246 (1870). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Kyzylchali, 28.04.1913, *Korovin* (TASH); Urganchi, 01.05.1913, *Korovin* 187 (TASH); mountains Koytash, south of the village Yanbashtut, 17.07.1937, *Demurina* 647 (TASH); Gatchasay, 15.06.1956, *Zaprometova* (TASH); Ukhumsay, 19.05.1981, *Mukhina* 81089 (herbarium of the Nuratau Nature Reserve); Tykchasay, 23.05.1983, *Fominykh* 83076 (herbarium of the Nuratau Nature Reserve); Karysay, 10.06.1993, *Beshko* 93079 (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** Nurata,

24.04.1913, *Korovin* (TASH); Nurata valley, near the village Koktepa, 12.05.1957, *Momotov 346* (TASH); near the village Dekhibaland, 22.05.1974, *Pratov* (TASH). **I-4-b Karatau Range:** mountains Karatau, 20.05.1936, *Kharchenko 1101, 1102, 1103, 1104* (TASH); gentle slopes of mountains Karatau, 05.05.1955, *Momotov 111* (TASH); Karatau, valley of the river Bakachinak, 05.05.1955, *Momotov 123, 136* (TASH); Bukhara Region, Gizhduvan District, western piedmonts of Karatau Range, 40.4724° N, 65.1068° E, 21.04.2024, *Beshko* (www.inaturalist.org); Bukhara Region, Gizhduvan District, western part of Karatau Range, 13.04.2025, *Beshko* (TASH). **I-4-b Khobduntau Range:** plain between mountains Khobduntau and Karachatau, 07.06.1929, *Kudrjashev* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistaltau, 08.04.1915, *Kultiasow 79* (TASH).

Ranunculus L.

294. *Ranunculus arvensis* L., Sp. Pl. 1: 555 (1753). Annual, therophyte. Euro-Siberian, Tethyan. Desert, Forest, Shrubland, Grassland, Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Hayatsay gorge, 30.05.1969, *Mambetjumaev 113* (TASH); Hayatsay, Novi Daroz, 19.04.1992, *Beshko 92060* (herbarium of the Nuratau Nature Reserve); Hayatsay, surroundings of village Hayat, 06.05.1992, *Beshko 92418* (TASH); Hayatsay, 22.04.2006, *Beshko 06352* (herbarium of the Nuratau Nature Reserve); Hayatsay, 14.05.2008, *Beshko* (www.plantarium.ru); Jizzakh Region, Farish District, Nuratau Nature Reserve, Hayatsay, 40.519155° N 66.752239° E, 22.04.2023, *Beshko* (www.inaturalist.org); Nuratau Nature Reserve, Hayatsay, 27.05.2023, *Beshko* (www.plantarium.ru); Jizzakh Region, Farish District, Karysay, 40.51571° N 66.78761° E, 12.05.2024, *langli* (www.inaturalist.org).

295. *Ranunculus baldshuanicus* Regel & Kom., Trav. Soc. Nat. Petersb. Sect. Bot. 26: 67 (1896). Perennial, hemicryptophyte. Western Tien Shan, Pamir-Alay. Wetlands (inland), Artificial aquatic. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Asrafsay, 11.06.1995, *Beshko 95068* (herbarium of the Nuratau Nature Reserve); Kulbasay, 03.05.2002, *Beshko 02096* (herbarium of the Nuratau Nature Reserve); Yongoklisay, 27.04.2006, *Beshko* (www.plantarium.ru); Yongoklisay, 16.05.2009, *Beshko* (www.plantarium.ru).

296. *Ranunculus distans* Wall. ex Royle (*Ranunculus laetus* Wall.), Ill. Bot. Himal. Mts. 1: 53 (1834). Perennial, hemicryptophyte. Irano-Turanian, Himalayan. Wetlands (inland), Artificial aquatic. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, the village Osmansay, 06.1931, *Kobranova 486* (TASH); Balamansay, 30.07.1940, *Gomolitsky, Dolgikh, Arkhireev 229* (TASH); Alichaksay, 26.05.1969, *Mambetjumaev 12* (TASH); Hayatsay, 05.06.1969, *Mambetjumaev 153* (TASH); Madjrumsay, 19.06.1969, *Mambetjumaev 219* (TASH); Hayatsay, 11.05.1994, *Beshko 94021* (herbarium of the Nuratau Nature Reserve); Hayatsay, 11.05.2005, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, field station, 23.05.2006, *Beshko 06287, 06288, 06289* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 21.06.2012, *Beshko* (TASH); Hayatsay, 20.05.2013, *Beshko* (www.plantarium.ru); Hayatsay, 30.08.2020, *Beshko* (www.plantarium.ru).

297. *Ranunculus komarovii* Freyn, Bull. Herb. Boiss. 2 ser., 3: 558 (1903). Perennial, geophyte. Western Tien Shan, Western Pamir-Alay. Foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Alichak, 06.05.1969, *Mambetjumaev 25* (TASH).

298. *Ranunculus linearilobus* Bunge, Arb. Naturf. Ver. Riga 1: 499. Perennial, geophyte. Turanian. Plain, foothills, montane zone. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** montes Nuratau ad lacum Fazilman, 26.04.1892, *Glasunov* (LE); south-east of Kyzylcha State Farm, 15.04.1954, *Zaprometova* (TASH); near Kyzylcha State Farm, 20.04.1954, *Zaprometova* (TASH); Mt. Zargar, 3 km NE of the village

Urtasay, 11.05.1957, *Momotov*, *Li* 271 (TASH); Sharaussay, 05.04.1958, *Zaprometova* 305 (TASH); Koblatysay, 06.04.1958, *Zaprometova* 336 (TASH); Gatchasay, 14.04.1958, *Zaprometova* 441 (TASH); 5 km south-east of the village Upper Ukhum near the pass Ukhum, 30.04.1958, *Li*, *Zakirov* 258 (TASH); 1 km south of the village Saukbulak, 14.05.1958, *Li*, *Zakirov* 559 (TASH); Kyzylcha, 12.04.1960, *Leonova* (LE); plateau near the lake Sentobkul (Fazilman), 14.05.1993, *Beshko* 93034 (herbarium of the Nuratau Nature Reserve); lower reaches of Ukhumsay, 14.04.1994, *Beshko* 94003 (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** mountain slopes between Nurata and Pashat, 24.04.1913, *Korovin* 178 (LE); between well Pashat and Kara-Yuzgan, 25.04.1913, *Korovin* 7185 (TASH); Mt. Takhkutau, 07.05.1913, *Korovin* (TASH); the gorge Yangokly, near the village Langar, 19.05.1941, *Zakirov*, *Niyazov* (TASH); near district center Nurata, 27.03.1963, *Markova* (TASH). **I-4-c North-Nuratau insular low mountains:** Mts. Uchkulach, 17.04.2011, *Batashov* (TASH).

299. *Ranunculus mindshelkensis* B.Fedtsch., *Rastit. Turkest.*: 416 (1915). Perennial, geophyte. Western Tien Shan, Western Pamir-Alay. Montane zone. Shrubland, Grassland, Rocky areas. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** 2.5 km south-east of Kyzylcha State Farm, 15.04.1954, *Zaprometova* (TASH); northern slope of mountains Fazilmantau, near the top, 12.05.1956, *Zaprometova* 5139 (TASH); Koblatysay, 06.04.1958, *Zaprometova* 336 (TASH); southern slope of Mt. Zargar, 26.04.1979, *Pimenov*, *Kljuykov*, *Boryaev*, *Baranova*, *Vassiljeva* 69 (MW831504); Hayatsay, Zamezhak, 01.04.1981, *Mukhina* 81011 (herbarium of the Nuratau Nature Reserve); Karysay, Pubsay, 20.04.1992, *Beshko* 92058 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 10.04.2007, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 05.04.2008, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, rocky massif Parrandoz, 07.05.2010, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Gurdara, 17.03.2019, *Beshko* (www.plantarium.ru); **I-4-b Aktau Range:** Mt. Takhku-tau, 07.05.1913, *Korovin* 421, 426 (TASH).

300. *Ranunculus oxyspermus* Willd., *Sp. Pl.*, ed. 4 [Willdenow] 2 (2): 1328 (1799). Perennial, geophyte. European, Irano-Turanian. Plain, foothills, montane zone. Forest, Shrubland, Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** Hayatsay, field station of Nuratau Nature Reserve, 26.04.1994, *Beshko* 94014 (herbarium of the Nuratau Nature Reserve); Hayatsay, 21.04.2006, *Beshko* 06005 (herbarium of the Nuratau Nature Reserve); Hayatsay, 14.05.2008, *Beshko* 08019 (herbarium of the Nuratau Nature Reserve); Hayatsay, field station of Nuratau Nature Reserve, 24.04.2009, *Beshko* (www.plantarium.ru).

301. *Ranunculus paucidentatus* Schrenk, *Bull. Cl. Phys.-Math. Acad. Imp. Sci. Saint-Petersbourg* 3: 309 (1845). Perennial, geophyte. Mountain Middle Asian, Dzungarian. Shrubland, Grassland, Rocky areas. Montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** pass near the sources of Guzumsay, 23.07.1937, *Demurina* 688/3 (TASH); Farish District, 29.04.1941, *Bukasov* (TASH); Alichaksay, 26.05.1941, *Mambetjumaev* 37 (TASH); southern slopes of Ustuksay, 11.05.1956, *Korotkova* 5096 (TASH); Mt. Zargar, 3 km north-east of the village Urtasay, 11.05.1957, *Momotov*, *Li* 257 (TASH); 5 km north-east of the village Khukala, 17.05.1958, *Li*, *Zakirov* 641 (TASH); Karysay, 17.04.1992, *Beshko* 94051 (herbarium of the Nuratau Nature Reserve); Farish district, Uzbekistan, 40.309358° N, 67.24875° E, 20.04.2013, *Lougarou* (www.inaturalist.org); Nuratau Nature Reserve, watershed crest between Hayatsay and Madjrumasay, 09.05.2014, *Beshko* (www.plantarium.ru, www.inaturalist.org); upper reaches of Osmansay upstream of the village Baland Osman, 05.04.2019, *Beshko*, *Adilov*, *Muminov* (TASH); right side of Tykchasay, village Ukhum, 12.05.2019, *Juramurodov* (TASH); watershed crest near the pass Hayat, 19.05.2021, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, northern slope of Mt. Hayatbashi, 2145 m a.s.l., 19.05.2021, *Beshko*, *Madaminov* NB2021226 (TASH). **I-4-b Aktau Range:** Nuratau mountains, Mt. Takhku-tau, 07.05.1913, *Korovin*

(LE); slopes of Mt. Takhkuta, 07.05.1913, *Korovin* (TASH); mountains Nurata, surroundings of Langar, 19.05.1941, *Zakirov, Niyazov* (TASH).

302. *Ranunculus pinnatisectus* Popov, Soil Invest. Exped. Rivers Syr-daria & Amu-daria 1: 51 (1915). Perennial, geophyte. Western Tien Shan, Western Pamir-Alay. Plain, foothills, montane zone. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** north slopes of Nuratau, along the valley Andygen, 14.05.1915, *Spiridonov* (LE); Koblatysay, 07.04.1952, *Zaprometova* (TASH); Madjrumsay, 06.05.1993, *Beshko 93022* (herbarium of the Nuratau Nature Reserve); Hayatsay, 22.04.2006, *Beshko 06029* (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** Dzhusk – Koshrabad, *Iris* steppe, 1913, *Korovin* (TASH). **I-4-b Khobduntau Range:** near the village Khodzha-Kabud, 05.06.1929, *Kudrjashev* (TASH). **I-4-b Karachatau Range:** north-east of Yukary-Kariya, 06.07.1937, *Demurina* (TASH).

303. *Ranunculus sardous* Crantz, Stirp. Austr. Fasc. 2: 84 (1763). Perennial, geophyte. Native to Europe and Mediterranean. Foothills. Wetlands (inland), Artificial aquatic, Artificial terrestrial. Rare. Alien. **I-4-c North-Nuratau insular low mountains:** Pistalitau, 04.04.2012, *Batashov* (TASH).

304. *Ranunculus sceleratus* L., Sp. Pl.: 551 (1753). Annual, biennial, therophyte. Pluriregional. Wetlands (inland), Artificial aquatic. Plain, foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Madjrumsay, 22.05.1994, *Beshko 94070* (herbarium of the Nuratau Nature Reserve).

305. *Ranunculus sewerzowii* Regel, Trudy Imp. S.-Peterburgsk. Bot. Sada 5: 221 (1877). Perennial, geophyte. Middle Asian. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Farish District, 05.05.1941, *Momotov 105, 172* (TASH); valley 2.5 km south-east of Kyzylcha State Farm, 27.04.1954, *Zaprometova* (TASH); Sharaussay, 26.03.1958, *Zaprometova 130* (TASH); 3 km south of Saurbel Pass, 26.04.1958, *Li, Zakirov 97* (TASH); Koblatysay, 30.03.1958, *Zaprometova 249, 330* (TASH); the village Hayat, 18.04.1981, *Mukhina 81010* (herbarium of the Nuratau Nature Reserve); lower reaches of Bolosay, 26.04.1992, *Beshko 92061* (herbarium of the Nuratau Nature Reserve); Bolosay, 08.05.1992, *Beshko 92430* (herbarium of the Nuratau Nature Reserve); Madjrumsay, 06.05.1993, *Beshko 93023* (herbarium of the Nuratau Nature Reserve); Hayatsay, Andebaraut, 22.05.2006, *Beshko 06308* (herbarium of the Nuratau Nature Reserve); Jizzakh Region, Farish District, foothills of Nuratau, 19.04.2012, *Beshko* (www.plantarium.ru). **I-4-b Karatau Range:** slopes of foothills near the valley Sarmysh, 26.04.1965, *Pryakhin* (TASH); southern foothills of Karatau, near the road to the Karakarga Pass, 17.04.2012, *Beshko* (www.plantarium.ru). **I-4-b Khobduntau Range:** Gallaaral District, surroundings of Milyutinskaya Station, experimental station of cereal crops, 13.05.1934, *Toporova* (TASH). **I-4-c North-Nuratau insular low mountains:** Jizzakh Region, mountains Pistalitau, 22.04.1986, *Pimenov, Kljuykov, Vassiljeva, Melibaev 113* (MW).

306. *Ranunculus sphaerospermus* Boiss. & C.I.Blanche (*Batrachium pachycaulon* Nevski), Diagn. Pl. Orient., ser. 2, 5: 6 (1856). Perennial, hydrophyte. Tethyan. Wetlands (inland), Artificial aquatic. Plain, foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Alaysay, 25.03.1958, *Zaprometova 85* (TASH). **Karatau Range:** Aksakalata, 18.05.1941, *Popov* (TASH).

307. *Ranunculus tenuilobus* Regel ex Kom., Trudy Imp. S.-Peterburgsk. Obshch. Estestvoisp., Vyp. 3, Otd. Bot. 26: 59 (1896). Perennial, geophyte. Western Tien Shan, Pamir-Alay. Shrubland, Grassland. Foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** reported by Zakirov in «Vegetation cover of Nuratau Mountains» (1969, p. 26). Recorded from the western extremity of the Malguzar Range near the Tamerlane's Gate Gorge.

308. *Ranunculus trichophyllus* Chaix (*Batrachium divaricatum* (Schränk) Schur, *B. trichophyllum* (Chaix) Bosch), Pl. Vapicens.: 31 (1785). Perennial, hydrophyte. Pluriregional. Wetlands (inland),

Artificial aquatic. Plain, foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Sanguzarsay, 07.05.1992, *Beshko*, 92280, 92281 (herbarium of the Nuratau Nature Reserve); Fazilman Lake, 09.06.2013, *Beshko* (TASH); shore of Fazilman Lake, 09.06.2018, *Beshko* (www.plantarium.ru); Ustuksay, 40.5349° N, 66.54289° E, 06.07.2024, *Beshko* (TASH, www.inaturalist.org).

Thalictrum L.

309. *Thalictrum isopyroides* C.A.Mey., Fl. Altaic. 2: 346 (1830). Perennial, hemicryptophyte. Irano-Turanian. Forest, Shrubland, Grassland, Rocky areas. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Samarkand Region Nurata District, 15.04.1951, *Novikova* (TASH); north slopes of Koblatysay, 04.04.1952, *Zaprometova* (TASH); Aktashsay, 17.04.1953, *Zaprometova* (TASH); Karasay, 15.04.1954, *Zaprometova* (TASH); Alaysay, 25.03.1958, *Galkina* (TASH); Alaysay, 30.03.1958, *Zaprometova* 17 (TASH); 5 km south-east of the village Upper Ukhum, near the pass Ukhum, 30.04.1958, *Li, Zakirov* 250 (TASH); Hayatsay gorge, 30.05.1969, *Mambetjumaev* 127 (TASH); Karysay, Pubsay, 17.04.1992, *Beshko* 92029 (herbarium of the Nuratau Nature Reserve); Hayatsay, Khotunon, 23.05.2006, *Beshko* 06062 (herbarium of the Nuratau Nature Reserve); Hayatsay gorge, 27.03.2011, *Davkaev* (www.plantarium.ru); Farish district, upper reaches of Osmansay, 40.30931° N, 67.248767° E, 20.04.2013, *lougarou* (www.inaturalist.org); Nuratau Nature Reserve, Madjrumsay, lower reaches, 25.03.2016, *Beshko, Usmonov* (TASH); Madjrumsay, 25.03.2016, *Beshko* (www.plantarium.ru, www.inaturalist.org); piedmonts of Mt. Karatash, N 40°22'03" E 67°22'00", 05.04.2019, *Beshko, Adilov* (plant community description); upper reaches of Osmansay, upstream of the village Baland Osman, N 40°19'20" E 67°17'25", 05.04.2019, *Beshko, Adilov* (plant community description); Madjrumsay, 23.03.2020, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 05.05.2020, *Akbarov, Turdiev, Juramurodov* 5052020082 (TASH); Mt. Kichik Fazilman, near the Fazilman Lake, 06.05.2020, *Akbarov, Turdiev, Juramurodov* 6052020107, 6052020108 (TASH). **I-4-b Aktau Range:** between Nurata and Pashat, 24.04.1913, *Korovin* 82 (TASH); Mt. Takhkutau, 07.05.1913, *Korovin* (TASH); Aktau, near the village Langar, valley Yangokly, 19.05.1941, *Zakirov, Niyazov* (TASH). **I-4-b Karatau Range:** valley Karakarga, 11.05.2014, *Tojibaev, Sun Hang et al.* 17317 (TASH, KUN). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 07.04.1911, *Dimo, Sprygin, Shulga* 420 (TASH); Pistalitau, 07.04.1915, *Kultiasow* (TASH); the crest of Egarbelistag, 1.5 km west of the Carbonat JSC quarry, 25.03.2019, *Beshko, Shomurodov, Adilov, Abduraimov* (plant community description); Farish district, Egarbelistag, 40.36236° N, 67.48529° E, 25.03.2019, *Beshko* (www.inaturalist.org).

310. *Thalictrum minus* L., Sp. Pl.: 546 (1753). Perennial, hemicryptophyte. Euro-Siberian, Tethyan. Forest, Wetlands (inland). Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Asrafsay, 04.06.1996, *Beshko* 96109 (herbarium of the Nuratau Nature Reserve); Madjrumsay, 29.06.2011, *Beshko* 11067 (TASH, herbarium of the Nuratau Nature Reserve); Ustuksay, 40.53754° N, 66.56119° E, 04.07.2024, *Beshko* (TASH, www.plantarium.ru, www.inaturalist.org).

311. *Thalictrum sultanabadense* Stapf, Verh. K. K. Zool.-Bot. Ges. Wien 38: 550 (1888). Perennial, hemicryptophyte. Irano-Turanian. Forest, Shrubland, Grassland, Rocky areas. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Samarkand Region, southern slope of Mt. Zargar, 26.04.1979, *Pimenov, Kljuykov, Boryaev, Baranova, Vassiljeva* 109 (MW0831874); piedmonts of Mt. Karatash, N 40°22'03" E 67°22'00", 05.04.2019, *Beshko, Adilov* (plant community description); Nuratau Nature Reserve, Madjrumsay, 23.03.2020, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 40.52101° N, 66.75479° E, 03.04.2022, *Beshko* (www.inaturalist.org); Nuratau Nature Reserve, Hayatsay, 15.05.2024, *Beshko* (www.plantarium.ru, www.inaturalist.org).

Platanaceae T.Lestib.*Platanus* L.

312. *Platanus orientalis* L., Sp. Pl.: 999 (1753). Tree, phanerophyte. Tethyan. Forest, Wetlands (inland), Artificial terrestrial. Montane zone. Occasional. Native. UzbRDB 3. **Occurrence records: I-4-a Nuratau Range:** Nuratau Nature Reserve, Hayatsay, 11.08.1980, *Mukhina* (TASH); Hayatsay, 20.08.1980, *Mukhina 80015* (herbarium of the Nuratau Nature Reserve); Hayatsay, field station of nature reserve, 15.06.1990, *Beshko, Yakovenko 90076* (herbarium of the Nuratau Nature Reserve); Hayatsay 07.07.2006, *Beshko 06223* (herbarium of the Nuratau Nature Reserve); Hayatsay, 22.04.2009, *Beshko* (www.plantarium.ru); Hayatsay, 03.04.2022, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, lower reaches of Madjrumsay, 40.58312° N, 66.72438° E, 16.10.2022, *Beshko* (www.inaturalist.org).

Crassulaceae J.St.-Hil.*Pseudosedum* (Boiss.) A.Berger

313. *Pseudosedum fedtschenkoanum* Boriss., Trudy Bot. Inst. Akad. Nauk S.S.S.R., Ser. 1, Fl. Sist. Vyssh. Rast. 1: 114 (1933). Perennial, hemicryptophyte. Western Tien Shan, Western Pamir-Alay. Shrubland, Rocky areas. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-b Aktau Range:** Khanbandy – Chuya, 02.05.1913, *Korovin* (TASH); Charkhansay, rocks, 10.05.2013, *Beshko* (www.plantarium.ru).

314. *Pseudosedum lievenii* (Ledeb.) A.Berger, Nat. Pflanzenfam. ed. 2, 18a: 465 (1930). Perennial, hemicryptophyte. Euro-Siberian, Irano-Turanian. Shrubland, Rocky areas. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Mt. Piyazli, rocks on the north slope, 2 km south-south-east of the village Kuvakiya, 24.04.1941, *Bukasov* (TASH); valley 2.5 km south-east of Kyzylcha State Farm, 02.05.1954, *Sedov* (TASH); southern slope, 1 km east from the pass through Pistalisay, 08.05.1958, *Li, Zakirov 429* (TASH); northern slope of Nuratau Range south-west of town Jizzakh, Tamerlane's Gate, 26.04.1979, *Pimenov, Kljuykov, Boryaev, Baranova, Vassiljeva 43* (MW); Hayatsay, Khotunon, 23.05.2006, *Beshko 06056* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 13.05.2009, *Beshko* (www.plantarium.ru); Hayatsay, 25.06.2012, *Beshko* (TASH). **I-4-b Khobduntau Range:** reported by Kudrjashev in "Vegetation of the Khobduntau and Karachatau Mountains" (1929, p. 62). **I-4-c North-Nuratau insular low mountains:** Pistalитай, 07.04.1911, *Dimo, Sprygin, Shulga 1054, 1258* (TASH); Pistalитай, 08.04.1911, *Dimo, Sprygin, Shulga 873* (TASH); Pistalитай, 08.04.1915, *Kultiasov 7* (TASH); mountains Balyklitau south of the village Chimbkurgan, 02.05.1958, *Vvedensky, Nabiev* (TASH).

315. *Pseudosedum longidentatum* Boriss., Trudy Bot. Inst. Akad. Nauk S.S.S.R., Ser. 1, Fl. Sist. Vyssh. Rast. 1: 109 (1933). Perennial, hemicryptophyte. Mountain Middle Asian. Rocky areas. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Bolosay, 25.04.1992, *Beshko 92422* (herbarium of the Nuratau Nature Reserve); Tykchasay, Parrandoz, 11.05.2010, *Beshko 10001* (herbarium of the Nuratau Nature Reserve, TASH).

Rosularia (DC.) Stapf.

316. *Rosularia radicata* (Boiss. & Hohen.) Eggli (*Rosularia paniculata* (Regel & Schmalh.) A.Berger), Bradleya 6 (Suppl.): 76 (1988). Perennial, hemicryptophyte. Irano-Turanian. Shrubland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau mountains, north slopes, 21.07.1931, *Kobranova 28* (TASH); Koytash, southern slope, near the crest, 28.06.1971, *Botschantzev, Kamelin* (LE); Sentob, rocks, 24.06.1971, *Botschantzev, Kamelin* (LE); Mt. Parrandoz,

22.07.1992, *Beshko* 92343–344 (herbarium of the Nuratau Nature Reserve); upper reaches of Madjrumsay, Fargun, 08.09.2010, *Beshko* (TASH). **I-4-b Aktau Range:** between Chuya and Langar, 19.07.1975, *Pimenov, Kljuykov, Baranova, Vassiljeva* 741 (MW).

317. *Rosularia subspicata* (Freyn & Sint.) Boriss., Fl. URSS 9: 123 (1939). Perennial, hemicryptophyte. Hyrcanian, Mountain Middle Asian. Shrubland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** Koytash Mts., village Kokbulak, 18.07.1937, *Demurina* 600 (TASH); Koytash Mts., southern slopes, upper reaches of Garashasay, 20.07.1937, *Demurina* 706 (TASH); Nuratau Nature Reserve, western crest of Mt. Hayatbashi, 08.09.2010, *Beshko* (www.plantarium.ru).

Sedum L.

318. *Sedum aetnense* Tineo (*Sedum tetramerum* Trautv.), Fl. Sicul. Syn. 2: 826 (1845). Annual, therophyte. Tethyan. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** Nuratau Range, Farish District, 24.04.1941, *Momotov* (TASH); Gatchasay, 01.05.1956, *Zaprometova* 26 (TASH); northern slope of Nuratau Range south-west of town Jizzakh, Tamerlane's Gate, 26.04.1979, *Pimenov, Kljuykov, Boryaev, Baranova, Vassiljeva* 49 (MW); Hayatsay, 30.04.1981, *Mukhina* 81124 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 28.04.2009, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 25.03.2012, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Madjrumsay, 13.04.2016, *Beshko* (www.plantarium.ru); Jizzakh Region, Farish District, Nuratau Nature Reserve, Madjrumsay, 40.57882° N, 66.72047° E, 23.03.2024, *Beshko* (www.inaturalist.org). **I-4-b Aktau Range:** near district center Nurata, 07.04.1964, *Markova* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 09.04.1915, *Kultiasow* 118 (TASH); piedmont plain between Mt. Piyazli and Balykli, 24.04.1941, *Momotov* 36 (TASH).

Haloragaceae R.Br.

Myriophyllum L.

319. *Myriophyllum sibiricum* Kom., Sp. Pl.: 992 (1753). Perennial, hydrophyte. Circumtemperate. Wetlands (inland). montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** northern shore of Fazilman Lake, 40.552165° N, 66.588563° E, 1650 m, 01.07.2024, *Volkova, Dadykin* (IBIW 78494).

320. *Myriophyllum spicatum* L., Sp. Pl.: 992 (1753). Perennial, hydrophyte. Pluriregional. Wetlands (inland), Artificial aquatic. Plain, montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** lake Dzhaulaulkul north-west of mountains Fazilmantau, 06.08.1940, *Pjataeva* (TASH); Fazilman Lake, 08.06.2013, *Beshko* (TASH). **I-4-b Khobduntau Range:** surroundings of Marjonbulak, bank of stream, 02.07.2021, *Beshko* (www.plantarium.ru).

Vitaceae Juss.

Ampelopsis Michx.

321. *Ampelopsis vitifolia* (Boiss.) Planch. (*Ampelopsis aegiophylla* (Bunge) Planch.), A.L.P.P.de Candolle & A.C.P.de Candolle, Monogr. Phan. 5: 454 (1887). Shrub, climber, phanerophyte. Hyrcanian, Mountain Middle Asian. Forest, Rocky areas. Montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** reported in «Conspectus Florae Asiae Mediae», vol. 6, 1981, p. 316.

Vitis L.

322. *Vitis vinifera* L., Sp. Pl.: 202 (1753). Shrub, climber, phanerophyte. Tethyan. Forest, Shrubland, Rocky areas. Montane zone. Rare. Native. UzbRDB 3. **Occurrence records: I-4-a Nuratau Range:** Gurdara, 23.06.1971, *Botschantzev, Kamelin* (LE); Hayatsay, August 1980, *Pjatina, Korshunov 80030* (herbarium of the Nuratau Nature Reserve); Hayatsay, Andebaraut, 02.08.2006, *Beshko 06260–261* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 02.08.2006, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 25.09.2021, *Beshko* (www.plantarium.ru, www.inaturalist.org); Jizzakh Region, Farish District, gorge Gurdara, 40.51599°N, 66.91433°E, 24.04.2025, *Beshko* (www.inaturalist.org).

Zygophyllaceae R.Br.

Tribulus L.

323. *Tribulus terrestris* L., Sp. Pl.: 387 (1753). Annual, therophyte. Pluriregional. Desert, Shrubland, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** foothills, along the valley Bereshek, 18.07.1931, *Zakirov* (TASH); Kyzylcha State Farm, piedmont plain, 02.06.1951, *Zaprometova* (TASH); Hayatsay, field station of nature reserve, 07.06.2006, *Beshko 06191* (herbarium of the Nuratau Nature Reserve); Hayatsay, field station of nature reserve, 25.06.2006, *Beshko 06297* (herbarium of the Nuratau Nature Reserve, TASH). **I-4-b Aktau Range:** piedmont plain near the town Nurata, 08.05.1963, *Markova* (TASH); mountains Nuratau, 12.06.1963, *Khaydarov 1683* (TASH); near the town Nurata, piedmonts of Aktau Range, roadside, 17.05.2024, *Beshko* (www.plantarium.ru, www.inaturalist.org). **I-4-b Karatau Range:** surroundings of town Kanimekh, 18.07.1934, *Tyshchenko* (TASH); surroundings of Kanimekh, 26.08.1934, *Kharchenko* (MW). **I-4-c North-Nuratau insular low mountains:** mountains Balyklitau, south of Pistalitau, 02.09.1934, *Botschantzev* (TASH).

Zygophyllum L.

324. *Zygophyllum atriplicoides* Fisch. & C.A.Mey. (*Halimiphyllum atriplicoides* Boriss.), Index Seminum (LE, Petropolitanus) 1: 41 (1835). Shrub, phanerophyte. Irano-Turanian. Desert, Shrubland, Rocky areas. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-b Karatau Range:** 5–6 km south-west of the well Tansaray, 25.04.1955, *Momotov, Li 42* (TASH); western part of Karatau Range, 22.03.2013, *Tojibaev, Shomurodov, Beshko, Batashov* (TASH); western part of Karatau Range, 22.03.2013, *Beshko* (www.plantarium.ru); Bukhara Region, Gizhduvan District, Nuratau mountains, western part of Karatau Range, about 400 m a.s.l., 21.04.2024, *Beshko* (www.plantarium.ru). **I-4-b Mt. Kokcha:** mountains Kokcha, 17.08.1934, *Tyshchenko* (TASH); mountains Kokcha, 17.08.1934, *Sakhobiddinov, Neyumina 844* (TASH); southern slopes of Mt. Kokcha, 26.06.1936, *Klimovskaya 52* (TASH); remnant mountain Kokcha, 14.04.1938, *Granitov, Evstafiev* (TASH); mountains Kokchatau, 23.04.1955, *Momotov, Li 19* (TASH); north slopes of Kokchatau, 21.04.1964, *Adylov, Shorakhimov 2317* (TASH); eastern part of Kokchatau, 22.03.2013, *Tojibaev, Shomurodov, Beshko, Batashov* (TASH).

325. *Zygophyllum miniatum* Cham., Linnaea 5: 9 (1830). Perennial, hemicryptophyte. Turanian. Desert, Shrubland, Rocky areas. Plain, foothills. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** reported by Zakirov in «Vegetation cover of Nuratau Mountains» (1969, p. 32) and «Botanical geography of low mountains of Kyzylkum and Nuratau Range» (1971, p. 66).

326. *Zygophyllum oxianum* Boriss., Fl. URSS 14: 723 (1949). Perennial, hemicryptophyte. Irano-Turanian. Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** mountains Nuratau, 12.06.1963, *Khaydarov 1703* (TASH); Jizzakh Region, Farish District, piedmont plain of Nuratau Range, surroundings of district

center Yangikishlak, wasteland, 20.06.2012, *Beshko* (TASH). **I-4-b Karatau Range:** surroundings of town Kanimekh, 16.07.1934, *Tyshchenko* 238 (TASH).

Fabaceae Lindl. (Leguminosae Juss.)

Alhagi Hill

327. *Alhagi canescens* (Regel) Shap., Sovetsk. Bot. 1933(3-4): 164 (1933). Perennial, hemicryptophyte. Turanian. Desert, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills. Occasional. Native. **I-4-b Karatau Range:** station Karmana – mountains Karakarga, 22.04.1913, *Korovin* (TASH).

328. *Alhagi kirghisorum* Schrenk ex Fisch. & C.A.Mey., Enum. Pl. Nov. 1: 84 (1841). Perennial, hemicryptophyte. Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Abundant. Native. **Occurrence records: I-4-a Nuratau Range:** 2 km north-east of the village Ugat, 21.07.1931, *Kobranova* 193 (TASH); the village Khasanata, 27.07.1931, *Kobranova* 96, 222 (TASH); Kyzylcha State Farm, clayey plain, 02.06.1951, *Zaprometova* (TASH); Hayatsay, Novi Khushk, 18.08.1980, *Mukhina* 80011 (herbarium of the Nuratau Nature Reserve); Hayatsay, Novi Daroz, 20.06.2006, *Beshko* 06088 (herbarium of the Nuratau Nature Reserve); piedmont plain of Nuratau (Farish Steppe), 31.05.2011, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Madjrumsay, 31.08.2020, *Beshko* (www.plantarium.ru); proluvial plain, fallow land about 5 km north-west of village Tulibay and 3 km north of the well Usarbay, 28.04.2020, 02.07.2020, 24.09.2020, *Beshko*, *Shomurodov*, *Adilov* (plant community description); upper reaches of Osmansay, above the summer camp «Zangori Olov», 02.07.2020, 24.09.2020, *Beshko*, *Shomurodov*, *Adilov* (plant community description). **I-4-b Aktau Range:** mountains Aktau, 28.05.1963, *Khaydarov* (TASH). **I-4-b Khobduntau Range:** 2 km north of the village Gumsay, 26.06.1929, 28.06.1929, *Kudrjashev* (TASH). **I-4-c North-Nuratau insular low mountains:** piedmont plain at the foot of remnant range Uchkulach, 5–6 km east of the village Uzunkuduk, 26.04.2020, 01.07.2020, 23.09.2020, *Beshko*, *Shomurodov*, *Adilov* (plant community description); 5 km north of town Band, between two dumps of the Uchkulach open pit, 26.04.2020, 01.07.2020, 23.09.2020, *Beshko*, *Shomurodov*, *Adilov* (plant community description); piedmonts of remnant mountains Pistalita, surroundings of the village Uchkulach, 23.09.2020, *Beshko*, *Shomurodov*, *Adilov* (plant community description).

329. *Alhagi pseudalhagi* (M.Bieb.) Desv. ex Wangerin, Just's Bot. Jahresber. 40: 504 (1912). Perennial, hemicryptophyte. Irano-Turanian, Saharo-Arabian. Desert, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** the village Poveyli, 07.06.1931, *Kobranova* 97 (TASH); Nurata District, Nuratau Range, 08.04.1951, *Pauzner* (TASH); Kyzylcha State Farm, clayey plain, 15.05.1951, *Zaprometova* (TASH); Nuratau Range, north slopes, Alaysay, 29.05.1951, *Zaprometova* (TASH); Hayatsay, Andebaraut, 02.08.2006, *Beshko* 06262–264 (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** Bakhrin, 14.07.1913, *Kueckenthal* (LE). **I-4-b Karatau Range:** surroundings of town Kanimekh, 5–7 km north of the town, 15.07.1934, *Tyshchenko* 117, 119 (TASH); 3 km north of the well Karymkuduk, along dry riverbeds, 25.10.1956, *Momotov*, *Li* 538 (TASH). **I-4-b Khobduntau Range:** Gallaaral District, experimental station of cereal crops, 18.06.1934, *Toporova* (TASH); [same locality], 30.06.1934, *Toporova* (TASH); [same locality], 24.07.1934, *Toporova* (TASH); [same locality], 02.08.1934, *Toporova* (TASH).

Ammodendron Fisch.

330. *Ammodendron conollyi* Bunge ex Boiss., Fl. Orient. 2: 627 (1872). Tree, shrub, phanerophyte. Irano-Turanian. Desert. Plain. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** south of Kyzylcha State Farm on sabulous plots, 22.05.1974, *Pratov* (TASH). **I-4-b Aktau Range:** piedmont

plain, 5–6 km north-west of the well Khodzha-Akhmeti-Kabir, 21.06.1937, *Demurina* 276, 277, 278 (TASH).

Astragalus L.

331. *Astragalus alabugensis* B.Fedtsch., Trudy Imp. S.-Peterburgsk. Bot. Sada 24: 234 (1905). Perennial, hemicryptophyte. Western Tien Shan, Nuratau Mts. (subendemic). Shrubland, Grassland, Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Ukansay, 18.05.1957, *Zaprometova* (TASH); Nuratau Nature Reserve, Mt. Dushokh, 00.05.1981, *Mukhina* (TASH); Nuratau Nature Reserve, Mt. Dushokh, 17.05.1995, *Beshko* 95043–044 (herbarium of the Nuratau Nature Reserve, TASH). **I-4-b Aktau Range:** valley Yangokly, near the village Langar, 19.05.1941, *Zakirov, Niyazov* (TASH).

332. *Astragalus alopecias* Pall.. Perennial, hemicryptophyte. Irano-Turanian. Desert, Shrubland, Grassland, Artificial terrestrial. Plain, foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Ukansay, 10.05.1951, *Zaprometova* (TASH); piedmont plain near Kyzylcha State Farm, 06.04.1952, *Zaprometova* 396 (TASH); Gatchasay, 31.05.1954, *Zaprometova* 137 (TASH); Akbel, 19.06.1962, *Khaydarov* 189 (TASH); Sanguzarsay, 23.06.2002, *Dieterich* 02070 (TASH); Saurbel Pass, 21.06.2010, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** Nurata District, surroundings of the village Chashma (south of Bakhiltau Mts.), 05.06.1964, *Pryakhin* (TASH); near the village Shamaly, 24.06.1974, *Baranova* 315 (TASH). **I-4-b Khobduntau Range:** plain between mountains Khobduntau and Karachatau, east of the village Khodzha-Kabud, 17.06.1929, *Kudrjashev* (TASH); Samarkand Region, Bulungur District, southern piedmonts of Khobduntau Range, 39.83488° N, 67.27109° E, 15.07.2023, *Beshko* (www.inaturalist.org).

333. *Astragalus ammophilus* Kar. & Kir., Bull. Soc. Imp. Naturalistes Moscou 15: 335 (1842). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** foothills of Nuratau Range, on the latitude of town Jizzakh, 16.05.1928, *Sovetkina* 210 (TASH); Mts. Koytash, 3 km north-east of the village Kuvakiya, piedmonts of Mt. Piyazli, 24.04.1941, *Momotov* 10 (TASH); 1 km south-west of the village Urganchi, 29.04.1955, *Momotov, Li* 66 (TASH); Kichiksay, 08.05.1956, *Zaprometova* (TASH); Sentob, 0.5 km south of the village Yukary-Kurgan, 11.05.1958, *Li, Zakirov* (TASH). **I-4-b Aktau Range:** piedmont plain near district center Nurata, 12.04.1963, *Markova* (TASH). **I-4-b Mt. Kokcha:** mountains Kokchatau, 24.04.1955, *Momotov, Li* 32 (TASH).

334. *Astragalus ammotrophus* Bunge, Mém. Acad. Imp. Sci. Saint Pétersbourg, Sér. 7, 11(16): 112 (1868). Perennial, hemicryptophyte. Turanian. Desert, Rocky areas. Plain, foothills. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Kyzylchali, 28.04.1913, *Korovin* 139 (TASH); Dzhusk – Koshrabad, 03.05.1913, *Korovin* 252 (TASH). **I-4-b Aktau Range:** surroundings of Koshrabad, 03.05.1913, *Korovin* 251 (TASH); *Iris* steppe in surroundings of town Nurata, 09.05.1913, *Korovin* 479 (TASH); piedmont plain near district center Nurata, 12.04.1963, *Markova* (TASH); surroundings of town Nurata, 24.05.1964, *Pryakhin* (TASH).

335. *Astragalus atrovinosus* Popov, Byull. Moskovsk. Obshch. Isp. Prir., Otd. Biol., n.s., 44: 34 (1935). Perennial, hemicryptophyte. Western Tien Shan, Nuratau Mts. (subendemic). Foothills, montane zone. Rare. Native. **Occurrence records: I-4-b Aktau Range:** 12 km north-west of district center Nurata, Chashma, 27.03.1963, *Markova* (TASH); valley Chashma, 03.04.1963, *Khaydarov* 271 (TASH); the spring Bitav, 18.04.1963, *Khaydarov* 821 (TASH).

336. *Astragalus bactrianus* Bunge, A.A.von Bunge, Beitr. Fl. Russl.: 96 (1852). Shrub, phanerophyte. Western Tien Shan, Western Pamir-Alay. Desert, Shrubland, Grassland, Rocky areas. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** foothills of Nuratau, the village Katta Ej, 27.07.1931, *Nurgalieva* 666 (TASH); Nuratau Range, Farish District, 07.05.1941,

Momotov 166 (TASH); Hayatsay, 09.07.1981, *Mukhina 81049* (herbarium of the Nuratau Nature Reserve); watershed between Hayatsay and Andygensay, 12.06.1992, *Beshko 92197–198* (herbarium of the Nuratau Nature Reserve); foothills of Nuratau, surroundings of Bogdon (Farish), 26.04.2006, *Beshko* (www.plantarium.ru); Hayatsay, Andebaraut, 14.07.2006, *Beshko 06277–278* (herbarium of the Nuratau Nature Reserve, www.plantarium.ru); Hayatsay, 27.03.2011, *Davkaev* (www.plantarium.ru); southern slope of Nuratau Range, surroundings of Koytash, 28.06.2019, *Beshko* (www.plantarium.ru); upper reaches of Osmansay above the Zangori Olov summer camp, 02.07.2020, *Beshko, Shomurodov, Adilov, Abduraimov* (plant community description); upper reaches of right tributary of Uchmasay, upstream of the village Jakak, 02.07.2020, *Beshko, Shomurodov, Adilov, Abduraimov* (plant community description); watershed crest of Nuratau Range, about 2 km east of Saurbel Pass, 02.07.2020, *Beshko, Shomurodov, Adilov, Abduraimov* (plant community description); foothills of Nuratau between the villages Egiz-Bulak and Amandara, 03.07.2020, *Beshko, Shomurodov, Adilov, Abduraimov* (plant community description). **I-4-b Aktau Range:** Nurata, the village Pashat, mountains, 04.05.1913, *Korovin 208* (TASH). **I-4-b Khobduntau Range:** reported by Kudrjashev in “Vegetation of the Khobduntau and Karachatau Mountains” (1929, p. 62).

337. *Astragalus bakaliensis* Bunge, Arbeiten Naturf. Vereins Riga 1: 249 (1847). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** Sanguzarsay, 07.05.1992, *Beshko 92302* (herbarium of the Nuratau Nature Reserve). **I-4-c North-Nuratau insular low mountains:** northern piedmonts of Pistalitau, 02.06.2003, *Beshko 03012* (herbarium of the Nuratau Nature Reserve).

338. *Astragalus camptoceras* Bunge, Mém. Acad. Imp. Sci. Saint Pétersbourg, Sér. 7, 11(16): 12 (1868). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** Nuratau Range, Farish District, 07.05.1941, *Momotov 159* (TASH); Hayatsay, 03.05.1981, *Mukhina 81029* (herbarium of the Nuratau Nature Reserve); Hayatsay, 1991, *Maximova 91016* (herbarium of the Nuratau Nature Reserve); Hayatsay, 06.05.1992, *Beshko 92411* (herbarium of the Nuratau Nature Reserve); Tykchasay, Loloi, 25.04.2007, *Beshko 0722* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 05.05.2012, *Beshko* (www.plantarium.ru); foothills near Yangikishlak, 13.05.2012, *Beshko* (TASH); Nuratau Nature Reserve, Hayatsay, 23.04.2025, *Beshko* (TASH).

339. *Astragalus campylorrhynchus* Fisch. & C.A.Mey., Index Seminum (LE, Petropolitanus) 1: 23 (1835). Annual, therophyte. Caucasian, Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** Dzhush – Koshrabad, 03.05.1913, *Korovin 264* (TASH); mountains south-west of town Jizzakh, 04.05.1921, *Kultiasow 12, 150* (TASH); near town Jizzakh, foothills, 06.05.1928, *Sovetkina 24* (TASH); Nuratau Range, Farish District, 26.04.1941, *Momotov 54* (TASH); Nuratau Range, Farish District, 29.04.1941, *Bukasov* (TASH); Nurata District, surroundings of Kyzylcha State Farm, piedmont plain, 06.04.1952, *Zaprometova* (TASH); Gatchasay, 20.05.1957, *Zaprometova* (TASH); 1.5 km west of the village Barnas, 25.04.1958, *Li, Zakirov 46* (TASH); Farish District, 4 km north-east of the village Deristan, 28.04.1958, *Li, Zakirov 220* (TASH); piedmont plain between Yangikishlak and Ukhum, 04.05.1958, *Li, Zakirov 324* (TASH); 1 km east from the pass through Pistalisay, 08.05.1958, *Li, Zakirov 481* (TASH); Sentob, 0.5 km south of the village Yukary-Kurgan, 11.05.1958, *Li, Zakirov 511* (TASH); 1 km south of the village Saukbulak, 14.05.1958, *Li, Zakirov 549* (TASH); 3 km south of village Midzhigan, 15.05.1958, *Li, Zakirov 583* (TASH); 2 km north-west of the village Khukala, 17.05.1958, *Li, Zakirov 619* (TASH); 5 km south-east of the village Kokbulak, 23.05.1958, *Li, Zakirov 744* (TASH); Nuratau Range, Yangi-hayat, 28.05.1969, *Mambetjumaev 99a*

(TASH); Hayatsay gorge, 01.06.1969, *Mambetjumaev 137* (TASH); Hayatsay, 06.05.1992, *Beshko 92412* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, Novi Daroz, 29.04.2009, *Beshko* (herbarium of the Nuratau Nature Reserve, TASH, www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, Andebaraut, 05.05.2012, *Beshko* (TASH); foothills near Yangikishlak, 13.05.2012, *Beshko* (TASH); fallow land between Band and Yangikishlak, 27.04.2020, *Beshko, Shomurodov, Adilov* (plant community description); foothills of Nuratau, between the villages Egiz-Bulak and Amandara, 27.04.2020, *Beshko, Shomurodov, Adilov* (plant community description). **I-4-b Aktau Range:** Nurata, north slopes of Nuratau Mts., 23.04.1913, *Korovin 30* (TASH); surroundings of Nurata, *Iris* steppe, west of the town, 23.04.1913, *Korovin 34* (TASH); mountain slopes between Nurata and well Pashat, 24.04.1913, *Korovin 82* (TASH); Khanbandy – Chuya, shistaceous mountain slopes, 02.05.1913, *Korovin 201* (TASH); Nurata, *Iris* steppe, 09.05.1913, *Korovin 407* (TASH); well Uzunkuduk, 28.05.1963, *Khaydarov 1423* (TASH); surroundings of town Nurata, 23.05.1964, *Pryakhin* (TASH); sources of river Bitau, 27.05.1964, *Zuckerwanik 276, 322* (TASH); south of district center Nurata, gravelly plain, 22.05.1974, *Pratov* (TASH); near the village Dekhibaland, 22.05.1974, *Pratov* (TASH). **I-4-b Karatau Range:** valley Karakarga, 11.05.2014, *Tojibaev, Sun Hang et al. 17324* (TASH, KUN); southern foothills of Karatau, on the road to the Karakarga pass, 15.04.2015, *Beshko* (www.plantarium.ru). **I-4-b Karachatau Range:** 1 km south of the village Borsa-ke, 20.05.1958, *Li, Zakirov 672* (TASH). **I-4-b Khobduntau Range:** reported by Kudrjashev in “Vegetation of the Khobduntau and Karachatau Mountains” (1929, p. 62). **I-4-c North-Nuratau insular low mountains:** mountains Pistaltau, 12.04.1915, *Spiridonov* (MW); foothills of Pistaltau, 03.06.2003, *Beshko 03011* (herbarium of the Nuratau Nature Reserve); pass on the remnant range Pistaltau, 25.04.2020, *Beshko, Shomurodov, Adilov* (plant community description); crest of Egarbelistag, 27.04.2020, *Beshko, Shomurodov, Adilov* (plant community description); northern piedmonts of Pistaltau, 24.04.2020, 13.04.2021, *Beshko, Shomurodov, Adilov* (plant community description); proluvial plain 7 km east of the village Yangiabad, 26.04.2020, 14.04.2021, *Beshko, Shomurodov, Adilov* (plant community description); northern piedmonts of remnant mountains Uchkulach, 5-6 km east of the village Uzunkuduk, 26.04.2020, 14.04.2021, *Beshko, Shomurodov, Adilov* (plant community description); southern outskirts of the town Band, garden, 30.04.2020, 14.04.2021, *Beshko, Shomurodov, Adilov* (plant community description).

340. *Astragalus campylotrichus* Bunge, Izv. Imp. Obshch. Lyubit. Estestv. Moskovsk. Univ. 26(2): 207 (1880). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** fallow land 12 verst south of town Jizzakh, 11.05.1928, *Sovetkina 131* (TASH); Gallaaral District, Karakuduk, 04.06.1934, *Rybakov* (TASH); Mts. Koytash, 3 km north-east of the village Kuvakiya, piedmonts of Mt. Piyazli, 24.04.1941, *Momotov 13* (TASH); Nuratau Range, Farish District, 03.05.1941, *Momotov* (TASH); Ukansay, 02.04.1958, *Zaprometova 289, 302* (TASH); Sharaussay, 05.04.1958, *Zaprometova 310* (TASH); Gatchasay, 14.04.1958, *Zaprometova* (TASH); Gatchasay, 10.04.1958, *Zaprometova 398* (TASH); Gatchasay, 27.04.1958, *Zaprometova 142* (TASH); Farish District, 4 km north-east of the village Deristan, 28.04.1958, *Li, Zakirov 211* (TASH); 1 km east from the pass through Pistalisay, 08.05.1958, *Li, Zakirov 420* (TASH); 5 km north-east of the village Karasay, gentle upland of Nuratau valley, 20.05.1958, *Li, Zakirov 678* (TASH); 1 km south of the village Savryuk, piedmont plain of Koytash Mts., 22.05.1958, *Li, Zakirov 727* (TASH); Ambulatory valley, the pass, 20.05.1960, *Zaprometova, Nikerov 175* (TASH); foothills of Nuratau, surroundings of Bogdon (Farish), 15.05.2009, *Beshko* (www.plantarium.ru); foothills near Yangikishlak, 13.05.2012, *Beshko* (TASH). **I-4-b Aktau Range:** north slopes, 1.5 km east of the village Taz, 02.07.1937, *Makarchuk 501* (TASH); near the village Langar, valley Yangokly, 19–21.05.1941, *Zakirov, Niyazov* (TASH). **I-4-b Karatau Range:** 1 km north of the ruins of the village Sarmysh, 05.05.1955, *Momotov, Li 178* (TASH); Sarmyshsay, 26.04.1965, *Pryakhin* (TASH). **I-4-b Karachatau Range:** foothills, 10

km east of the village Bulakbashi, 06.07.1937, *Demurina* 429 (TASH). **I-4-b Khobduntau Range:** Gallaaral District, experimental station of cereal crops, 14.05.1934, *Toporova* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 07.04.1911, *Dimo, Sprygin, Shulga* 278 (TASH); Pistalitau, 08.04.1915, *Kultiasow* 124, 142 (TASH); piedmonts of Pistalitau, 03.06.2003, *Beshko* 03013 (herbarium of the Nuratau Nature Reserve); Uchkulach Mts., 17.04.2011, Batashov (TASH); pass on the range Pistalitau, 25.04.2020, *Beshko, Shomurodov, Adilov* (plant community description); crest of Egarbelistag, 27.04.2020, *Beshko, Shomurodov, Adilov* (plant community description); northern piedmonts of Pistalitau, 24.04.2020, 13.04.2021, *Beshko, Shomurodov, Adilov* (plant community description); northern piedmonts of remnant mountains Uchkulach, 5-6 km east of the village Uzunkuduk, 26.04.2020, 14.04.2021, *Beshko, Shomurodov, Adilov* (plant community description); plain 7 km east of village Yangiabad, rainfed arable land, 26.04.2020, 14.04.2021, *Beshko, Shomurodov, Adilov* (plant community description).

341. *Astragalus commixtus* Bunge, Arbeiten Naturf. Vereins Riga 1: 246 (1847). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** Dzhusk – Koshrabad, 03.05.1913, *Korovin* 260 (TASH); mountains Nuratau, 21.05.1963, *Khaydarov* 1183 (TASH); south of Kyzylcha State Farm, 22.05.1974, *Pratov* (TASH); Hayatsay, field station of Nuratau Nature Reserve, 23.04.2009, *Beshko* 09007 (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** Nuratau, mountain slopes between Nuratau and well Pashat, 24.04.1913, *Korovin* 82 (TASH); Nuratau, *Iris* formation near the town, 03.05.1913, *Popov* (TASH); Khatyrchi District, 23.05.1928, *Lepeschkin* (TASH); surroundings of ruins Upper Bubak (south of Bakhiltau Mts.), 07.06.1964, *Pryakhin* (TASH). **I-4-b Karatau Range:** gentle slopes of Karatau Mts., 5 km south-east of the village Zyum, 05.05.1955, *Momotov, Li* 105 (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 07.04.1911, *Dimo, Sprygin, Shulga* 277 (TASH); Pistalitau, 08.04.1911, *Dimo, Sprygin, Shulga* 283 (TASH).

342. *Astragalus compositus* Pavlov, Byull. Moskovsk. Obshch. Isp. Prir., Otd. Biol., n.s., 44: 33 (1935). Annual, therophyte. Western Tien Shan, Western Pamir-Alay. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** Nuratau Range, Farish District, 15.05.1941, *Momotov* (TASH); Nuratau Range, mountains, 28.05.1963, *Khaydarov* 1472 (TASH); Hayatsay, Zamezhak, 10.05.1981, *Mukhina* 81026–028 (herbarium of the Nuratau Nature Reserve); village Hayat, 08.06.1992, *Beshko* 92133 (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** mountains Aktau, 00.05.1963, *Khaydarov* 1587 (TASH).

343. *Astragalus dolichocarpus* Popov, Trudy Turkestan. Gosud. Univ. 4: 62 (1922). Subshrub, chamaephyte. Western Tien Shan, Western Pamir-Alay. Shrubland, Grassland, Rocky areas. Montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** between valleys Karchigay and Sentob, near mountains Fazilmantau, 11.05.1956, *Korotkova* 5119 (TASH); mountains Nuratau, plateau, 10.05.1958, *Li, Zakirov* 462 (TASH); upper reaches of Ustuksay, surroundings of Fazilman Lake, 28.05.1964, *Zuckerwanik* 342, 346, 353 (TASH); watershed between Sobsay and Sentobsay, 09.05.2013, *Beshko* (TASH).

344. *Astragalus eximius* Bunge, Izv. Imp. Obshch. Lyubit. Estestv. Moskovsk. Univ. 26(2): 244 (1880). Perennial, hemicryptophyte. Mountain Middle Asian. Montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** plateau Fazilmantau, 15.06.1969, *Mambetjumaev* 203 (TASH); Nuratau Nature Reserve, Karysay, 1400 m a.s.l., 21.08.1980, *Mukhina* (TASH); Hayatsay, Novi Khushk, 24.05.2006, *Beshko* 06251 (herbarium of the Nuratau Nature Reserve, www.plantarium.ru); Nuratau Nature Reserve, Tykchasay, 00.06.2009, *Beshko* (www.plantarium.ru); Karysay, at the foot of rocks Beshbarmak and Parrandoz, 20.06.2009, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Karysay, 27.06.2011, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** mountains Aktau near the village Shamaly, 24.05.1925, *Popov* 364 (TASH); ad declivia argillosa montium Nura-tau, loco Jang-

ogly dicto, 08.06.1926, *Popov* (MW, TASH). **I-4-b Khobduntau Range:** reported by Kudrjashev in “Vegetation of the Khobduntau and Karachatau Mountains” (1929, p. 62).

345. *Astragalus falcigerus* Popov, Byull. Sredne-Aziatsk. Gosud. Univ. 14: 143 (1926). Subshrub, chamaephyte. Tien Shan, Western Pamir-Alay. Shrubland, Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** 1 km south of the village Kokbulak, 22.04.1956, *Zakirov 31* (TASH).

346. *Astragalus farctissimus* Lipsky, Trudy Imp. S.-Peterburgsk. Bot. Sada 26: 150 (1910). Perennial, hemicryptophyte. Western Pamir-Alay. Montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** 1/4 km from the village Khukala, 01.09.1932, *Knorring 149a* (MW); Mts. Koytash, 3 km west of village Tutli, 29.05.1940, *Gomolitsky, Dolgikh 80* (TASH); Nuratau Range, Farish District, 15.05.1941, *Momotov* (TASH); Koblatysay, 27.03.1956, *Zaprometova* (TASH); Alaysay, 25.03.1958, *Zaprometova 108* (TASH); 5 km south-east of the village Yukary Ukhum near the pass Ukhum, south-south-east of village Hayat, 30.04.1958, *Li, Zakirov 252* (TASH); 5 km north-west of the village Khukala, 17.05.1958, *Li, Zakirov 635* (TASH); south of the village Ustakhan 1 km, 25.05.1958, *Li, Zakirov 785* (TASH); upper reaches of Parrandozsay, on the way to the pass Ukhum, 31.05.1964, *Zuckerwanik 432* (TASH); Hayatsay gorge, 30.05.1969, *Mambetjumaev 121* (TASH); Gurdara, 23.06.1971, *Botschantzev, Kamelin* (LE); Koytash, southern slope, 28.06.1971, *Botschantzev, Kamelin* (LE); Andygensay, Kachak, 17.04.1981, *Mukhina 81031* (herbarium of the Nuratau Nature Reserve); Karysay, 28.04.1982, *Mukhina 82009–011* (herbarium of the Nuratau Nature Reserve); Hayatsay, 05.04.2008, *Beshko* (www.plantarium.ru); Hayatsay, 06.05.2012, *Beshko* (TASH). **I-4-b Karachatau Range:** 3–5 km south-east of the village Kursafar, 07.07.1937, *Makarchuk 564* (TASH).

347. *Astragalus ferganensis* (Popov) B. Fedtsch. ex A.S.Korol., Fl. Tadzhiksk. S.S.R. 5: 414 (1937). Perennial, hemicryptophyte. Western Tien Shan, Western Pamir-Alay. Shrubland, Rocky areas. Foothills. Rare. Native. **Occurrence records: I-4-b Karatau Range:** top of the hill east of valley Sarmysh, 26.04.1965, *Pryakhin* (TASH).

348. *Astragalus filicaulis* Fisch. & C.A.Mey., Fl. Ross. 1: 637 (1843). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Urganchi, 01.05.1913, *Korovin 167* (TASH); Dzhus – Koshrabad, 03.05.1913, *Korovin 265* (TASH); fallow land 12 verst south of town Jizzakh, 28.04.1928, *Sovetkina 122* (TASH); Gallaaral District, Karakuduk, 03.05.1934, *Rybakov* (TASH); Mts. Koytash, 3 km north-east of the village Kuvakiya, piedmonts of Mt. Piyazli, 24.04.1941, *Momotov 13* (TASH); Aktashsay, 17.04.1953, *Zaprometova* (TASH); near Kyzylcha State Farm, 01.05.1954, *Zaprometova* (TASH); piedmont plain near Kyzylcha State Farm, 12.05.1954, *Zaprometova 402* (TASH); piedmont plain near Kyzylcha State Farm, 30.05.1956, *Zaprometova* (TASH); Gatchasay, 24.03.1958, *Zaprometova 76* (TASH); Gatchasay, 10.04.1958, *Zaprometova 399* (TASH); Gatchasay, 27.04.1958, *Zaprometova 144* (TASH); Gatchasay, 29.04.1958, *Zaprometova 205* (TASH); 3,5 km NE of the well Saidbek on a sandy-loamy plain, 05.05.1958, *Li, Zakirov 364* (TASH); near the pass through Pistalisay, 07.05.1958, *Li, Zakirov 411, 415* (TASH); 1 km south of the village Saukbulak, southern slope of the western part of Nuratau Mts., 14.05.1958, *Li, Zakirov 558* (TASH); 4 km south of the village Khukala, 19.05.1958, *Li, Zakirov 657* (TASH); 5 km north-east of the village Karasay, gentle upland of Nuratau valley, 20.05.1958, *Li, Zakirov 675* (TASH); 2 km north-west of the village Arvaten, 24.05.1958, *Li, Zakirov 758* (TASH); 4 km east of the village Nurak, 25.05.1958, *Li, Zakirov 822* (TASH); Ambulatory valley, the pass, 20.05.1960, *Zaprometova, Nikerov 173* (TASH); Uruskuduk, 21.04.1962, *Khaydarov 193* (TASH); Nuratau Range, mountains, 28.05.1963, *Khaydarov 1475* (TASH); Karl Marx State Farm, eastern part of Nuratau Range, basin of Chagyshmansay, 24.05.1967, *Pereygina* (TASH); northern slope of Nuratau Range, gorge of Sanzar, 26.04.1979, *Pimenov, Kljuykov, Boryaev, Baranova, Vassiljeva 29* (MW); Sanguzarsay, 07.05.1992, *Beshko 92412*

(herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** Koshrabad – Shurcha, 16.04.1913, *Teplov* (TASH); station Karmana – mountains Karakarga, *Iris*-sagebrush steppe, 22.04.1913, *Korovin 6k* (TASH); Nurata, 29.04.1913, *Korovin 145* (TASH); Koshrabad – Chuya, 06.05.1913, *Korovin 4026* (TASH); Khatyrchi District, near Tos-aryk, 15.05.1928, *Lepeschkin* (TASH); southern slope of Mt. Takhku-tau near the village Ment, 02.05.1941, *Momotov* (TASH); town Nurata, piedmont plain, 17.04.1963, *Markova* (TASH); the village Yangibino, 27.05.1963, *Khaydarov 1385* (TASH); upper reaches of river Bitau, 26.05.1964, *Zuckerwanik 234* (TASH); sources of river Bitau, 27.05.1964, *Zuckerwanik 278* (TASH); Nurata District, surroundings of ruins Upper Bubak (south of Bakhiltai Mts.), 07.06.1964, *Pryakhin* (TASH); near the village Dekhibaland, 22.05.1974, *Pratov* (TASH); south of district center Nurata, 22.05.1974, *Pratov* (TASH); valley Altynsay, downstream of the village Langar, 28.04.1979, *Pimenov, Kljuykov, Boryaev, Baranova, Vassiljeva 146* (MW); Kattasay, 07.05.2020, *Akbarov, Turdiev, Juramurodov 7052020174* (TASH). **I-4-b Karatau Range:** mountains Karakarga near the pass Jizlan, 22.04.1913, *Korovin 15* (TASH); valley Karakarga, 11.05.2014, *Tojibaev, Sun Hang et al. 17313* (TASH, KUN). **I-4-b Khobduntai Range:** Milyutinskaya Station, Gallaaral State Farm, 4 km north-west of the village Alyamli, 00.04.1930, *Tarasevich 32* (TASH); surroundings of Milyutinskaya Station, 00.05.1930, *Tarasevich 41* (TASH); 3 km north of the village Gum, foothills, 14.05.1958, *Li, Zakirov 573* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 08.04.1911, *Dimo, Sprygin, Shulga 283* (TASH); on the way from Pistalitau to the lake Tuzkan, 09.04.1911, *Dimo, Sprygin, Shulga 202* (TASH); Pistalitau, 09.04.1915, *Kultiasow* (TASH); mountains Balyklitau, 25.05.1931, *Kobranova 456* (TASH); piedmont plain between Mt. Piyazli and Balykli, 24.04.1941, *Momotov 37* (TASH); piedmonts of Pistalitau, about 8 km east of the village Yangiabad, 13.05.2012, *Beshko* (TASH); pass on the remnant range Pistalitau, 25.04.2020, *Beshko, Shomurodov, Adilov* (plant community description); crest of Egarbelistag, 27.04.2020, *Beshko, Shomurodov, Adilov* (plant community description); northern piedmonts of Pistalitau, 24.04.2020, 13.04.2021, *Beshko, Shomurodov, Adilov* (plant community description); southern piedmonts of remnant mountains Pistalitau, about 7 km east of the villages Yangiabad and Uchkulach, 26.04.2020, *Beshko, Shomurodov, Adilov* (plant community description); northern piedmonts of remnant mountains Uchkulach, 5–6 km east of the village Uzunkuduk, 26.04.2020, 14.04.2021, *Beshko, Shomurodov, Adilov* (plant community description).

349. *Astragalus flexus* Fisch., Bull. Cl. Phys.-Math. Acad. Imp. Sci. Saint-Petersbourg 3: 307 (1844). Perennial, hemicryptophyte. Irano-Turanian. Desert. Plain. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** south of Kyzylcha State Farm, 22.05.1974, *Pratov* (TASH).

350. *Astragalus globiceps* Bunge, Trudy Imp. S.-Peterburgsk. Bot. Sada 7: 372 (1880). Perennial, hemicryptophyte. Hyrcanian, Mountain Middle Asian. Shrubland, Grassland, Rocky areas, Artificial terrestrial. Foothills, montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** between the village Egiz-Bulak and Amandara, 21.07.1931, *Kobranova* (TASH); Mts. Koytash south-west of the village Jizzakly, 28.05.1940, *Gomolitsky, Dolgikh 57* (TASH); north slopes near Kyzylcha State Farm, 29.05.1951, *Zaprometova* (TASH); Koblatysay, 27.03.1956, *Zaprometova* (TASH); Koblatysay, 09.06.1957, *Zaprometova* (TASH); 2.5 km north-west of the village Kuray, 11.06.1965, *Perehygina* (TASH); Sentobsay, dry stony slopes, 24.06.1971, *Botschantzev, Kamelin* (LE); 2–3 km south-west of the village Kulbasay, foothills, 27.06.1973, *unknown collector* (TASH); Andygensay, Kachak, 15.06.1981, *Mukhina 81032* (herbarium of the Nuratau Nature Reserve); Sobsay, 11.06.2013, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** 10 km south of the village Dekhibaland, 28.05.1936, *Kharchenko 1170* (TASH); near the village Chashma (south of Bakhiltai Mts.), 06.06.1964, *Pryakhin* (TASH); northern slope of Aktau Range, Charkhansay, about 800 m a.s.l., 17.05.2024, *Beshko, Volis et al.* (TASH). **I-4-b Karatau Range:** 2–3 km south of the pass Kucha-siya, 24.06.1937, *Demurina* (TASH). **I-4-b Khobduntai Range:** plain between mountains Khobduntai and Karachatau, 1 km north of the village Gumsay, 12.06.1929, *Kudrjashev* (TASH); plain between mountains Khobduntai

and Karachatau, 13.06.1929, *Kudrjashev* (TASH); 2 km west of Kuropatkino railway station, 14.06.1929, *Kudrjashev* (TASH); plain between mountains Khobduntau and Karachatau, opposite the village Gumsay, 28.06.1929, *Kudrjashev* (TASH).

351. *Astragalus guttatus* Banks & Solander (*A. striatellus* M.Bieb.), Nat. Hist. Aleppo, ed. 2, 2: 260 (1794). Annual, therophyte. Caucasian, Irano-Turanian. Plain, foothills. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** 1 km east of Ukhumsay, piedmont plain of Nuratau Mts., 12.05.1958, *Li, Zakirov 535* (TASH); plain north of Nuratau Mts., east of the village Nurak, 25.05.1958, *Li, Zakirov 825* (TASH); Yangikishlak, 14.04.1995, *Beshko 95017* (herbarium of the Nuratau Nature Reserve). **I-4-c North-Nuratau insular low mountains:** surroundings of the town Band, 14.04.2021, *Beshko* (www.plantarium.ru).

352. *Astragalus inaequalifolius* Basil., Bot. Mater. Gerb. Glavn. Bot. Sada R.S.F.S.R. 3: 117 (1922). Perennial, hemicryptophyte. Western Tien Shan, Western Pamir-Alay. Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-b Aktau Range:** in glareosis, loco Jang-ogly, 08.06.1926, *Popov* (TASH, MW); 8 km south-west of the village Chuya, 29.06.1937, *Demurina 305* (TASH); stony slopes in the valley Kokbulak, 01.07.1937, *Demurina 417* (TASH).

353. *Astragalus iskanderi* Lipsky, Trudy Imp. S.-Peterburgsk. Bot. Sada 26: 187 (1910). Shrub, phanerophyte. Western Pamir-Alay. Shrubland. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, Khotunon, 24.05.2008, *Beshko 08028* (herbarium of the Nuratau Nature Reserve, www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, Khotunon, 15.06.2014, *Beshko* (TASH).

354. *Astragalus juratzkanus* subsp. *juratzkanus* Freyn & Sint. (*Astragalus maverranagri* Popov), Bull. Herb. Boissier, sér. 2, 5: 567 (1905). Perennial, hemicryptophyte. Western Tien Shan, Pamir-Alay. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** piedmont plain north of Nuratau, near Kyzylcha State Farm, 01.04.1958, *Zaprometova 281* (TASH); surroundings of Kyzylcha State Farm, piedmont plain, 06.04.1952, *Zaprometova* (TASH); on the way from the gorge Ustuksay to Fazilman Lake, 11.05.1956, *Korotkova 5107* (TASH); seft side of the river Ustuksay, 17.05.1956, *Korotkova 5190* (TASH); Alaysay, 25.03.1958, *Zaprometova 89* (TASH); Karasay, 12.04.1958, *Zaprometova 421* (TASH); Gatchasay, 14.04.1958, *Zaprometova 442* (TASH); Farish District, 4 km north-east of the village Deristan, 28.04.1958, *Li, Zakirov 207* (TASH); 3 km south of the village Midzhigan, 15.05.1958, *Li, Zakirov 582* (TASH); 2 km north-west of the village Arvaten, 24.05.1958, *Li, Zakirov 756* (TASH); 4 km south-west of Kirov State Farm, plain north of Koytash Mts., 28.05.1958, *Li, Zakirov 837* (TASH); Ambulatory Pass 2 km west of Kyzylcha State Farm, 26.05.1960, *Zaprometova, Nikerov 227* (TASH); south of Kyzylcha State Farm, 22.05.1974, *Pratov* (TASH); lower reaches of Madjrumsay, 21.04.2010, *Beshko 10028* (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** south-west of district center Nurata, 15.04.1952, *Zaprometova* (TASH); valley between Nuratau and Aktau ranges, above the village Yangi-Turmush, 10.05.1956, *Korotkova 5075* (TASH); sources of river Bitau, 27.05.1964, *Zuckerwanik 277* (TASH); southern slope of Aktau Range, valley Altynsay, downstream of the village Langar, 28.04.1979, *Pimenov, Kljuykov, Boryaev, Baranova, Vassiljeva 131, 136* (MW). **I-4-b Karatau Range:** piedmont plain of Karatau, 22.04.1913, *Korovin* (TASH); the road Navoi-Nurata, Karakarga Pass, 24.04.1987, *Pimenov, Vassiljeva 50* (MW); southern foothills of Karatau Range, near the road to Karakarga Pass, 17.04.2012, *Beshko* (www.plantarium.ru).

355. *Astragalus kelleri* Popov, Trudy Turkestansk. Nauchn. Obshch. 1: 36 (1923). Perennial, hemicryptophyte. Western Pamir-Alay. Desert, Shrubland, Grassland, Rocky areas. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** mountains near Tamerlane's Gate gorge, on the left bank of river Sanzar, 03.05.1921, *Kultiasow 47, 81* (TASH); near town Jizzakh, foothills, 06.05.1928, *Sovetkina 20* (TASH); near the village Sarymsak, 09.08.1934, *Botschantzev*

(TASH); Mts. Koytash, west of the village Jizzakly, 28.05.1940, *Gomolitsky, Dolgikh 21* (TASH); piedmonts of Mt. Piyazli, surroundings of the village Kuvakiya, 24.04.1941, *Bukasov* (TASH); Nuratau Range, Farish District, 02.05.1941, *Momotov* (TASH); foothills of Nuratau Range, Farish District, Kirov State Farm, 02.05.1943, *Vernik, Raykova 4* (TASH); Ukansay, 10.05.1951, *Zaprometova* (TASH); surroundings of Kyzylcha State Farm, piedmont plain, 06.04.1952, *Zaprometova* (TASH); near Kyzylcha State Farm, 01.05.1954, *Zaprometova* (TASH); Karasay, 12.04.1955, *Zaprometova* (TASH); Gatchasay, 25.04.1955, *Zaprometova* (TASH); 1 km north-east of the village Kokbulak, 21.04.1956, *Zakirov 16* (TASH); 1 km south of the village Kokbulak, 22.04.1956, *Zakirov 32* (TASH); on the way from the village Yangi-Turmush, Saukbulaksay, 10.05.1956, *Korotkova 5063* (TASH); near Kyzylcha State Farm, 23.03.1958, *Zaprometova* (TASH); Alaysay, 25.03.1958, *Zaprometova 94* (TASH); Koblatysay, 30.03.1958, *Zaprometova 227* (TASH); Karasay, 12.04.1958, *Zaprometova 422* (TASH); 4 km north-east of the village Deristan, 28.04.1958, *Li, Zakirov 205* (TASH); 5 km south-east of the village Yukary Ukhum near Ukhum Pass south-south-east of the village Hayat, 30.04.1958, *Li, Zakirov 253* (TASH); piedmont plain between Yangikishlak and Ukhum, 04.05.1958, *Li, Zakirov 322* (TASH); Akbel, 01.04.1963, *Khaydarov 240* (TASH); near the well Uruskuduk, 21.04.1963, *Khaydarov 191* (TASH); the well Kuchat, 23.04.1963, *Khaydarov 1042* (TASH); 21 km on the road Jizzakh-Farish, 00.04.1981, *Safraliev* (TASH); Hayatsay, 18.04.1981, *Mukhina 81033* (herbarium of the Nuratau Nature Reserve, TASH); Hayatsay, Novi Daroz, 20.04.2008, *Beshko 08024* (herbarium of the Nuratau Nature Reserve); Hayatsay, 00.04.2009, *Beshko* (www.plantarium.ru); foothills of Nuratau, 3 km north of the village Uchma, 04.04.2012, *Beshko* (TASH); Hayatsay, 12.04.2013, *Beshko* (www.plantarium.ru); Mt. Karatash, 05.04.2019, *Beshko, Adilov* (TASH). **I-4-b Aktau Range:** 8 km north-west of district center Nurata, 16.03.1963, *Markova* (TASH); mountains Aktau, 30.03.1963, *Khaydarov 239* (TASH); near the spring Bitav, 18.04.1963, *Khaydarov 719* (TASH). **I-4-b Karatau Range:** 2.5 km south-west of the ruins of the village Sarmysh, 06.05.1955, *Momotov, Li 204* (TASH); foothills east of Sarmysh, 26.04.1965, *Pryakhin* (TASH); surroundings of Karakarga Pass, 15.04.2017, *Beshko* (www.plantarium.ru).

356. *Astragalus knorringianus* Boriss., Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk S.S.S.R. 10: 56 (1947). Perennial, hemicyptophyte. Nuratau, Kuhistan (subendemic). Shrubland, Grassland, Rocky areas. Foothills, montane zone. Occasional. Native. UzbRDB 2. **Occurrence records:** **I-4-a Nuratau Range:** Mt. Mirishkar, 05.05.1913, *Korovin 346* (TASH); mountains near gorge Tamerlane's Gate, left bank of the river Sanzar, 03.05.1921, *Kultiasow 52* (TASH); Mts. Koytash, west of the village Jizzakly, 28.05.1940, *Gomolitsky, Dolgikh 29* (TASH); Nuratau Range, Farish District, 07.05.1941, *Momotov 153* (TASH); Ustusay, 18.05.1954, *Zaprometova 374* (TASH); Mt. Zargar, 2 km north-east of the village Urtasay, 11.05.1957, *Momotov, Li 232* (TASH); 1 km north-east of village Kokbulak, 21.04.1956, *Zakirov 17* (TASH); 1.5 km south-west of Saurbel Pass, 27.04.1958, *Li, Zakirov 105* (TASH); 4 km north-east of the village Deristan, 28.04.1958, *Li, Zakirov* (TASH); 2 km north-west of the village Khukala, 17.05.1958, *Li, Zakirov 623* (TASH); foothills of Nuratau, 00.03.2009, *Beshko* (www.plantarium.ru); foothills of Nuratau near Yangikishlak, 13.05.2012, *Beshko* (TASH); 0.5 km west of Saurbel Pass, 27.05.2012, *Beshko* (TASH); foothills of Nuratau, 05.04.2019, *Beshko* (www.plantarium.ru, www.inaturalist.org). **I-4-b Aktau Range:** surroundings of Nurata, 07.04.1963, *Markova* (TASH); valley Chashma, 03.04.1963, *Khaydarov 271a* (TASH); 3 km north-west of the well Khanbarkhana, 29.05.1963, *Khaydarov* (TASH); sources of river Bitau, 27.05.1964, *Zuckerwanik 287* (TASH). **I-4-b Karatau Range:** foothills east of the valley Sarmysh, 26.04.1965, *Pryakhin* (TASH). **I-4-b Karachatau Range:** 1 km south of the village Borsa-ke, 20.05.1958, *Li, Zakirov 670* (TASH). **I-4-b Khobduntau Range:** foothills near Kuropatkino railway station, 30.03.1913, *Androssov* (TASH).

357. *Astragalus kudrjaschovii* Korol., Fl. Tadzhiksk. S.S.R. 5: 677 (1937). Shrub, phanerophyte. Western Pamir-Alay. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** Kyzylcha State Farm, foothills of Nuratau Range,

15.04.1951, *Burygin* (TASH); Jingildysay, 12.04.1952, *Zaprometova* (TASH); 3 km north of Saurbel Pass, 27.04.1958, *Li, Zakirov 174, 201* (TASH); 5 km south-east of the village Yukary Ukhum near Ukhum Pass, south-south-east of village Hayat, 30.04.1958, *Li, Zakirov 262* (TASH); Alaysay, 3 km east of Kyzylcha State Farm, 15.05.1960, *Zaprometova, Nikerov 87* (TASH). **I-4-b Aktau Range:** mountains Aktau, 29.05.1963, *Khaydarov 1561* (TASH).

358. *Astragalus lasiostylus* Fisch. (*Astragalus plumatus* (Boriss.) Boriss.), A.A.von Bunge, Beitr. Fl. Russl.: 95 (1852). Shrub, phanerophyte. Western Pamir-Alay. Shrubland, Grassland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, watershed, 6 km south-west of the village Kyzyly, 25.07.1937, *Demurina 773* (TASH); near the village Ustuk, 29.07.1937, *Mironov 42* (TASH); Mts. Koytash, upstream of the village Shurkundi, 25.05.1938, *Botschantzev 6* (TASH); 3 km south-west of the village Jizzakly, 28.05.1940, *Gomolitsky, Dolgikh, Arkhireev 60* (TASH); near the village Ulfatan, 24.07.1940, *Gomolitsky, Dolgikh, Arkhireev 213* (TASH); Nakrutsay, 20.05.1964, *Zuckerwanik 407, 413* (TASH); upper reaches of Ustuksay, 29.05.1964, *Zuckerwanik 336, 366* (TASH); valley Uchma, upstream of the village, 01.06.1964, *Zuckerwanik 453* (TASH); Hayatsay gorge, 28.05.1969, *Mambetjumaev 111* (TASH); Nuratau Nature Reserve, Mt. Hayatbashi, 2000 m a.s.l., 12.08.1980, *Mukhina, Pjatina* (TASH); Hayatsay, 1981, *Mukhina 81050* (herbarium of the Nuratau Nature Reserve); Nakrutsay, 19.06.1992, *Beshko 92353–354* (herbarium of the Nuratau Nature Reserve); Hayatsay, Khotunon, 23.05.2006, *Beshko 06036* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, Andebaraut, 14.07.2006, *Beshko 06279* (herbarium of the Nuratau Nature Reserve, TASH); Hayatsay, 06.05.2008, *Beshko* (www.plantarium.ru); upper reaches of Hayatsay, Alichak, 26.03.2016, *Beshko, Usmonov* (TASH); Hayatsay, 30.05.2020, *Beshko* (www.plantarium.ru); Hayatsay, 19.05.2021, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 1325 m a.s.l., 19.05.2021, *Beshko, Madaminov NB2021247* (TASH). **I-4-b Aktau Range:** Ak-Chap, Khanbandy – Chuya, shistaceous mountain slopes, 02.05.1913, *Korovin 202a* (TASH); Dzhus – Koshrabad, 03.05.1913, *Korovin 278a* (TASH); mountains Aktau, near the village Shamaly, 27.05.1925, *Popov 338* (TASH). **I-4-b Karatau Range:** mountains Karatau, 05.09.1931, *Tyshchenko 731* (TASH); southern ridge crest, 24.06.1937, *Demurina 265* (TASH).

359. *Astragalus leptophysus* Vved., Bot. Mater. Gerb. Inst. Bot. Akad. Nauk Uzbeksk. S.S.R. 15: 10 (1959). Perennial, hemicryptophyte. Nuratau, Kuhistan (subendemic). Shrubland, Rocky areas. Montane zone. Rare. Native. UzbRDB 2. **Occurrence records: I-4-a Nuratau Range:** 2 km north-west of Saurbel Pass, 27.04.1958, *Li, Zakirov 179, 180* (TASH); 3 km from the village Khukala, 17.05.1958, *Li, Zakirov 625, 626* (TASH); 7 km from the village Narvan, 21.05.1958, *Li, Zakirov 701* (TASH); Farish District, Saurbel Pass, 14.06.1961, *Khokhryakov, Vlasov* (TASH); upper reaches of Parrandozsay, on the way to Ukhum Pass, 31.05.1964, *Zuckerwanik 434* (TASH); valley Uchma, 01.06.1964, *Zuckerwanik 444* (TASH); Karysay, 28.04.1982, *Mukhina 82012–016* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Tykchasay, Loloi, 18.05.1997, *Beshko 97029* (TASH); Hayatsay, Andebaraut, 15.05.2007, *Beshko 0710* (herbarium of the Nuratau Nature Reserve, www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 06.05.2008, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, upper reaches of Hayatsay, Alichak, 04.05.2012, *Beshko* (TASH); Nuratau Nature Reserve, Hayatsay, 08.05.2014, *Tojibaev, Sun Hang et al. 17187* (TASH, KUN); Nuratau Nature Reserve, Tykchasay, 13.04.2016, *Beshko* (www.plantarium.ru); about 2 km east of Saurbel Pass, 28.04.2020, *Beshko, Adylov* (TASH, www.plantarium.ru); Ukhumsay, 05.05.2020, *Akbarov, Turdiev, Juramurodov 5052020048* (TASH); surroundings of Saurbel Pass, 22.04.2023, *Turdiev* (www.plantarium.ru); Nuratau Nature Reserve, upper reaches of Hayatsay, 27.05.2023, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Karysay, foot of rocky massif Parrandoz, 28.05.2023, *Beshko* (www.plantarium.ru, www.inaturalist.org); upper reaches of Ustuksay, about 1750 m a.s.l., 05.07.2024, *Beshko* (www.plantarium.ru).

360. *Astragalus lipskyi* Popov, Bot. Mater. Gerb. Glavn. Bot. Sada R.S.F.S.R. 4: 158 (1923). Perennial, hemicryptophyte. Western Pamir-Alay. Shrubland, Grassland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Range, Farish District, 06.05.1941, *Momotov 135* (TASH); northern slope of Nuratau Range south-west of town Jizzakh, Tamerlane's Gate, 26.04.1979, *Pimenov, Boryaev, Kljuykov, Baranova, Vassiljeva 40* (MW); southern slope of Mt. Zargar, 27.04.1979, *Pimenov, Boryaev, Kljuykov, Baranova, Vassiljeva 86* (MW); Nuratau Nature Reserve, Hayatsay, 10.04.2008, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 08.05.2014, *Tojibaev, Sun Hang et al. 17185* (TASH, KUN); Ukhumsay, 05.05.2020, *Akbarov, Turdiev, Juramurodov 5052020015* (TASH). **I-4-b Aktau Range:** Kattasay, 07.05.2020, *Akbarov, Turdiev, Juramurodov 7052020145* (TASH).
361. *Astragalus macrocladus* Bunge, Izv. Imp. Obshch. Lyubit. Estestv. Moskovsk. Univ. 26(2): 293 (1880). Subshrub, chamaephyte. Turanian. Desert, Shrubland, Rocky areas. Plain, foothills. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** north slopes of Alaysay, 02.05.1957, *Zaprometova 192* (TASH).
362. *Astragalus macronyx* Bunge, Izv. Imp. Obshch. Lyubit. Estestv. Moskovsk. Univ. 26(2): 236 (1880). Perennial, hemicryptophyte. Western Tien Shan, Pamir-Alay. Desert, Shrubland, Grassland, Rocky areas. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** hills on the bank of river Sanzar near town Jizzakh, 01–04.04.1921, *Korovin 64* (TASH); mountains near Tamerlane's Gate gorge, left bank of the river Sanzar, 03.05.1921, *Kultiasow 80* (TASH); Koshrabad State Farm, 4 km north-north-west of the village Allaberdy, 23.04.1965, *Perelygina* (TASH); Mt. Parrandoz, 29.04.1982, *Mukhina 82017* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Gurdara, 10.04.2013, *Beshko* (TASH, www.plantarium.ru); Nuratau Nature Reserve, Karysay, 12.04.2013, *Beshko* (TASH); southern slope of Nuratau Range, upper reaches of Ustuksay, 31.03.2018, *Beshko* (TASH, www.plantarium.ru). **I-4-b Aktau Range:** mountains Aktau, 06.04.1965, *Khaydarov 294* (TASH).
363. *Astragalus macropetalus* Schrenk, Bull. Cl. Phys.-Math. Acad. Imp. Sci. Saint-Petersbourg 3: 307 (1844). Perennial, hemicryptophyte. Middle Asian. Desert, Shrubland, Grassland. Plain, foothills. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Gallaaral District, Gallaaral State Farm 1.5 km south-west of Milyutinskaya Station, foothills of Koytash, 08.05.1951, *Petrova et al.* (TASH).
364. *Astragalus macropterus* DC. (*Astragalus leptostachys* Pall.), Prodr. 2: 283 (1825). Perennial, hemicryptophyte. Siberian, Irano-Turanian, Himalayan. Shrubland, Grassland, Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Nature Reserve, Tykchasay, Parrandoz, 24.06.2010, *Beshko 10035-036* (TASH, herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, Andebaraut, 1525 m a.s.l., 19.05.2021, *Beshko, Madaminov NB2021243* (TASH); Hayatsay, 09.06.2020, *Ortikov, Pulatov, Turdiev, Juramurodov, Makhmudjanov 9062020620* (TASH).
365. *Astragalus macrotropis* Bunge, Mém. Acad. Imp. Sci. Saint Pétersbourg, Sér. 7, 11(16): 127 (1868). Perennial, hemicryptophyte. Middle Asian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Nature Reserve, Hayatsay, 30.04.1981, *Mukhina* (TASH). **I-4-b Khobduntau Range:** plain between mountains Khobduntau and Karachatau, near the village Gumsay, 10.06.1929, *Kudrjashev* (TASH).
366. *Astragalus marguzaricus* Lipsky, Trudy Imp. S.-Peterburgsk. Bot. Sada 26: 164 (1910). Perennial, hemicryptophyte. Pamir-Alay. Shrubland, Grassland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** 2–3 km north-west of the village Kokbulak, 18.07.1937, *Demurina 604* (TASH); 6–7 km west of the village Guzhum, 23.07.1937, *Demurina 736* (TASH); Mts.

Koytash, upstream of the village Shurkundi, 25.05.1938, *Botschantzev 10*; Mts. Koytash, 28.05.1941, *Lepeschkin* (TASH); Ukan, 16 km from Kyzylcha State Farm, 18.04.1950, *unknown collector* (TASH); Ukansay, 28.05.1951, *Zaprometova* (TASH); Hayatsay, Andebaraut, 09.06.2006, Beshko 06197–198 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, upper reaches of Hayatsay, Alichak, 23.07.2014, *Beshko* (TASH); Mt. Kichik Fazilman, near Fazilman Lake, 06.05.2020, *Akbarov, Turdiev, Juramurodov, 6052020123* (TASH).

367. *Astragalus masenderanus* Bunge (*A. kurdaicus* Saposhn. ex Sumn., *A. skorniakovii* B. Fedtsch.), Mém. Acad. Imp. Sci. Saint Pétersbourg, Sér. 7, 11(16): 114 (1868). Perennial, hemicryptophyte. Irano-Turanian. Shrubland, Grassland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Range, Farish District, 16.05.1941, *Momotov* (TASH); Ustuksay, 11.05.1956, *Korotkova 5081, 5095* (TASH); Kyzylcha State Farm, 3 km east of the village Kokkavga, 1958, *Makarchuk* (TASH); 1.5 km south-west of Saurbel Pass, 27.04.1958, *Li, Zakirov 102* (TASH); mountains Nuratau, plateau, 10.05.1958, *Li, Zakirov 464* (TASH); near Sentob Pass, 10.05.1958, *Li, Zakirov 460* (TASH); Kyzylcha, 27.05.1963, *Khaydarov 1357* (TASH); upper reaches of Ustuksay, surroundings of Fazilman Lake, 28.05.1964, *Zuckerwanik 347* (TASH); Mt. Dushokh, *Beshko 97003* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, northern slope of Mt. Hayatbashi, 02.06.2013, *Beshko* (TASH); upper reaches of Ustuksay, 08.06.2013, *Beshko* (www.plantarium.ru); plateau in surroundings of Fazilman Lake, 31.03.2018, *Beshko* (TASH, www.plantarium.ru); Mt. Kichik Fazilman, near Fazilman Lake, 06.05.2020, *Akbarov, Turdiev, Juramurodov 6052020131* (TASH); plateau in surroundings of Fazilman Lake, about 1700 m a.s.l., 24.04.2024, *Turdiev* (www.plantarium.ru).

368. *Astragalus mucidus* Bunge ex Boiss., Fl. Orient. 2: 279 (1872). Perennial, hemicryptophyte. Western Tien Shan, Western Pamir-Alay. Desert, Shrubland, Grassland, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Urganchi, 01.05.1913, *Korovin* (TASH); left side of the river Ustuksay, 17.05.1956, *Korotkova 5181* (TASH); 4 km east-north-east of village Midzhigan, 15.05.1958, *Li, Zakirov 595* (TASH); Mt. Parrandoz, 29.04.1982, *Mukhina 82018–019* (herbarium of the Nuratau Nature Reserve); Hayatsay, Novi Daroz, 24.04.2006, *Beshko 06353* (herbarium of the Nuratau Nature Reserve); Hayatsay, Novi Daroz, 23.05.2006, *Beshko 06142* (herbarium of the Nuratau Nature Reserve); watershed between Hayatsay and Andygensay, 22.05.2007, *Beshko 07005–006, 073* (herbarium of the Nuratau Nature Reserve); foothills of Nuratau, surroundings of Bogdon (Farish), 16.05.2009, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 20.05.2009, *Beshko* (www.plantarium.ru); Mt. Kichik Fazilman, near Fazilman Lake, 06.05.2020, *Akbarov, Turdiev, Juramurodov 6052020124* (TASH). **I-4-b Aktau Range:** Nurata, Iris formation, west of the town, 23.04.1913, *Korovin* (TASH); the village Pichet, 04.05.1913, *Korovin* (TASH); Koshrabad, 06.05.1913, *Korovin* (TASH); near the town Nurata, 24.05.1964, *Pryakhin* (TASH); near the village Shamaly, 23.06.1974, *Baranov 291* (TASH); Kattasay, 07.05.2020, *Akbarov, Turdiev, Juramurodov 7052020147* (TASH). **I-4-b Karatau Range:** 1 km north of the ruins of the village Sarmysh, 05.05.1955, *Momotov, Li 170* (TASH); top of the hill east of valley Sarmysh, 26.04.1965, *Pryakhin* (TASH). **I-4-b Khobduntau Range:** reported by Kudrjashev in “Vegetation of the Khobduntau and Karachatau Mountains” (1929, p. 62). **I-4-c North-Nuratau insular low mountains:** remnant uplands north of Nuratau Range, 60 km west of Jizzakh, 26.05.1956, *Zaprometova* (TASH).

369. *Astragalus nematodes* Bunge ex Boiss., Fl. Orient. 2: 425 (1872). Perennial, hemicryptophyte. Western Tien Shan, Nuratau (subendemic). Shrubland, Grassland, Rocky areas. Foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** the pass south of Kyzylcha State Farm, 20.05.1955, *Zaprometova* (TASH); north slopes of Alaysay, 11.05.1957, *Zaprometova 343* (TASH).

370. *Astragalus nobilis* Bunge & B. Fedtsch., Trudy Imp. S.-Peterburgsk. Bot. Sada 24: 236 (1905). Perennial, hemicryptophyte. Pamir-Alay. Shrubland, Grassland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, upstream of the village Shurkundi, 25.05.1938, *Botschantzev 11* (TASH); the pass in upper reaches of Mikhinsay, 25.07.1940, *Gomolitsky, Dolgikh, Arkhireev 215* (TASH); Nuratau Range, Farish District, 05.05.1941, *Momotov 109* (TASH); 2 km south-west of Kyzylcha State Farm, 19.05.1955, *Zaprometova* (TASH); left side of the river Ustuksay, 17.05.1956, *Korotkova 5184* (TASH); Mt. Zargar, 2 km north-east of the village Urtasay, 11.05.1957, *Momotov, Li 217* (TASH); 3 km north of Saurbel Pass, 27.04.1958, *Li, Zakirov 198* (TASH); 5 km south-east of the village Yukary Ukhum near Ukhum Pass, south-south-east of the village Hayat, 30.04.1958, *Li, Zakirov 268* (TASH); upper reaches of Ustuksay, surroundings of Fazilman Lake, 28.05.1964, *Zuckerwanik 338* (TASH); upper reaches of Ustuksay, 29.05.1964, *Zuckerwanik 374* (TASH); Hayatsay gorge, 28.05.1969, *Mambetjumaev 70* (TASH); Nuratau Nature Reserve, Hayat, 03.05.1981, *Mukhina* (TASH); Hayatsay, 17.05.1983, *Fominykh 83008–010* (herbarium of the Nuratau Nature Reserve); Hayatsay, Novi Daroz, 28.05.1990, *Beshko, Yakovenko 90055* (herbarium of the Nuratau Nature Reserve); Hayatsay, 20.05.2006, *Beshko 06094–096* (herbarium of the Nuratau Nature Reserve, www.plantarium.ru); Hayatsay, 05.05.2007, *Beshko* (www.plantarium.ru); Hayatsay, 06.05.2012, *Beshko* (TASH); Hayatsay, 15.06.2014, *Beshko* (www.plantarium.ru); Hayatsay, 05.05.2020, *Akbarov, Turdiev, Juramurodov 5052020076* (TASH); Hayatsay, Andebaraut, 1525 m a.s.l., 19.05.2021, *Beshko, Madaminov NB2021205, NB2021240* (TASH, www.plantarium.ru). **I-4-b Aktau Range:** near the village Shamaly, 24.05.1925, *Popov* (TASH). **I-4-b Karachatau Range:** 1 km north-east of the village Ingichka, 07.07.1937, *Demurina 551a* (TASH).

371. *Astragalus nuratensis* Popov, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk S.S.S.R. 7: 111 (1938). Perennial, hemicryptophyte. Aktau (endemic). Shrubland, Rocky areas. Foothills, montane zone. Rare. Native. UzbRDB 1. **Occurrence records: I-4-b Aktau Range:** north of the village Hojakolishan, valley Yangokly, 08.06.1926, *Popov 117, 118* (TASH); valley Petyr, 14.07.1972, *Kamelin 94* (LE); northern slope of Aktau, mountains Bakhiltai, Charkhansay, 10.05.2013, *Beshko* (TASH, www.plantarium.ru); Ambarsay, 11.06.2018, *Beshko* (TASH, www.plantarium.ru); surroundings of Langar, 18.05.2024, *Beshko* (www.plantarium.ru, www.inaturalist.org); Ambarsay, 865 m a.s.l., 18.05.2024, *Beshko* (www.plantarium.ru, www.inaturalist.org).

372. *Astragalus oxyglottis* Stev. ex M.Bieb., Fl. Taur.-Caucas. 2: 196 (1808). Annual, therophyte. Pontic, Irano-Turanian. Desert, Shrubland, Grassland. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, near the village Sarymsak, 09.08.1934, *Botschantzev* (TASH); piedmont plain between Yangikishlak and Ukhum, 04.05.1958, *Li, Zakirov 324* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 09.04.1915, *Kultiasow 73* (TASH); stony crest of Pistalitau, 25.04.2020, *Beshko* (www.plantarium.ru).

373. *Astragalus pterocephalus* Bunge (*A. stipulosus* Boriss), Izv. Imp. Obshch. Lyubit. Estestv. Moskovsk. Univ. 26(2): 252 (1880). Shrub, chamaephyte. Western Tien Shan, Western Pamir-Alay. Shrubland, Grassland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, upper reaches of Karakiyasay, 03.08.1934, *Botschantzev* (TASH); Mts. Koytash, watershed, upper reaches of Narvansay, 19.07.1938, *Demurina 689, 699, 700* (TASH); Karysay, 15.05.1983, *Fominykh 83043* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 01.08.2006, *Beshko 06312* (herbarium of the Nuratau Nature Reserve, www.plantarium.ru).

374. *Astragalus pulcher* Korovin, Trudy Turkestansk. Nauchn. Obshch. 1: 73 (1923). Perennial, hemicryptophyte. Western Tien Shan, Nuratau (subendemic). Shrubland, Grassland, Rocky areas. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** rocky crest

of Mt. Parrandoz, 22.07.1992, *Beshko* 92476–477 (herbarium of the Nuratau Nature Reserve, TASH); Nuratau Nature Reserve, rocky massif Parrandoz, 24.06.2010, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** mountain slopes between Nurata and well Pashat, 24.04.1913, *Korovin* (TASH); Dzhush – Koshrabat, 03.05.1913, *Korovin* 254 (TASH); in loco Jang-ogly dicto, 08.06.1926, *Popov* (TASH, MW); 5 km west of the village Tikalik, 06.07.1932, *Knorring*, *Emme* 34 (LE, MW); 13 km south-south-east of the village Chuya, 13.07.1932, *Knorring*, *Emme* 64 (LE, MW); 4 km north-west of district center Nurata, 13.04.1963, *Markova* (TASH); mountains Aktau, 06.04.1963, *Khaydarov* 303 (TASH); mountains Bakhiltai, 07.04.1963, *Khaydarov* 320 (TASH); the spring Bitav, 18.04.1963, *Khaydarov* (TASH); stony piedmonts of Bakhiltai Mts., 23.05.1964, *Pryakhin* (TASH); upper reaches of river Bitau, 26.05.1964, *Zuckerwanik* 261 (TASH). **I-4-b Karatau Range:** valley Yangier, 14.05.1931, *Tyshchenko* (TASH); valley Bakachinak, 05.05.1955, *Momotov*, *Li* 134 (TASH); between Bozrabat and Dekhibaland, Karakarga Pass, 21.04.1986, *Pimenov*, *Kljuykov*, *Vassiljeva*, *Melibaev* 98 (MW); road Navoi – Nurata, Karakarga Pass, 24.04.1987, *Pimenov*, *Vassiljeva* 51 (MW).

375. *Astragalus rubromarginatus* Czerniak., Bot. Mater. Gerb. Glavn. Bot. Sada R.S.F.S.R. 2: 69 (1921). Perennial, hemicryptophyte. Turanian. Desert. Plain. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** 3.5 km west of 1-st department of Nurata State Farm, sabulous plain north of Nuratau Mts., 06.05.1958, *Li*, *Zakirov* 396 (TASH); south of Kyzylcha State Farm, 22.05.1974, *Pratov* (TASH).

376. *Astragalus saidii* F.O.Khass. & Esankulov, Stapfia 101: 21 (2014). Perennial, hemicryptophyte. Aktau (endemic). Shrubland, Rocky areas. Montane zone. Rare. Native. **I-4-b Aktau Range:** 15 km east of town Nurata, 31.05.2014, *Esankulov* (TASH).

377. *Astragalus schmalhauseni* Bunge, Trudy Imp. S.-Peterburgsk. Bot. Sada 7: 369 (1880). Annual, therophyte. Hyrcanian, Mountain Middle Asian. Shrubland, Grassland, Rocky areas, Artificial terrestrial. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** 3-rd department of Gallaaral State Farm, 13.06.1951, *unknown collector* (TASH); 2 km north-west of the village Khukala, 17.05.1958, *Li*, *Zakirov* 615 (TASH); 4 km east of the village Nurak, 25.05.1958, *Li*, *Zakirov* 824 (TASH); Hayatsay, Novi Khushk, 24.05.2006, *Beshko* 06254 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 19.05.2008, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 06.05.2012, *Beshko* (TASH). **I-4-b Aktau Range:** Dzhush – Koshrabat, 03.05.1913, *Korovin* 275 (TASH); Koshrabat – Chuya, 06.05.1913, *Korovin* 400 (TASH); sources of river Bitau, 27.05.1964, *Zuckerwanik* 304, 326 (TASH). **I-4-b Khobduntai Range:** surroundings of Kuropatkino railway station, 07.06.1929, *Kudrjashev* (TASH). **I-4-c North-Nuratau insular low mountains:** piedmonts of Pistalitai, 03.06.2003, *Beshko* 03010 (herbarium of the Nuratau Nature Reserve).

378. *Astragalus schrenkianus* Fisch. & C.A.Mey., Bull. Cl. Phys.-Math. Acad. Imp. Sci. Saint-Pétersbourg 2: 197 (1844). Perennial, hemicryptophyte. Middle Asian. Shrubland, Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Ustuksay, 02.06.1954, *Burygin* (TASH); left side of the river Ustuksay, 17.05.1956, *Korotkova* 5184 (TASH). **I-4-b Aktau Range:** Dzhush – Koshrabat, 03.05.1913, *Korovin* 254 (TASH); near the village Shamaly, 24.05.1925, *Popov* (TASH). **I-4-b Khobduntai Range:** near the village Khodzha-Kabud, 15.06.1929, *Kudrjashev* (TASH); one of peaks near the village Boz-niyaz, 16.06.1929, *Kudrjashev* (TASH).

379. *Astragalus sesamoides* Boiss., Diagn. Pl. Orient. 9: 59 (1849). Annual, therophyte. Mountain Middle Asian. Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Range, Farish District, 10.05.1941, *Momotov* 191 (TASH); Ambulatory valley, 20.05.1960, *Zaprometova*, *Nikerov* 172 (TASH); Yangi-Hayat, 28.05.1969, *Mambetjumaev* 99 (TASH); Hayatsay, Sangich, 13.05.1995, *Beshko* 95038–039 (herbarium of the Nuratau Nature Reserve); Hayatsay, Andebaraut, 22.05.2006, *Beshko* 06331–332 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay,

20.05.2013, *Beshko* (www.plantarium.ru). **I-4-b Karachatau Range:** 3–5 km south-east of the village Kursafar, 07.07.1937, *Makarchuk 571* (TASH).

380. *Astragalus sewertzowii* Bunge (*A. subbarbellatus* Bunge), Mém. Acad. Imp. Sci. Saint Pétersbourg, Sér. 7, 11(16): 38 (1868). Perennial, hemicryptophyte. Western Tien Shan, Pamir-Alay. Forest, Shrubland, Grassland. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Koytash Mts., 3–4 km south-south-east of the village Amandara, 01.08.1937, *Demurina 816* (TASH); Nuratau Range, Farish District, 05.05.1941, *Momotov 106* (TASH); Nuratau Range, Farish District, 20.05.1941, *Momotov* (TASH); Nuratau, Farish District, 09.05.1956, *Zakirov 166* (TASH); Fazilmantau, 15.06.1969, *Mambetjumaev 190* (TASH); Karysay, 07.06.1981, *Mukhina 81034* (herbarium of the Nuratau Nature Reserve); Andygensay, 08.07.1990, *Beshko, Yakovenko 90056–90057* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, Novi Khushk, 24.05.2006, *Beshko* (herbarium of the Nuratau Nature Reserve, www.plantarium.ru); Hayatsay, Andebaraut, 05.05.2012, *Beshko* (TASH). **I-4-b Aktau Range:** Mt. Takhku-tau, 07.05.1913, *Korovin 450* (TASH); Yangokly, 19.06.1941, *Zakirov, Niyazov* (TASH).

381. *Astragalus sieversianus* Pall., Sp. Astragal.: 15 (1800). Perennial, hemicryptophyte. Irano-Turanian. Forest, Shrubland, Grassland, Rocky areas. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, Bereshek, 28.05.1940, *Gomolitsky, Dolgikh* (TASH); Kyzylcha State Farm, 20.04.1951, *Novikova* (TASH); valley 2.5 km south-east of Kyzylcha State Farm, 27.04.1954, *Sedov* (TASH); on the way from gorge Ustusay to Fazilman Lake, 11.05.1956, *Korotkova 5101* (TASH); Koblatysay, 09.06.1957, *Zaprometova* (TASH); nameless valley near Kyzylcha State Farm, 31.03.1958, *Zaprometova 259* (TASH); Fazilmantau, 15.06.1969, *Mambetjumaev 201* (TASH); Nuratau Nature Reserve, Hayatsay, 05.05.2006, *Beshko* (www.plantarium.ru); Hayatsay, Novi Khushk, 24.05.2006, *Beshko 06250* (herbarium of the Nuratau Nature Reserve, www.plantarium.ru); surroundings of town Koytash, 22.05.2019, *Yusupov* (www.plantarium.ru); Jizzakh Region, Farish District, Nuratau Nature Reserve, Hayatsay, 40.519155° N 66.752239° E, 22.04.2023, *Beshko* (www.plantarium.ru, www.inaturalist.org); Nuratau Nature Reserve, Mt. Parrandoz, 40.481247° N 66.807796° E, 28.05.2023, *Beshko* (www.inaturalist.org); Jizzakh Region, Farish District, 5 km south-west of town Yangikishlak, 01.06.2023, *Fateryga* (www.plantarium.ru). **I-4-b Aktau Range:** Dzhush – Koshrabad, 03.05.1913, *Korovin 223, 225, 230, 231* (TASH); northern slope of Mt. Takhku-tau, 07.05.1913, *Korovin 460* (TASH); 10 km south of the village Dekhibaland, 23.05.1936, *Kharchenko 1174, 1191, 1195* (TASH); Aktau, 1964, *Khaydarov 21* (TASH); southern slope of Aktau Range, 4 km downstream of the village Langar, 28.04.1979, *Pimenov, Kljuykov, Boryaev, Baranova, Vassiljeva 142* (MW).

382. *Astragalus sogdianus* Bunge, Izv. Imp. Obshch. Lyubit. Estestv. Moskovsk. Univ. 26(2): 268 (1880). Perennial, hemicryptophyte. Western Tien Shan, Pamir-Alay. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** mountains near Tamerlane's Gate gorge, left bank of river Sanzar, 03.05.1921, *Kultiasow 49, 69, 97, 200* (TASH); Gallaaral District, Gallaaral State Farm, 3rd farm, Karakuduk, 06.06.1934, *Rybakov* (TASH); surroundings of the well Kozybay, 05.05.1939, *Mikhaylova, Popova* (TASH); Koblatysay, 04.04.1952, *Zaprometova* (TASH); Nurata District, piedmont plain, 06.04.1952, *Novikova* (TASH); Jingildysay, 12.04.1952, *Zaprometova* (TASH); piedmont plain near Kyzylcha State Farm, 06.04.1954, *Zaprometova 395* (TASH); near Kyzylcha State Farm, 01.05.1954, *Zaprometova* (TASH); Gatchasay, 31.05.1954, *Zaprometova 129* (TASH); Alaysay, 25.03.1958, *Zaprometova* (TASH); Sharaussay, 05.04.1958, *Zaprometova 315* (TASH); 2 km west of village Shurcha, 25.04.1958, *Li, Zakirov 68* (TASH); Farish District, 4 km north-east of the village Deristan, 28.04.1958, *Li, Zakirov 208, 212* (TASH); 5 km south-east of the village Yukary Ukhum, near Ukhum Pass, south-south-east of the village Hayat, 30.04.1958, *Li, Zakirov 267* (TASH); piedmont plain

between Yangikishlak and Ukhum, 04.05.1958, *Li, Zakirov 329* (TASH); Sentob, 0.5 km south of the village Yukary-Kurgan, 11.05.1958, *Li, Zakirov 509* (TASH); 2 km north-west of the village Khukala, 17.05.1958, *Li, Zakirov 614* (TASH); upper reaches of Ustuksay, surroundings of Fazilman Lake, 28.05.1964, *Zuckerwanik 345* (TASH); Sanguzarsay, 07.05.1992, *Beshko 92516* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 01.05.2009, *Beshko* (www.plantarium.ru); Hayatsay, 14.05.2009, *Beshko* (www.plantarium.ru); northern foothills of Nuratau, 19.04.2012, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 20.05.2013, *Beshko* (TASH). **I-4-b Aktau Range:** mountain slopes between the town Nurata and well Pashat, 24.04.1913, *Korovin 82* (TASH); Ak-Chap, Khanbandy – Chuya, 02.05.1913, *Korovin 199* (TASH); valley Chashma, 03.04.1963, *Khaydarov 270* (TASH); mountains Aktau, 24.05.1963, *Khaydarov 1572* (TASH); upper reaches of river Bitau, 26.05.1964, *Zuckerwanik 237* (TASH). **I-4-b Karatau Range:** gentle slopes of Karatau 5 km south-east of the village Zyum, 05.05.1955, *Momotov, Li 104* (TASH); valley Bakachinak, 05.05.1955, *Momotov, Li 130* (TASH); 1 km north of the ruins of the village Sarmysh, 05.05.1955, *Momotov, Li 161* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 07.04.1911, *Dimo, Sprygin, Shulga 281* (TASH); on the way from Pistalitau to the lake Tuzkan, 09.04.1911, *Dimo, Sprygin, Shulga 203* (TASH); Pistalitau, 09.04.1915, *Kultiasow 127* (TASH); the crest of Egarbelistag, 1.5 km west of the Carbonat JSC quarry, 27.04.2020, *Beshko, Shomurodov, Adilov* (plant community description).

383. *Astragalus stalinskyi* Širj., Feddes Repert. Spec. Nov. Regni Veg. 53: 75 (1944). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Range, Farish District, 15.05.1941, *Momotov* (TASH); Sanzar river valley surroundings of Tamerlane's Gate, 25.04.1957, *Adylov 51* (TASH); Hayatsay, Novi Daroz, 29.04.2008, *Beshko 08019* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 08.05.2014, *Tojibaev, Sun Hang et al. 17169* (TASH, KUN). **I-4-b Aktau Range:** mountain slopes between the town Nurata and well Pashat, 24.04.1913, *Korovin 82* (TASH); upper reaches of river Bitau, 26.05.1964, *Zuckerwanik 233* (TASH); sources of river Bitau, 27.05.1964, *Zuckerwanik 279* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 09.04.1915, *Kultiasow* (TASH).

384. *Astragalus stenanthus* Bunge, Izv. Imp. Obshch. Lyubit. Estestv. Moskovsk. Univ. 26(2): 274 (1880). Perennial, hemicryptophyte. Western Tien Shan, Pamir-Alay. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** mountains near Tamerlane's Gate gorge, left bank of river Sanzar, 03.05.1921, *Kultiasow 46, 48, 50* (TASH); 3 km south-east of the village Yukary Ukhum, on the way to Ukhum Pass, 29.04.1958, *Li, Zakirov 233* (TASH).

385. *Astragalus stenocystis* Bunge, Izv. Imp. Obshch. Lyubit. Estestv. Moskovsk. Univ. 26(2): 301 (1880). Perennial, hemicryptophyte. Mountain Middle Asian. Desert, Shrubland, Grassland, Rocky areas. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Nurata, Kyzylchali, 28.04.1913, *Korovin 137* (TASH); bank of river Sanzar, 14.05.1928, *Sovetkina 192* (TASH); Mts. Koytash, 3 km west of village Tutli, 29.05.1940, *Gomolitsky, Dolgikh 81* (TASH); hills north of the village Karatash, 26.04.1941, *Bukasov* (TASH); Nuratau Range, Farish District, 08.05.1941, *Momotov* (TASH); on the way from the gorge Ustuk to Fazilman Lake, 11.05.1956, *Korotkova 5104* (TASH); 3 km south-east of the village Yukary Ukhum, on the way to Ukhum Pass, 29.04.1958, *Li, Zakirov 236* (TASH); near the village Jadir, 16.04.1963, *Khaydarov 1300* (TASH); near Kyzylcha State Farm, plain, 27.05.1963, *Khaydarov 1356* (TASH); 2.5 km north-east of the spring Koblaty, 28.05.1963, *Makarchuk 50* (TASH); Koshrabad State Farm, 1.5 km east of the village Pastki-Shavva, 17.05.1965, *Perelygina* (TASH); upper reaches of Ustuksay, 28.05.2003, *Beshko 03054* (TASH, herbarium of the Nuratau Nature Reserve); Talabaysay (left tributary of Kulbasay), 8 km

south-west of district center Yangikishlak, 27.05.2012, *Beshko* (TASH); Mt. Kichik Fazilman, near Fazilman Lake, 06.05.2020, *Akbarov, Turdiev, Juramurodov 6052020130* (TASH); middle reaches of Ustuksay, about 1250 m a.s.l., 06.07.2024, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** Khanbandy – Chuya, shistaceous mountain slopes, 02.05.1913, *Korovin 201* (TASH); near the spring Bitav, 16.04.1963, *Khaydarov 563* (TASH); Kattasay, 07.05.2020, *Akbarov, Turdiev, Juramurodov 7052020169* (TASH). **I-4-b Khobduntau Range:** Milyutinskaya Station, Gallaaral State Farm, 4 km north-west of the village Alyamli, 00.04.1930, *Tarasevich 35* (TASH). **I-4-c North-Nuratau insular low mountains:** the crest of Egarbelistag, 1.5 km west of the Carbonat JSC quarry, 27.04.2020, *Beshko, Shomurodov, Adilov* (plant community description).

386. *Astragalus subbijugus* Ledeb., Fl. Ross. 1: 627 (1843). Perennial, hemicryptophyte. Kyzylkum Relic Mountains, Aktau (subendemic). Desert, Shrubland, Rocky areas. Foothills, montane zone. Rare. Native. **Occurrence records:** **I-4-b Aktau Range:** near the village Chashma, 03.04.1963, *Khaydarov 268* (TASH); upper reaches of river Bitau, 27.05.1963, *Zuckerwanik 302* (TASH). **I-4-b Karatau Range:** valley Bakachinak, 05.05.1955, *Momotov, Li 120* (TASH); 1 km north of the ruins of the village Sarmysh, 05.05.1955, *Momotov, Li 169* (TASH); 2.5 km south-west of the ruins of the village Sarmysh, 06.05.1955, *Momotov, Li 203* (TASH); valley Karakarga, 11.05.2014, *Tojibaev, Sun Hang et al. 17327* (TASH, KUN). **I-4-b Mt. Kokcha:** southern slopes of Mt. Kokcha, 26.04.1936, *Klimovskaya 62, 64* (TASH); Kokchatau, 14.04.1964, *Adylov, Shorakhimov 2300* (TASH); Kokchatau, 17.05.1964, *Adylov, Shorakhimov 2381* (TASH); Kokchatau, 24.04.1965, *Adylov, Shorakhimov 2420* (TASH).

387. *Astragalus substipitatus* Gontsch., Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk S.S.S.R. 9: 122 (1946). Perennial, hemicryptophyte. Western Tien Shan, Pamir-Alay. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** Ukansay, 10.05.1951, *Zaprometova* (TASH); surroundings of Kyzylcha State Farm, piedmont plain, 11.04.1952, *Zaprometova* (TASH); Aktashsay, 17.04.1953, *Zaprometova* (TASH); valley 2.5 km north of Kyzylcha State Farm, 21.04.1954, *Zaprometova* (TASH); Sharaussay, 28.05.1956, *Zaprometova* (TASH); nameless valley near Kyzylcha State Farm, 30.03.1958, *Zaprometova 243* (TASH); 1 km west of Kyzylcha State Farm, 11.04.1958, *Galkina* (TASH); 1 km east from the pass through Pistalisay, 08.05.1958, *Li, Zakirov 425* (TASH); Sharaussay, 26.05.1958, *Zaprometova 125* (TASH); Nuratau Nature Reserve, Hayatsay, Novi Daroz, 13.04.2013, *Beshko* (TASH, www.plantarium.ru); Hayatsay, 05.05.2020, *Akbarov, Turdiev, Juramurodov 5052020028* (TASH).

388. *Astragalus taschkendicus* Bunge, Izv. Imp. Obshch. Lyubit. Estestv. Moskovsk. Univ. 26(2): 280 (1880). Perennial, hemicryptophyte. Western Tien Shan, Pamir-Alay. Shrubland, Grassland. Montane zone. Rare. Native. **Occurrence records:** **I-4-b Aktau Range:** Bakhrin, 03.04.1912, *Neustruev* (LE).

389. *Astragalus tibetanus* Benth. ex Bunge, Mém. Acad. Imp. Sci. Saint Pétersbourg, Sér. 7, 11(16): 52 (1868). Perennial, hemicryptophyte. Irano-Turanian, Himalayan. Shrubland, Grassland, Rocky areas. Montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** Mt. Dushokh, 21.04.1982, *Mukhina 82021* (herbarium of the Nuratau Nature Reserve); plateau near the lake Sentobkul (Fazilman), 14.05.1992, *Beshko 93065* (herbarium of the Nuratau Nature Reserve); Hayatsay, 05.05.2020, *Akbarov, Turdiev, Juramurodov 5052020059* (TASH); Mt. Kichik Fazilman, near Fazilman Lake, 06.05.2020, *Akbarov, Turdiev, Juramurodov 6052020096* (TASH).

390. *Astragalus transoxanus* F.G.L.Fisch., Beitr. Fl. Russl.: 95 (1852). Shrub, chamaephyte. Nuratau, Kuhistan (subendemic). Shrubland, Grassland, Rocky areas. Foothills, montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** Nuratau mountains, north slopes, 21.08.1931, *Kobranova 233* (TASH); Mts. Koytash, upper reaches of Karakiyasay, 02.08.1934, *Botschantzev* (TASH); Mts. Koytash, surroundings of village Kokbulak, 05.08.1934, *Botschantzev* (TASH); upper reaches of Sentobsay, 27.07.1937, *Demurina 793* (TASH). **I-4-b Aktau Range:** 8 km south-west of the village

Chuya, 29.06.1937, *Demurina* 314 (TASH); near the village Karakisa, 30.07.1937, *Mironov* 56 (TASH); Gazgan, 16.06.1963, *Khaydarov* 1747 (TASH). **I-4-b Khobduntau Range:** Khobduntau Range, watershed, 09.07.1937, *Demurina* 474 (TASH). **I-4-b Karachatau Range:** surroundings of Kuropatkino railway station, near the village Sarybulak, 09.06.1929, *Kudrjashev* (MW); 1 km from the village Sarybulak, 09.06.1929, *Kudrjashev* (TASH); southern slope, 1 km north-east of the village Ingichka, 07.07.1937, *Demurina* 555 (TASH).

391. *Astragalus tribuloides* Delile, Descr. Egypte, Hist. Nat. 2(Mém.): 70 (1813). Annual, therophyte. Tethyan, Saharo-Arabian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills. Rare. Native. **Occurrence records:** **I-4-b Karatau Range:** southern foothills of Karatau Range, near the road to Karakarga Pass, 15.04.2017, *Beshko* (www.plantarium.ru). **I-4-b Khobduntau Range:** reported by Kudrjashev in “Vegetation of the Khobduntau and Karachatau Mountains” (1929, p. 62).

392. *Astragalus turbinatus* Bunge, Arbeiten Naturf. Vereins Riga 1: 251 (1847). Perennial, hemicryptophyte. Irano-Turanian. Desert, Shrubland, Grassland. Plain, foothills. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** piedmont plain 15 km west of Jizzakh Station, 14.06.1956, *Zaprometova* 275 (TASH); Gatchasay, 05.05.1957, *Zaprometova* (TASH); Koblatysay, 09.06.1957, *Zaprometova* (TASH); south of Kyzylcha State Farm, 19–22.05.1974, *Pratov* (TASH). **I-4-b Aktau Range:** between well Pashat and Kara-Yuzgan, 25.04.1913, *Korovin* 1183a (TASH).

393. *Astragalus turczaninowii* Kar. & Kir., Bull. Soc. Imp. Naturalistes Moscou 15: 342 (1842). Perennial, hemicryptophyte. Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** Urganchi, *Iris* formation, 02.05.1913, *Korovin* 168 (TASH); Koblatysay, 26.04.1958, *Zaprometova* (TASH); valley Kyzylcha, 28.05.1963, *Khaydarov* 1361 (TASH); south of Kyzylcha State Farm, 19–22.05.1974, *Pratov* (TASH). **I-4-b Aktau Range:** piedmont plain near district center Nurata, 17.04.1963, *Markova* (TASH); near district center Nurata, plain, 21.05.1963, *Khaydarov* 1190 (TASH); 10 km south-east of town Nurata, northern piedmonts of Bakhiltai Mts., 23.05.1964, *Pryakhin* (TASH); south of district center Nurata, 22.04.1974, *Pratov* (TASH). **I-4-b Karatau Range:** station Karmana – mountains Karakarga, 22.04.1913, *Korovin* (TASH); town Nurata, north slopes of Nuratau Mts., 23.04.1913, *Korovin* (TASH); southern foothills of Karatau Range, near the road to Karakarga Pass, 15.04.2017, *Beshko* (www.plantarium.ru).

394. *Astragalus turkestanus* Bunge ex Boiss., Fl. Orient. 2: 278 (1872). Perennial, hemicryptophyte. Mountain Middle Asian. Shrubland, Grassland. Foothills, montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** left side of the river Ustuksay, 11.05.1956, *Korotkova* 5080 (TASH); 2 km north-west of the village Khukala, 17.05.1958, *Li, Zakirov* (TASH); surroundings of Yangikishlak, upper reaches of river Garasha, 18.05.1961, *Vlasov* 1623 (MW); basin of Kattasay, 26.05.1967, *Perelygina* (TASH); Hayatsay, 20.05.1983, *Fominykh* 83011 (herbarium of the Nuratau Nature Reserve); Hayatsay, 07.05.2006, *Beshko* (www.plantarium.ru); Hayatsay, Novi Daroz, 23.05.2006, *Beshko* 06143–144 (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** near the village Shamaly, 24.05.1925, *Popov* 359 (TASH); 6–8 km downstream of the village Langar, 09.06.1983, *Rusanovich* (MW).

395. *Astragalus urgutinus* Lipsky, Trudy Imp. S.-Peterburgsk. Bot. Sada 26: 179 (1910). Shrub, chamaephyte. Western Pamir-Alay. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** mountains near Tamerlane's Gate gorge, left bank of river Sanzar, 03.05.1921, *Kultiasow* (TASH); 1.5 km north of the village Guzhum, 04.07.1937, *Makarchuk* 513 (TASH); upper reaches of the river 5 km north-east of the village Narvan, 19.07.1937, *Demurina* 614 (TASH); upper reaches of Garashasay, 20.07.1937, *Demurina* 638 (TASH); Mt. Piyazli, 24.04.1941, *Bukasov* (TASH); Nuratau Range, Farish District, 05.05.1941, *Momotov* 115

(TASH); north slopes near Kyzylcha State Farm, 29.05.1951, *Zaprometova* (TASH); Alaysay, 19.05.1955, *Zaprometova* (TASH); Sharaussay, 28.05.1956, *Zaprometova* (TASH); valley 1 km west of Kyzylcha State Farm, 29.05.1957, *Zaprometova* (TASH); Sharaussay, 05.04.1958, *Zaprometova* 316 (TASH); valley near Kyzylcha State Farm, 14.04.1958, *Galkina* (TASH); 7 km north-east of the village Narvan, 21.05.1958, *Li, Zakirov* 698 (TASH); upper reaches of Ustuksay, 29.05.1964, *Zuckerwanik* 371 (TASH); upper reaches of Parrandozsay, on the way to Ukhum Pass, 31.05.1964, *Zuckerwanik* 436 (TASH); Hayatsay gorge, 09.06.1969, *Mambetjumaev* 163 (TASH); Sentob, 24.06.1971, *Botschantzev, Kamelin* (LE); Bolosay, 10.06.1996, *Beshko* 96077 (herbarium of the Nuratau Nature Reserve); Hayatsay, Andebaraut, 31.05.1996, *Beshko* 96120 (herbarium of the Nuratau Nature Reserve); Hayatsay, 20.06.2006, *Beshko* 06097–098 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Bolosay, 01.07.2008, *Beshko* (www.plantarium.ru); Hayatsay, Andebaraut, 21.05.2011, *Beshko* (TASH); Nuratau Nature Reserve, Hayatsay, 08.05.2014, *Tojibaev, Sun Hang et al.* 17184 (TASH, KUN). **I-4-b Aktau Range:** near the village Shamaly, 24.05.1923, *Popov* 336 (TASH); mountains Aktau near the village Andak, 01.05.1925, *Popov* 41 (TASH); northern foothills of Bakhiltai Mts., 23.05.1964, *Pryakhin* (TASH); upper reaches of river Bitau, 26.05.1964, *Zuckerwanik* 269 (TASH); valley Ingichka, 26.06.1971, *Botschantzev, Kamelin* (LE). **I-4-b Karatau Range:** between Beshrabot and Dekhibaland, Karakarga Pass, 21.04.1986, *Pimenov, Kljuykov, Vassiljeva, Melibaev* 104 (MW). **I-4-b Karachatau Range:** 3–5 km south-east of the village Kursafar, 07.07.1937, *Makarchuk* 566 (TASH).

396. *Astragalus variegatus* Franch., Ann. Sci. Nat., Bot., sér. 6, 15: 259 (1883). Shrub, chamaephyte. Western Tien Shan, Pamir-Alay. Shrubland, Grassland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** Mts. Koytash, 3 km west of village Tutli, 29.05.1940, *Gomolitsky, Dolgikh* 73 (TASH); Nuratau Range, Farish District, 07.05.1941, *Momotov* 182 (TASH). **I-4-b Aktau Range:** east of the spring Bitau, 29.07.1982, *Shermatov, Kazakbaev, Levichev, Tagaev* 86 (TASH). **I-4-b Karatau Range:** valley Karakarga, 11.05.2014, *Tojibaev, Sun Hang et al.* 17328 (TASH, KUN).

397. *Astragalus vicarius* Lipsky, Trudy Imp. S.-Peterburgsk. Bot. Sada 18: 25 (1901). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Foothills, montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** mountains south-west of town Jizzakh, 04.05.1921, *Kultiasow* 116 (TASH); Nuratau Range, Farish District, 24.04.1941, *Momotov* 23 (TASH); Mts. Koytash, 3 km north-east of the village Kuvakiya, piedmonts of Mt. Piyazli, 24.04.1941, *Momotov* 10 (TASH); Mts. Koytash, on the way to the village Bogdon, 27.04.1941, *Lepeschkin* (TASH); Gatchasay, 09.04.1958, *Zaprometova* 389 (TASH); 1 km east of Ukhumsay, piedmont plain of Nuratau Mts., 12.05.1958, *Li, Zakirov* 531 (TASH); 2 km south of the village Ustakhan, 25.05.1958, *Li, Zakirov* 817 (TASH). **I-4-c North-Nuratau insular low mountains:** Pistaltau, 08.04.1911, *Dimo, Sprygin, Shulga* (TASH).

398. *Astragalus villosissimus* Bunge, Mém. Acad. Imp. Sci. Saint Pétersbourg, Sér. 7, 11(16): 129 (1868). Subshrub, chamaephyte. Turanian. Desert. Plain, foothills. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** Nurata, surroundings of Ak-Chap, 01.05.1913, *Korovin* 176 (TASH); Mumincha, 18.06.1962, *Khaydarov* 182 (TASH); well Kushar, 14.05.1963, *Khaydarov* 1225 (TASH); south of Kyzylcha State Farm, 22.05.1974, *Pratov* (TASH). **I-4-b Aktau Range:** Nurata, *Iris* steppe, 09.05.1913, *Korovin* 479 (TASH); Arasay, 10.04.1936, *Kharchenko* 1284, 1294 (TASH); piedmont valley, 5–6 km north-west of the village Khodzha-Akhmeti-Kabir, 21.06.1937, *Demurina* 271, 272 (TASH); near the village Akkula, 03.08.1937, *Mironov* 111 (TASH); Nurata valley, 3 km south-west of the well Ernazar, 13.05.1957, *Momotov* 383 (TASH); piedmont plain near the town Nurata, 13.04.1963, *Markova* (TASH). **I-4-b Karatau Range:** south of the pass Jizlan, 27.05.1964, *Pryakhin* (TASH); western part of Karatau Range, about 370 m a.s.l., 21.04.2024, *Beshko* (www.plantarium.ru).

399. *Astragalus xanthomeloides* Korovin & Popov, Byull. Sredne-Aziatsk. Gosud. Univ. 7(Suppl.): 15 (1924). Perennial, hemicryptophyte. Western Tien Shan, Pamir-Alay. Shrubland, Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-b Aktau Range:** Kattasay, 07.05.2020, Akbarov, Turdiev, Juramurodov 7052020153 (TASH). **I-4-b Karatau Range:** 1 km north of the ruins of the village Sarmysh, 05.05.1955, Momotov, Li 155 (TASH).

Caragana Lam.

400. *Caragana halodendron* (Pall.) Dum.Cours. (*Halimodendron halodendron* (Pall.) Voss.), Bot. Cult. 3: 513 (1802). Shrub, phanerophyte. Caucasian, Irano-Turanian. Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** valley of Mikhinsay, south of the village Yangikishlak, 22.07.1940, Gomolitsky, Dolgikh, Arkhireev 191 (TASH); mountains Nuratau, 04.05.1963, Khaydarov 58 (TASH); mountains Nuratau, 12.06.1963, Khaydarov 1677 (TASH); near the village Simbulak, 23.06.2002, Beshko 02102 (herbarium of the Nuratau Nature Reserve); Kulbasay, on the way to Saurbel Pass, upstream of village Kulba, 13.05.2012, Beshko (TASH, www.plantarium.ru). **I-4-b Aktau Range:** Khatyrchi District, 18.08.1928, Lepeschkin (TASH); near the village Bakhrin, 08.08.1956, Sedov 1465 (TASH); Nurata District, along channel, 25.05.1964, Pryakhin (TASH). **I-4-b Karatau Range:** Nurata, mountains Karakarga, 11.05.1913, Korovin 484, 485 (TASH); banks of stream near the village Sarmysh, 24.06.1937, Demurina 256 (TASH).

Chesneya Lindl.

401. *Chesneya ternata* (Korsh.) Popov. Perennial, hemicryptophyte. Mountain Middle Asian. Shrubland, Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** mountains near Tamerlane's Gate gorge, left bank of river Sanzar, 03.05.1921, Kultiasow 90, 95 (TASH).

Cicer L.

402. *Cicer flexuosum* Lipsky, Trudy Imp. S.-Peterburgsk. Bot. Sada 23: 102 (1904). Perennial, hemicryptophyte. Western Tien Shan, Western Pamir-Alay. Shrubland, Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Nature Reserve, Hayatsay, 1979, Korshunov (TASH). **I-4-b Aktau Range:** Yangokly, 08.06.1926, Popov (TASH).

403. *Cicer grande* (Popov) Korotkova, Bot. Mater. Gerb. Inst. Bot. Zool. Akad. Nauk Uzbeksk. S.S.R. 10: 18 (1948). Perennial, hemicryptophyte. Western Pamir-Alay (Nuratau Mts., Kugitang Range). Montane zone. Rare. Native. UzbRDB 1. **Occurrence records: I-4-a Nuratau Range:** Koshrabad, Mt. Mirishkar, 05.05.1913, Korovin (TASH); Karysay, Pubsay, 05.06.1990, Beshko, Yakovenko 90058–060 (herbarium of the Nuratau Nature Reserve); Mt. Parrandoz, Parrandoz Pass, 05.06.1990, Beshko 90060 (TASH); Nuratau Nature Reserve, Karysay, Pubsay, 20.06.2009, Beshko 09025–027 (TASH, herbarium of the Nuratau Nature Reserve); Karysay, Pubsay, 13.05.2010, Beshko (www.plantarium.ru); Nuratau Nature Reserve, Karysay, northern slope of rocky massif Parrandoz, 16.07.2017, Beshko (TASH). **I-4-b Aktau Range:** near the village Shamaly, 24.05.1925, Popov (TASH).

404. *Cicer pungens* Boiss., Diagn. Pl. Orient., ser. 2, 2: 44 (1856). Perennial, hemicryptophyte. Western Pamir-Alay. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Koytash, northern slope, 28.06.1971, Botschantzev, Kamelin (LE); Mt. Hayatbashi, 24.07.1993, Beshko 93081 (herbarium of the Nuratau Nature Reserve); Mts. Koytash, upper reaches of Amandara, 13.07.2010, Beshko 10011 (TASH).

Cullen Medik.

405. *Cullen drupaceum* (Bunge) C.H. Stirt. (*Psoralea drupacea* Bunge), Bothalia 13: 317 (1981). Perennial, hemicryptophyte. Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Abundant. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Range, Farish District, 01.05.1941, *Momotov* (TASH); Farish District, piedmont plain north-west of Jizzakh, 25.04.1956, *Zaprometova 241* (TASH); lower reaches of Madjrumsay, upstream of the village, 17.07.2007, *Beshko 07075* (herbarium of the Nuratau Nature Reserve, TASH); surroundings of Bogdon (Farish), 09.05.2010, *Beshko* (www.plantarium.ru); near the village Ok-tom, 19.05.2010, *Beshko* (www.plantarium.ru); northern piedmont plain of Nuratau Range (Farish Steppe), 13.05.2012, *Beshko* (www.plantarium.ru); surroundings of Bogdon (Farish), 25.06.2019, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** 25–30 km north of Mt. Aktash, southern foothills of Aktau, 12.06.1983, *Rusanovich* (MW). **I-4-b Khobduntau Range:** plain between mountains Khobduntau and Karachatau, 18.06.1929, *Kudrjashev* (TASH); Gallaaral District, experimental station of cereal crops, 25.05.1934, *Toporova* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 09.04.1915, *Popov 138* (TASH); mountains Balyklitau, 23.05.1931, *Kobranova 433* (TASH); mountains Balyklitau, foothills, 25.05.1931, *Kobranova 453* (TASH); southern slopes of Mt. Khanbandytau, near the village Ment, 02.05.1941, *Momotov* (TASH); near the village Uchkulach, 20.05.2010, *Beshko* (www.plantarium.ru); piedmonts of Pistalitau, about 8 km east of the village Yangiabad, 13.05.2012, *Beshko* (TASH); southern piedmonts of remnant mountains Pistalitau, about 10 km east of the village Uchkulach, 26.06.2019, *Beshko* (www.plantarium.ru).

Gleditsia L.

406. *Gleditsia caspica* Desf., Hist. Arbr. France 2: 247 (1809). Tree, phanerophyte. Caucasian, Hyrcanian. Forest, Artificial terrestrial. Foothills, montane zone. Rare. Alien (introduced). **Occurrence records: I-4-a Nuratau Range:** Gurdara, 23.06.1971, *Botschantzev, Kamelin* (LE); Nuratau Nature Reserve, Gurdara, 03.05.2012, *Beshko* (TASH, www.plantarium.ru).

Glycyrrhiza L.

407. *Glycyrrhiza aspera* Pall., Reise Russ. Reich. 1: 499 (1771). Perennial, hemicryptophyte. Euro-Siberian, Irano-Turanian. Grassland, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** reported by Zakirov in «Vegetation cover of Nuratau Mountains» (1969, p. 31) and «Botanical geography of low mountains of Kyzylkum and Nuratau Range» (1971, p. 61).

408. *Glycyrrhiza glabra* L., Sp. Pl.: 742 (1753). Perennial, hemicryptophyte. Euro-Siberian, Irano-Turanian. Forest, Shrubland, Grassland, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, 1200 m a.s.l., 09.08.1980, *Mukhina* (TASH); Hayatsay, 19.06.1984, *Petrochenko 84088* (herbarium of the Nuratau Nature Reserve); Hayatsay, 20.06.1990, *Beshko, Yakovenko 90061, 90122* (herbarium of the Nuratau Nature Reserve); Hayatsay, Andebaraut, 02.06.2006, *Beshko 06164* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, watershed between Hayatsay and Andygensay, 23.07.2008, *Beshko* (www.plantarium.ru). **I-4-b Khobduntau Range:** Mts. Khobduntau, near the village, 16.06.1929, *Kudrjashev* (TASH).

409. *Glycyrrhiza triphylla* Fisch. & C.A.Mey. (*Meristotropis triphylla* Fisch. & C. A. Mey.), Index Seminum (LE, Petropolitanus) 1: 29 (1835). Perennial, hemicryptophyte. Irano-Turanian. Forest, Shrubland, Grassland, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** 8 km north of the village Shurcha, Bulak, 28.07.1932, *Knorring, Emme 107* (MW); north slopes of valley Mikhinsay, south of the village Yangikishlak, 22.07.1940, *Arkhireev 187* (TASH); Sob Pass, 04.08.1940, *Gomolitsky, Dolgikh, Arkhireev 277* (TASH); Mts. Koytash, 28.05.1941, *Lepeschkin* (TASH); Nuratau Range,

Koshrabad District, 19.08.1954, *Petrovich* (TASH); Gurdara, 23.06.1971, *Botschantzev, Kamelin* (LE); Yangikishlak, 23.06.1992, *Beshko* 92457–458 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay valley, 27.06.2012, *Beshko* (TASH); Nuratau Nature Reserve, Hayatsay, 15.06.2014, *Beshko* (www.plantarium.ru); Jizzakh Region, Farish District, Hayatsay, 40.52239° N, 66.75664° E, 05.06.2022, *Beshko* (www.inaturalist.org). **I-4-b Aktau Range:** Nurata valley, between Koshrabad and Dzhush, 02.07.1956, *Vvedensky* (TASH). **I-4-b Khobduntau Range:** near the village Langar, southern slopes of mountains, 23.06.1929, *Kudrjashev* (TASH).

Hedysarum L.

410. *Hedysarum mogianicum* (B. Fedtsch.) B. Fedtsch., Fl. URSS 13: 293 (1948). Perennial, hemicryptophyte. Western Pamir-Alay. Shrubland, Grassland. Montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Koytash Mts., southern slope, near the village Savryuk, 18.07.1937, *Demurina* 609 (TASH); near Mekhayan, 17.05.1961, *Vlasov* (MW); upper reaches of Ukhumsay, 02.06.1964, *Zuckerwanik* 468 (TASH); Madjrumsay, Fargun, 02.06.2000, *Beshko* 00030–031 (TASH, herbarium of the Nuratau Nature Reserve); Hayatsay, 20.05.2006, *Beshko* 06113–114 (herbarium of the Nuratau Nature Reserve); Hayatsay, Khotunon, 03.06.2006, *Beshko* 06209 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 13.05.2019, *Juramurodov* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 16.06.2019, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, watershed crest between valleys Hayat and Madjrum, 1820 m a.s.l., 16.06.2019, *Beshko* (TASH); Nuratau Nature Reserve, Hayatsay, 30.05.2020, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 19.05.2021, *Beshko* (www.plantarium.ru).

411. *Hedysarum nuratense* Popov, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk S.S.S.R. 7: 16 (1937). Perennial, hemicryptophyte. Western Pamir-Alay. Shrubland, Grassland, Rocky areas. Montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** foothills of Nuratau Range, on the latitude of town Jizzakh, 16.05.1928, *Sovetkina* 213 (TASH); 2 km south-west of the village Ingichka, 18.07.1937, *Demurina* 644 (TASH); 6–7 km west of the village Guzhum, 23.07.1937, *Demurina* 725, 728 (TASH); Mts. Koytash, 3 km west of village Tutli, 29.05.1940, *Gomolitsky, Dolgikh* 76 (TASH); Mts. Koytash, 3 km north-east of the village Kuvakiya, piedmonts of Mt. Piyazli, 24.04.1941, *Momotov* 15 (TASH); Mts. Koytash, the village Karatash, 26.04.1941, *Bukasov* (TASH); northern slope of Nuratau Range, Farish District, 25.04.1941, *Momotov* 43 (TASH); Nuratau Range, Farish District, 14.05.1941, *Momotov* (TASH); Ustuksay, 02.06.1954, *Burygin* 343 (TASH); piedmont plain 15 km east of Farish, 12.05.1955, *Zaprometova* (TASH); Asrafsay, 30.04.1956, *Zaprometova* (TASH); 1 km west of the village Gum, 01.06.1956, *Zakirov* 273 (TASH); 1 km north-east of the village Katta Bogdon, 19.06.1956, *Zakirov* 293 (TASH); Ustuksay, 13.07.1956, *Vvedensky* 115 (TASH); Kyzylcha State Farm, 3 km east of the village Kovga, 13.06.1963, *Ivanova* 58 (TASH); upper reaches of Ustuksay, surroundings of Fazilman Lake, 28.05.1964, *Zuckerwanik* 341 (TASH); Karl Marx State Farm, eastern part of Nuratau Range, basin of Jilandysay, 23.05.1967, *Perelygina* (TASH); Andygensay, Kachak, 10.05.1981, *Mukhina* 81035–038 (herbarium of the Nuratau Nature Reserve); Mt. Dushokh, 07.05.1982, *Mukhina* 82022–029 (herbarium of the Nuratau Nature Reserve); Sentobsay, upper reaches of Teraksay, 25.06.1996, *Beshko* 96055 (herbarium of the Nuratau Nature Reserve); upper reaches of Ustuksay, 09.05.2014, *Beshko* (TASH); Nuratau Nature Reserve, Hayatsay, 19.05.2021, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** near the village Shamaly, 27.05.1925, *Popov* 347 (TASH); 5 km west of the village Tikalik, 06.07.1932, *Knorring* 32 (MW); upper reaches of Tutaksay, 07.06.1951, *Neustrujeva-Knorring, Cvetkova* (MW); the spring Bitav, 18.04.1963, *Khaydarov* 853, 869 (TASH); mountains Bakhiltai, 10.05.2013, *Beshko* (TASH). **I-4-b Karatau Range:** foothills east of valley Sarmysh, 26.04.1965, *Pryakhin* (TASH).

412. *Hedysarum plumosum* Boiss. & Hausskn., P.E.Boissier, Fl. Orient. 2: 515 (1872). Perennial, hemicryptophyte. Western Tien Shan, Western Pamir-Alay. Rocky areas. Montane zone. Rare. Native.

Occurrence records: I-4-a Nuratau Range: Samarkand Region, Koshrabad District, main watershed of Nuratau Range, upper reaches of Sentobsay, 20.06.1998, *Beshko 98001* (TASH, herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, main watershed of Nuratau Range between Madjrum Pass and Mt. Hayatbashi, 25.05.2025, *Beshko* (TASH, www.plantarium.ru).

Lathyrus L.

413. *Lathyrus aphaca* L., Sp. Pl.: 729 (1753). Annual, therophyte. Tethyan. Forest, Shrubland, Grassland, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** south-west of town Jizzakh, Sanzar river gorge, 26.04.1979, *Pimenov, Kljuykov, Boryaev, Baranova, Vassiljeva 23* (MW); Bolosay, 26.04.1992, *Beshko 92073* (herbarium of the Nuratau Nature Reserve, TASH).

414. *Lathyrus cicera* L., Sp. Pl.: 730 (1753). Annual, therophyte. European, Tethyan. Forest, Shrubland, Grassland, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Karl Marx State Farm, eastern part of Nuratau Range, basin of Narvansay, 16.05.1967, *Perelygina* (TASH); south-west of town Jizzakh, gorge of river Sanzar, 26.04.1979, *Pimenov, Kljuykov, Boryaev, Baranova, Vassiljeva 34* (MW); field station of Nuratau Nature Reserve, village Hayat, 22.04.1992, *Beshko 92065–067* (herbarium of the Nuratau Nature Reserve, TASH); Nuratau Nature Reserve, Hayatsay, 05.05.2006, *Beshko* (www.plantarium.ru); field station of Nuratau Nature Reserve, 30.04.2009, *Beshko* (www.plantarium.ru); Farish district, Mts. Koytash, upstream of the village Narvan, 40.265308° N, 67.226583° E, 20.04.2013, *Lougarou* (www.inaturalist.org).

415. *Lathyrus inconspicuus* L., Sp. Pl.: 730 (1753). Annual, therophyte. Tethyan. Desert, Forest, Shrubland, Grassland, Artificial terrestrial. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, 3 km north-east of the village Kuvakiya, piedmonts of Mt. Piyazli, 24.04.1941, *Momotov 14, 16* (TASH); north of the village Kuvakiya, 25.04.1941, *Bukasov* (TASH); Nuratau Range, Farish District, 01.05.1941, *Momotov* (TASH); Nuratau Range, Farish District, 15.05.1941, *Momotov* (TASH); 2 km north of Saurbel Pass, 27.04.1958, *Li, Zakirov 147* (TASH); 1 km east of Ukhumsay, piedmont plain of Nuratau Mts., 12.05.1958, *Li, Zakirov 533* (TASH); 3 km south-east of the village Karasay, 19.05.1958, *Li, Zakirov 664, 666* (TASH); 2 km north of the village Yongbosh-katta, 23.05.1958, *Li, Zakirov 747* (TASH); field station of Nuratau Nature Reserve, village Hayat, 22.04.1992, *Beshko 92064* (herbarium of the Nuratau Nature Reserve); Hayatsay, Khotunon, 11.06.1992, *Beshko 92141* (herbarium of the Nuratau Nature Reserve); lower reaches of Bolosay, 08.05.1992, *Beshko 92436* (herbarium of the Nuratau Nature Reserve); middle reaches of Tykchasay, 25.04.1994, *Beshko 94012* (herbarium of the Nuratau Nature Reserve, TASH); Karysay, 29.04.1994, *Beshko 94091* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 05.06.2012, *Beshko* (TASH).

416. *Lathyrus sativus* L. (*L. asiaticus* (Zalkind) Kudr.), Sp. Pl.: 730 (1753). Annual, therophyte. Pluriregional (native to Balcans). Desert, Forest, Shrubland, Grassland, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Alien. **Occurrence records: I-4-a Nuratau Range:** Yangikishlak, surroundings of the office of Nuratau Nature Reserve, 15.04.1995, *Beshko 95020* (herbarium of the Nuratau Nature Reserve).

Lotus L.

417. *Lotus krylovii* Schischkin & Serg. (*Lotus sergievskiae* Kamelin & Kovalevsk), Sist. Zametki Mater. Gerb. Krylova Tomsk. Gosud. Univ. Kuybysheva 1932(7-8): 5 (1932). Perennial, hemicryptophyte. Euro-Siberian, Irano-Turanian. Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** the pass 3 km south-west of Kyzylcha State Farm, 20.05.1955, *Zaprometova* (TASH); Kichik Fazilman,

wetlands near the lake, 15.06.1969, *Mambetjumaev 102* (TASH); Kichiksay (Keskansay), Soyikhud, 24.06.2002, *Beshko 02108* (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** Khatyrchi District, 09.06.1928, *Lepeschkin* (TASH).

Medicago L.

418. *Medicago lessingii* Fisch. & C.A.Mey. ex Kar. (*Medicago agropyretorum* Vassilcz.), Bull. Soc. Imp. Naturalistes Moscou 12: 150 (1839). Perennial, hemicryptophyte. Euro-Siberian, Irano-Turanian. Forest, Shrubland, Grassland, Artificial terrestrial. Foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, the village Osmansay, 01.06.1931, *Kobranova 465* (TASH). **I-4-b Khobduntau Range:** plain between mountains Khobduntau and Karachatau, near the village Almaly, 12.06.1929, *Kudrjashev* (TASH).

419. *Medicago lupulina* L., Sp. Pl.: 779 (1753). Annual, biennial, therophyte. Euro-Siberian, Tethyan. Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Sentob gorge, 31.07.1928, *Yakimova, Moskvina* (TASH); Mts. Koytash, south-west of the village Savryuk, 20.07.1931, *Kobranova 159* (TASH); mountains Nuratau, 26.04.1963, *Khaydarov 69* (TASH); valley Kyzylcha, 28.05.1963, *Khaydarov* (TASH); Hayatsay, 18.04.1981, *Mukhina 81039–040* (herbarium of the Nuratau Nature Reserve); Hayatsay, field station of nature reserve, 07.07.2006, *Beshko 06218–219* (herbarium of the Nuratau Nature Reserve); Hayatsay, field station of nature reserve, 26.06.2007, *Beshko 07032–033* (herbarium of the Nuratau Nature Reserve). **I-4-b Khobduntau Range:** valley Bodbod, upper reaches, 20.06.1929, *Kudrjashev* (TASH).

420. *Medicago minima* (L.) Bartal., Cat. Piante Siena: 60 (1776). Annual, biennial, therophyte. Euro-Siberian, Tethyan. Forest, Shrubland, Grassland, Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Mt. Piyazli, 24.04.1941, *Bukasov* (TASH); Hayatsay gorge, 01.06.1969, *Mambetjumaev 132* (TASH); Hayatsay, 1991, *Maximova 91012* (herbarium of the Nuratau Nature Reserve); Hayatsay, 05.05.2006, *Beshko* (www.plantarium.ru); Hayatsay, field station of Nuratau Nature Reserve, 07.07.2006, *Beshko 06218–219* (herbarium of the Nuratau Nature Reserve); Hayatsay, field station of Nuratau Nature Reserve, 26.06.2007, *Beshko 07032–033* (herbarium of the Nuratau Nature Reserve); Hayatsay, 01.05.2009, *Beshko* (www.plantarium.ru).

421. *Medicago monantha* (C.A.Mey.) Trautv. (*Trigonella geminiflora* Bunge), Index Seminum (KIEV, Kioviensi) 1840: vi (1841). Annual, therophyte. Irano-Turanian. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Urganchi, 01.05.1913, *Korovin* (TASH); Mts. Koytash, 3 km north-east of the village Kuvakiya, piedmonts of Mt. Piyazli, 24.04.1941, *Momotov 12* (TASH); Nuratau Range, Farish District, 19.05.1941, *Momotov* (TASH); south-west of Nuratau State Farm, piedmont plain, 15.04.1952, *Zaprometova* (TASH); surroundings of Kyzylcha State Farm, piedmont plain, 29.04.1952, *Zaprometova* (TASH); Nuratau Range, north slopes, Karasay, 30.05.1954, *Zaprometova* (TASH); Gatchasay, 24.04.1958, *Zaprometova 57* (TASH); 1 km east from the pass through Pistalisay, 08.05.1958, *Li, Zakirov 434* (TASH); 1 km south of the village Savryuk, 22.05.1958, *Li, Zakirov 729* (TASH); 3 km south-east of the village Karatepa, plain between Karatepa and Koytash, 29.05.1958, *Li, Zakirov 852* (TASH); south of Kyzylcha State Farm, 22.05.1974, *Pratov* (TASH); Hayatsay, Novi Daroz, 25.05.2007, *Beshko 07007, 07074* (herbarium of the Nuratau Nature Reserve); Hayatsay, Novi Daroz, 29.04.2009, *Beshko 09018–019* (herbarium of the Nuratau Nature Reserve, TASH, www.plantarium.ru); Hayatsay, 05.05.2012, *Beshko* (TASH). **I-4-b Aktau Range:** Nuratau, north slopes of Nuratau Mts., 23.04.1913, *Korovin 30* (TASH); Nuratau, 29.04.1913, *Korovin 9* (TASH); Dzhushe – Koshrabad, 03.05.1913, *Korovin* (TASH); Nuratau, *Iris* steppe, 09.05.1913, *Korovin 477* (TASH); Karathe village, 1941, *Popov* (SAM); sources of river Bitau, 27.05.1964, *Zuckerwanik 280* (TASH);

Nurata District, near the village Upper Bubak, south of Bakhiltai, 07.06.1964, *Pryakhin* (TASH). **I-4-b Karatau Range:** mountains Karakarga near the pass Jizlan, 22.04.1913, *Korovin* (TASH); slopes of Karatau, 05.05.1955, *Momotov, Li 106* (TASH). **I-4-b Mt. Kokcha:** remnant mountains Kokchatau, 28.03.1958, *Adylov 73* (TASH). **I-4-b Khobduntai Range:** surroundings of Milyutinskaya Station, May 1930, *Tarasevich 42* (TASH); Gallaaral State Farm, west of Milyutinskaya Station 4,5 km, May 1930, *Tarasevich 60* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitai, 08.04.1915, *Kultiasow* (TASH); Pistalitai, 09.04.1915, *Kultiasow 119* (TASH); plain between mountains Koytash and Balyklitai, 23.05.1931, *Kobranova 405* (TASH); mountains Balyklitai, 25.05.1931, *Kobranova 455* (TASH); piedmonts of Pistalitai, 02.06.2003, *Beshko 03009* (herbarium of the Nuratau Nature Reserve); northern piedmonts of Pistalitai, 24.04.2020, 13.04.2021, *Beshko, Shomurodov, Adilov* (plant community description); plain 7 km east of the village Yangiabad, rainfed arable land, 26.04.2020, 14.04.2021, *Beshko, Shomurodov, Adilov* (plant community description); northern piedmonts of remnant mountains Uchkulach, 5–6 km east of the village Uzunkuduk, 26.04.2020, 14.04.2021, *Beshko, Shomurodov, Adilov* (plant community description); southern outskirts of the town Band, garden, 30.04.2020, 14.04.2021, *Beshko, Shomurodov, Adilov* (plant community description).

422. *Medicago orbicularis* (L.) Bartal., Cat. Piante Siena: 60 (1776). Annual, therophyte. Tethyan. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** Hayatsay, 07.05.1995, *Beshko 95031* (herbarium of the Nuratau Nature Reserve); Hayatsay, Andebaraut, 01.05.2009, *Beshko 09031* (herbarium of the Nuratau Nature Reserve).

423. *Medicago orthoceras* (Kar. & Kir.) Trautv. (*Trigonella orthoceras* Kar. & Kir.). Annual, therophyte. Tethyan. Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** Nuratau Range, Farish District, 02.05.1941, *Momotov 12* (TASH); Nuratau Range, Farish District, 03.05.1941, *Momotov 14* (TASH).

424. *Medicago polymorpha* L. (*Medicago denticulata* Willd.), Sp. Pl.: 779, 1200 (1753). Annual, therophyte. European, Tethyan. Shrubland, Grassland, Artificial terrestrial. Plain, foothills, montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** Nuratau Range, Farish District, 15.05.1941, *Momotov* (TASH).

425. *Medicago popovii* (Korovin) Širj. (*Trigonella popovii* Korovin, *Melissitus popovii* (Korovin) Golosk.), Bull. Misc. Inform. Kew 1928: 271 (1928). Perennial, hemicryptophyte. Mountain Middle Asian. Shrubland, Grassland, Rocky areas. Montane zone. Rare. Native. **Occurrence records:** **I-4-b Aktau Range:** mountains Bakhiltai, 15.04.1963, *Khaydarov 470* (TASH).

426. *Medicago radiata* L., Sp. Pl.: 778 (1753). Annual, therophyte. Irano-Turanian. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** Kichiksay, 10.05.1957, *Zaprometova* (TASH).

427. *Medicago rigidula* (L.) All., Fl. Pedem. 1: 316 (1785). Annual, therophyte. Tethyan. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** Nuratau Range, Farish District, 19.05.1941, *Momotov* (TASH); Hayatsay, 1991, *Maximova 91013* (herbarium of the Nuratau Nature Reserve); Hayatsay, 07.05.1995, *Beshko 95027* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 05.05.2012, *Beshko* (TASH); Nuratau Nature Reserve, Hayatsay, about 1300 m a.s.l., 15.05.2024, *Beshko* (www.plantarium.ru, www.inaturalist.org).

428. *Medicago sativa* L., Sp. Pl.: 778 (1753). Perennial, hemicryptophyte. Pluriregional. Desert, Forest, Shrubland, Grassland, Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Probably alien (introduced). **Occurrence records:** **I-4-a Nuratau Range:** Nuratau Range, Farish District, 04.05.1941, *Momotov* (TASH); Hayatsay, 28.05.1990, *Beshko*,

Yakovenko 90061–062 (herbarium of the Nuratau Nature Reserve); Hayatsay, 1991, *Maximova 91028* (herbarium of the Nuratau Nature Reserve); Hayatsay, field station of nature reserve, 07.07.2006, *Beshko 06246* (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** Koshrabad, *Iris* formation, 06.05.1913, *Korovin 414, 418* (TASH); Mt. Takhkutaу, 07.05.1913, *Korovin 421* (TASH); mountains Aktau, 14.06.1963, *Khaydarov 1742* (TASH); downstream of the village Langar, 08.06.1983, *Rusanovich* (MW). **I-4-b Khobduntaу Range:** reported by Kudrjashev in “Vegetation of the Khobduntaу and Karachataу Mountains” (1929, p. 63).

Melilotus Mill.

429. *Melilotus albus* Medik., Vorles. Churpfälz. Phys.-Ökon. Ges. 2: 382 (1787). Biennial, therophyte. Pluriregional. Forest, Shrubland, Grassland, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Nature Reserve, Hayatsay, 1200 m a.s.l., 00.06.1979, *Korshunov* (TASH); Hayatsay, Alichak, 13.08.2010, *Beshko 10028–029* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, upper reaches of Hayatsay, 22.06.2011, *Beshko* (TASH).

430. *Melilotus officinalis* (L.) Lam., Fl. Franc. 2: 594 (1779). Biennial, therophyte. Euro-Siberian, Irano-Turanian. Forest, Shrubland, Grassland, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, field station of nature reserve, 26.06.2007, *Beshko 07031, 07044–045* (herbarium of the Nuratau Nature Reserve).

Onobrychis Hill

431. *Onobrychis chorassanica* Bunge ex Boiss., Fl. Orient. 2: 550 (1872). Perennial, hemicryptophyte. Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** mountains south-west of town Jizzakh, 03.05.1921, *Kultiasow 173, 174* (TASH); pass near the sources of Guzhumsay, 23.07.1937, *Demurina 665* (TASH); Mts. Koytash, 3 km west of village Tutli, 29.05.1940, *Gomolitsky, Dolgikh 74* (TASH); Nuratau Range, Farish District, 14.05.1941, *Momotov* (TASH); surroundings of Kyzylcha State Farm, piedmont plain, 24.05.1952, *Zaprometova* (TASH); Gatchasay, 31.05.1954, *Zaprometova 138* (TASH); Ustuksay, 02.06.1954, *Burygin 310, 311* (TASH); Asrafsay, 14.06.1956, *Zaprometova 208* (TASH); Alaysay, 30.03.1958, *Zaprometova 255* (TASH); middle reaches of the river Garasha, near the village Mekhayan, 17.05.1961, *Vlasov, Khokhryakov 13* (MW); Hayatsay gorge, 01.06.1969, *Mambetjumaev 34* (TASH); gorge Sentob, 15.06.1969, *Mambetjumaev 191* (TASH); Hayatsay, 01.06.1990, *Beshko, Yakovenko 90063* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Madjrumsay, Fargun, 02.06.2000, *Beshko 00037–038* (TASH, herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** town Nurata, north slopes of Nuratau Mts., 23.04.1913, *Korovin 17* (TASH, MW); Koshrabad, *Iris* formation, 06.05.1913, *Korovin 417* (TASH); 10 km south of the village Dekhibaland, 29.05.1936, *Kharchenko 1189, 1192* (TASH); north slopes 1.5 km east of the village Taz, 02.07.1937, *Makarchuk 503* (TASH); 1–2 km west of the village Shamaly, 08.07.1937, *Demurina 575* (TASH); the spring Bitav, 19.04.1963, *Khaydarov 972* (TASH); south-east of town Nurata, northern piedmonts of Bakhiltaу Mts., 23.05.1964, *Pryakhin* (TASH); upper reaches of river Bitau, surroundings of the village, 26.05.1964, *Zuckerwanik 243* (TASH); near the village Chashma, south of Bakhiltaу Mts., 06.06.1964, *Pryakhin* (TASH); Aktau, 1964, *Khaydarov 3* (TASH); 6–8 km downstream of the village Langar, 09.06.1983, *Rusanovich* (MW). **I-4-b Karatau Range:** 2.5 km south-west of the ruins of the village Sarmysh, 06.05.1955, *Momotov, Li 183* (TASH).

432. *Onobrychis gontscharovii* Vassilcz., Fl. Tadzhiksk. S.S.R. 5: 687 (1937). Perennial, hemicryptophyte. Pamir-Alay. Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Koytash (reported in «Conspectus Florae Asiae Mediae», vol. 6, 1981, p. 316).

433. *Onobrychis micrantha* Schrenk, Enum. Pl. Nov. 1: 85 (1841). Annual, therophyte. Hyrcanian, Mountain Middle Asian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** Urganchi, 01.05.1913, *Korovin 155* (TASH); piedmont plain near Kyzylcha State Farm, 09.04.1953, *Burygin 636* (TASH); Asrafsay, 14.06.1956, *Zaprometova 270* (TASH); 3 km east of Narvan, 22.05.1958, *Li, Zakirov 710* (TASH); the village Fangat, Kursay, 20.06.1969, *Baikabilov* (TASH); Hayatsay, Sangich, 13.05.1995, *Beshko 95079* (herbarium of the Nuratau Nature Reserve); Andygensay, 07.06.1995, *Beshko 95082* (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** Nurata, *Iris* steppe, 09.05.1913, *Korovin 478* (TASH); 10 km south of the village Dekhibaland, 28.05.1936, *Kharchenko 1181* (TASH); 1.5 km east of the village Taz, 02.07.1937, *Makarchuk 502* (TASH); near the village Langar, valley Yangokly, 19–21.05.1941, *Zakirov, Niyazov* (SAM); 3 km south-west of the well Yarkuduk, foothills, 06.05.1957, *Momotov, Li 83* (TASH); Uzunkuduk, 28.05.1963, *Khaydarov* (TASH); upper reaches of river Bitau, surroundings of the village, 26.05.1964, *Zuckerwanik 239* (TASH); near the village Chashma, south of Bakhiltai Mts., 06.06.1964, *Pryakhin* (TASH) 6–8 km downstream of the village Langar, 09.06.1983, *Rusanovich* (MW). **I-4-b Karatau Range:** 4 km north of the village Aksakalata, 07.05.1965, *Momotov, Li 216* (TASH). **I-4-b Karachatau Range:** 2.5–3 km north-east of the village Yukary-Kariya, 06.07.1937, *Demurina 542* (TASH); foothills, 10 km east of the village Bulakbashi, 06.07.1937, *Demurina 425* (TASH); 1–2 km west of the village Bolgaly, 08.07.1937, *Demurina 580* (TASH). **I-4-b Khobduntai Range:** Gallaaral District, experimental station of cereal crops, 29.05.1934, *Toporova* (TASH).

434. *Onobrychis pulchella* Schrenk, Enum. Pl. Nov.: 87 (1841). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** foothills south-west of Jizzakh Station, near the bridge, on the left bank of river Sanzar, 02.05.1921, *Kultiasow 29* (TASH); Gallaaral District, Karakuduk, 03.06.1934, *Rybakov* (TASH); Sentobsay, 26.05.1954, *Zaprometova* (TASH); piedmont plain near Kyzylcha State Farm, 20.05.1958, *Zaprometova* (TASH); near Saurbel Pass, 21 km south of the village Farish on the road to Karabakhana, 17.05.1961, *Gubanov 15a* (MW); below Mekhayan, 17.05.1961, *Vlasov* (MW); Hayatsay gorge, 10.06.1969, *Mambetjumaev 168* (TASH); Hayatsay, 1981, *Mukhina 81041* (herbarium of the Nuratau Nature Reserve); Hayatsay, 01.06.1990, *Beshko, Yakovenko 90064–065* (herbarium of the Nuratau Nature Reserve); Karysay, Chashmi Mullo, 19.06.1992, *Beshko 92316* (herbarium of the Nuratau Nature Reserve); foothills of Nuratau, 15.05.2009, *Beshko* (www.plantarium.ru); foothills of Nuratau, near Yangikishlak, 13.05.2012, *Beshko* (TASH). **I-4-b Aktau Range:** Dzhusk – Koshrabad, 03.05.1913, *Korovin 259, 300* (TASH); 5 km north-east of the village Karasay on gentle upland of Nurata valley, 20.05.1958, *Li, Zakirov 685* (TASH); near the village Chashma, south of Bakhiltai, 06.06.1964, *Pryakhin* (TASH); near the village Chashma, 29.05.1965, *Ubaydullaev, Baykabilov* (TASH). **I-4-b Khobduntai Range:** foothills near Kuropatkino railway station, 16.04.1926, *Androssov* (TASH). **I-4-c North-Nuratau insular low mountains:** remnant uplands north of Nuratau Range, 60 km west of Jizzakh, 26.05.1956, *Zaprometova* (TASH).

435. *Onobrychis saravschanica* B. Fedtsch., Russk. Bot. Zhurn. 1908: 58 (1908). Perennial, hemicryptophyte. Western Tien Shan, Pamir-Alay. Shrubland, Rocky areas. Montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** Koytash, southern slope, 28.06.1971, *Botschantzev, Kamelin* (LE).

Ononis L.

436. *Ononis spinosa* subsp. *antiquorum* (L.) Arcang., Comp. Fl. Ital.: 157 (1882). Perennial, hemicryptophyte. Tethyan. Wetlands (inland), Artificial aquatic. Foothills, montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** Sentob, near water, 24.06.1971, *Botschantzev, Kamelin* (LE); Temirqovuqsay, 11.07.2019, *Beshko* (TASH, www.inaturalist.org). **I-4-b Aktau Range:**

Khatyrchi District, 25.07.1928, *Lepeschkin* (TASH); near the village Bakhrin, 03.08.1956, *Sedov 1445* (TASH).

Oxytropis DC.

437. *Oxytropis chesneyoides* Gontsch., Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk S.S.S.R. 10: 86 (1947). Perennial, hemicryptophyte. Western Pamir-Alay. Rocky areas. Foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** near railway station Jizzakh (reported in «Conspectus Florae Asiae Mediae», vol. 7, 1983, p. 360).

438. *Oxytropis macrocarpa* Kar. & Kir., Bull. Soc. Imp. Naturalistes Moscou 15: 326 (1842). Perennial, hemicryptophyte. Mountain Middle Asian. Shrubland, Grassland, Rocky areas. Montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** 3 km south-east of the village Yukary Ukhum, on the way to Ukhum Pass, 29.04.1958, *Li, Zakirov 234* (TASH); 3 km from the village Khukala, 17.05.1958, *Li, Zakirov 624* (TASH); southern slopes of Ustuksay, 11.05.1956, *Korotkova 5094* (TASH); upper reaches of Ustuksay, surroundings of Fazilman Lake, 28.05.1964, *Zuckerwanik 343* (TASH); Hayatsay, valley opposite the village Hayat, 03.05.1981, *Mukhina 81042–048* (herbarium of the Nuratau Nature Reserve, TASH); Nuratau Nature Reserve, Mt. Dushokh, 07.05.1982, *Mukhina* (TASH); Nuratau Nature Reserve, Bolosay, 16.05.1982, *Mukhina* (TASH); Mt. Hayatbashi, 08.06.1992, *Beshko 92129–130* (herbarium of the Nuratau Nature Reserve); Ukhum Pass, 19.06.1992, *Beshko 92355* (herbarium of the Nuratau Nature Reserve); Hayatsay, Andebaraut, 31.05.1996, *Beshko 96121–122* (herbarium of the Nuratau Nature Reserve); Hayatsay, Khotunon, 23.05.2006, *Beshko 06048–049* (herbarium of the Nuratau Nature Reserve); Hayatsay, 05.05.2007, *Beshko* (www.plantarium.ru); Hayatsay, 06.05.2012, *Beshko* (TASH); watershed crest in surroundings of Hayat Pass, 30.05.2016, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, watershed between Hayatsay and Andygensay, 30.04.2021, *Turdiyev* (www.plantarium.ru); Nuratau Nature Reserve, top of Mt. Hayatbashi, 16.05.2021, *Turdiyev* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, Andebaraut, 1525 m a.s.l., 19.05.2021, *Beshko, Madaminov NB2021244* (TASH); watershed crest in surroundings of Hayat Pass, 19.05.2021, *Beshko* (TASH, www.plantarium.ru). **I-4-b Khobduntau Range:** reported by Kudrjashev in “Vegetation of the Khobduntau and Karachatau Mountains” (1929, p. 63).

439. *Oxytropis pseudorosea* Filim., Bot. Mater. Gerb. Inst. Bot. Akad. Nauk Uzbeksk. S.S.R. 20: 44 (1982). Perennial, hemicryptophyte. Nuratau, Aktau (endemic). Shrubland, Grassland, Rocky areas. Montane zone. Occasional. Native. UzbRDB 2. **Occurrence records: I-4-a Nuratau Range:** 35–40 km north of Kattakurgan, 25.05.1927, *Merkulovich* (TASH); Mts. Koytash, southern slope, 23.07.1931, *Kobranova 63* (LE); 6–7 km west of the village Guzhum, 23.07.1937, *Demurina 732* (TASH); Mts. Koytash, 28.05.1941, *Lepeschkin* (TASH, LE); on the ridge opposite the village Kyrk-aul, 22.05.1956, *Zakirov 256, 258* (TASH); 1 km north-west of the village Khukala, 17.05.1958, *Li, Zakirov 607* (TASH); 7 km south of the village Farish, 12.06.1962, *Karimov* (TASH); upper reaches of Parrandozsay, on the way to Ukhum Pass, 31.05.1964, *Zuckerwanik 435* (TASH); Hayatsay, 09.06.1969, *Mambetjumaev 164* (TASH); Hayatsay, valley opposite the village Hayat, 02.06.1981, *Mukhina* (TASH); Nuratau Nature Reserve, Parrandoz, 09.06.1982, *Mukhina 82023–025* (TASH, herbarium of the Nuratau Nature Reserve); Hayatsay, 28.05.1990, *Beshko, Yakovenko 90064–066* (herbarium of the Nuratau Nature Reserve); Hayatsay, Bedarak, 22.06.1992, *Beshko 92358–359* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 22.05.2008, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, rocky massif Parrandoz, 18.06.2010, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Fargun, 19.06.2010, *Beshko* (www.plantarium.ru); watershed between Hayatsay and Madjrumsay, 06.06.2011, *Beshko 11056–060* (TASH, herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 16.06.2019, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, watershed crest between valleys Hayat and Madjrum, 1820 m a.s.l., 16.06.2019, *Beshko* (TASH); Nuratau Nature Reserve, Hayatsay, 09.06.2020, *Ortikov*,

Pulatov, Turdiev, Juramurodov, Makhmudjanov 9062020675–76 (TASH); Nuratau Nature Reserve, Hayatsay, 17.05.2021, *Turdiev* (www.plantarium.ru); Mts. Koytash, upper reaches of Amandarasay, about 1600 m a.s.l., 19.05.2022, *Turdiev* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, about 1220 m a.s.l., 20.05.2022, *Turdiev* (www.plantarium.ru); Nuratau Nature Reserve, rocky massif Parrandoz, about 1450 m a.s.l., 23.05.2023, *Turdiev* (www.plantarium.ru). **I-4-b Aktau Range:** 3–4 km south of the pass Takhku, 29.06.1937, *Demurina* 342 (TASH); Navoi Region, Khatyrchi District, surroundings of the pass Langar, 40.34222° N, 66.01527° E, 18.05.2024, *Beshko* (www.inaturalist.org); surroundings of Langar, 04.06.2024, *Karimov* TD590 (TASH).

440. *Oxytropis tachtensis* Franch., Ann. Sci. Nat., Bot., sér. 6, 15: 263 (1883). Perennial, hemicryptophyte. Nuratau, Kuhistan (subendemic). Montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** 7 km north-east of the village Narvan, 21.05.1958, *Li, Zakirov* 697 (TASH); Mts. Koytash, northern slope, 28.06.1971, *Botschantzev, Kamelin* (LE); Mts. Koytash, southern slope, upstream of the village Koytash, 28.06.1971, *Botschantzev, Kamelin* (LE); Nuratau Nature Reserve, watershed between Hayatsay and Andygensay, 30.04.2021, *Turdiev* (www.plantarium.ru); [same locality], 30.04.2021, *Turdiev, Ortikov, Kurbaniyazova* 300420210157, 300420210159, 300420210163, 300420210164, 300420210173 (TASH); Nuratau Nature Reserve, top of Mt. Hayatbashi, 16.05.2021, *Turdiev, Ortikov, Juramurodov* TD16052021001–TD16052021007 (TASH); Nuratau Nature Reserve, watershed between Hayatsay and Andygensay, about 1620 m a.s.l., 20.05.2022, *Turdiev, Madaminov* TD20052022001, TD20052022002, TD20052022052, TD20052022053, TD20052022049 (TASH); [same locality], 20.05.2022, *Turdiev* (www.plantarium.ru); Hayatsay, 22.04.2023, *Beshko* (TASH, www.plantarium.ru); Nuratau Nature Reserve, surroundings of rocky massif Parrandoz, 23.05.2023, *Turdiev* (www.plantarium.ru); [same locality], 23.05.2023, *Turdiev* TD112–TD119 (TASH); Nuratau Nature Reserve, main watershed of Nuratau Range between Madjrum Pass and Mt. Hayatbashi, 25.05.2025, *Beshko* (TASH).

441. *Oxytropis trichocalycina* Bunge ex Boiss., Fl. Orient. 2: 502 (1872). Perennial, hemicryptophyte. Western Tien Shan, Western Pamir-Alay. Rocky areas. Montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** Nuratau Range, Farish District, 20.05.1941, *Momotov* (TASH); Mts. Koytash, on the watershed, 28.06.1971, *Botschantzev, Kamelin* (LE); Nuratau Nature Reserve, Bolosay, 16.05.1982, *Mukhina* (TASH); Karysay, 06.07.1990, *Beshko, Yakovenko* 90067 (herbarium of the Nuratau Nature Reserve, TASH); watershed between Karysay and Bolosay, Black Stone, 10.06.1993, *Beshko* 93071 (herbarium of the Nuratau Nature Reserve, TASH); Nuratau Nature Reserve, Hayatsay, 06.05.2010, *Beshko* (www.plantarium.ru); watershed between Sobsay and Sentobsay, 1435 m a.s.l., 40.58387° N 66.6237° E, 09.05.2013, *Beshko* (TASH); mountains Kichik Fazilman, near Fazilman Lake, 06.05.2020, *Akbarov, Turdiev, Juramurodov* 6052020110–111 (TASH); Nuratau Nature Reserve, surroundings of Mt. Hayatbashi, 16.05.2021, *Turdiev* (www.plantarium.ru); Nuratau Nature Reserve, top of Mt. Hayatbashi, 16.05.2021, *Turdiev, Ortikov, Juramurodov* TD16052021002, TD16052021010–TD16052021013 (TASH); Mts. Koytash, main watershed, upper reaches of Amandarasay, about 1800 m a.s.l., 19.05.2022, *Turdiev* (www.plantarium.ru); Nuratau Nature Reserve, top of Mt. Hayatbashi, 20.05.2022, *Turdiev, Madaminov* TD20052022003 (TASH); Nuratau Nature Reserve, watershed between Hayatsay and Madjrumsay, about 1830 m a.s.l., 15.05.2024, *Beshko* (www.plantarium.ru, www.inaturalist.org). **I-4-b Aktau Range:** top of Mt. Takhkuta, 07.05.1913, *Korovin* (TASH); Tutaksay, 17.06.1951, *Neustrujeva-Knorring, Cvetkova* (LE); near the village Langar, valley Yangokly, 21.05.1941, *Zakirov, Niyazov* (TASH); mountains Aktau, surroundings of top of Mt. Takhku, about 1800 m a.s.l., 21.05.2022, *Turdiev* (www.plantarium.ru); [same locality], 21.05.2022, *Turdiev, Madaminov* TD21052022049 (TASH).

Sophora L.

442. *Sophora alopecuroides* L. (*Vexibia alopecuroides* (L.) Yakovlev), Sp. Pl.: 373 (1753). Perennial, hemicryptophyte. Irano-Turanian. Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills. Rare. Native. **Occurrence records:** **I-4-b Khobduntau Range:** near Rostovtsevo station, 14.05.1909, *Androssov* (TASH); surroundings of Marjonbulak, bank of stream, 02.07.2021, *Beshko* (www.plantarium.ru); Samarkand Region, Dzhambay District, southern piedmonts of Khobduntau Range, bank of canal Payariq, 39.88031° N, 66.98098° E, 15.07.2023, *Beshko* (www.inaturalist.org).

443. *Sophora lehmannii* (Bunge) Yakovlev (*Ammothamnus lehmanni* Bunge), Trudy Leningradsk. Khim.-Farm. Inst. 17: 64 (1964). Subshrub, chamaephyte. Irano-Turanian. Desert. Plain. Rare. Native. **Occurrence records:** **I-4-b Aktau Range:** between well Pashat and Kara-Yuzgan, 25.04.1913, *Korovin 187a* (TASH). **I-4-b Karatau Range:** Kanimekh District, western part of Karatau Range, Tan-saray, 02.06.1964, *Pryakhin* (TASH).

444. *Sophora pachycarpa* Schrenk ex C.A.Mey. (*Vexibia pachycarpa* (C.A.Mey.) Yakovlev), Index Seminum (LE, Petropolitanus) 9: 89 (1843). Perennial, hemicryptophyte. Irano-Turanian. Desert, Forest, Shrubland, Grassland, Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** Urganchi, 29.04.1913, *Korovin* (TASH); village Ukhum, 19.05.1981, *Mukhina 81051* (herbarium of the Nuratau Nature Reserve); Yangikishlak, 26.06.1992, *Beshko 92452* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 20.06.2007, *Beshko* (www.plantarium.ru); Navoi Region, Nuratau Range, Sobsay, 08.06.2018, *Beshko* (www.plantarium.ru); northern piedmont plain of Nuratau Range (Farish Steppe), near the village Osmansay, 26.06.2019, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** Khatyrchi, 09.06.1928, *Lepeschkin* (TASH); northern slope of Aktau Range, Charkhansay, about 690 m a.s.l., 17.05.2024, *Beshko* (www.plantarium.ru, www.inaturalist.org). **I-4-b Karatau Range:** 6 km north of Kanimekh, 12.07.1934, *Tyshchenko* (TASH); valley Karakarga, 11.05.2014, *Tojibaev, Sun Hang et al. 17336* (TASH, KUN). **I-4-b Khobduntau Range:** reported by Kudrjashev in “Vegetation of the Khobduntau and Karachatau Mountains” (1929, p. 63). **I-4-c North-Nuratau insular low mountains:** Jizzakh Region, Farish District, northern slope of remnant mountains Pistalitu, 09.05.2024, *Beshko* (www.plantarium.ru, www.inaturalist.org).

Sphaerophysa DC.

445. *Sphaerophysa salsula* (Pall.) DC., Prodr. 2: 271 (1825). Perennial, hemicryptophyte. Siberian, Irano-Turanian. Wetlands (inland), Artificial aquatic. Plain. Rare. Native. **Occurrence records:** **I-4-b Aktau Range:** Khatyrchi District, 09.06.1928, *Lepeschkin* (TASH).

Trifolium Tourn. ex L.

446. *Trifolium campestre* Schreb. (*Chrysaspis campestris* (Schreb.) Desv.), Deutschl. Fl. Abbild. 4: 16 (1804). Annual, therophyte. European, Tethyan. Grassland, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Foothills, montane zone. Rare. Alien. **Occurrence records:** **I-4-a Nuratau Range:** Nuratau Nature Reserve, Madjrumsay, 29.05.2016, *Beshko* (TASH, www.plantarium.ru); Nuratau Nature Reserve, lower reaches of Madjrumsay, 06.06.2022, *Beshko* (TASH).

447. *Trifolium fragiferum* L. (*Trifolium neglectum* C.A.Mey.), Sp. Pl.: 772 (1753). Perennial, hemicryptophyte. Euro-Siberian, Tethyan. Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** Madjrumsay, 27.08.2003, *Beshko 03046* (herbarium of the Nuratau Nature Reserve); Hayatsay, field station of nature reserve, 07.07.2006, *Beshko 06217* (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** Khatyrchi District, 09.06.1928, *Lepeschkin* (TASH). **I-4-b Khobduntau Range:** surroundings of Marjonbulak, 02.07.2021, *Beshko* (www.plantarium.ru).

448. *Trifolium pratense* L., Sp. Pl.: 768 (1753). Perennial, hemicryptophyte. Pluriregional. Forest, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, the village Osmansay, 01.06.1931, *Kobranova* 480, 482 (TASH); gorge Alichaksay, 26.05.1969, *Mambetjumaev* 38 (TASH); Nuratau Nature Reserve, Hayatsay, 1200 m a.s.l., 10.08.1980, *Mukhina* (TASH); Hayatsay, 1991, *Maximova* 91030 (herbarium of the Nuratau Nature Reserve); Hayatsay, field station of nature reserve, 23.05.2006, *Beshko* 06284 (herbarium of the Nuratau Nature Reserve); Hayatsay, 22.05.2010, *Beshko* (www.plantarium.ru); Madjrumsey, 20.05.2017, *Beshko* (www.plantarium.ru); Madjrumsey, 31.08.2020, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** gardens on the outskirts of the town Koshrabad, 11.07.1956, *Vvedensky* 66 (TASH).

449. *Trifolium repens* L., Sp. Pl.: 767 (1753). Perennial, hemicryptophyte. Euro-Siberian, Tethyan. Forest, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Nature Reserve, Hayatsay, 1200 m a.s.l., 10.08.1980, *Mukhina* (TASH); Karysay, 22.06.1984, *Petrochenko* 84045–050 (herbarium of the Nuratau Nature Reserve); Hayatsay, 01.06.1990, *Beshko*, *Yakovenko* 90113 (herbarium of the Nuratau Nature Reserve); Hayatsay, 1991, *Maximova* 91029 (herbarium of the Nuratau Nature Reserve); Hayatsay, field station of nature reserve, 23.05.2006, *Beshko* 06283 (herbarium of the Nuratau Nature Reserve). **I-4-b Khobduntau Range:** reported by Kudrjashev in “Vegetation of the Khobduntau and Karachatau Mountains” (1929, p. 632).

Trigonella L.

450. *Trigonella grandiflora* Bunge, Arbeiten Naturf. Vereins Riga 1: 218 (1847). Annual, therophyte. Euro-Siberian, Tethyan. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Urganchi – Ak-Chap, *Iris* formation, 01.05.1913, *Korovin* 170 (TASH); 12 verst south of Jizzakh, 04.05.1928, *Sovetkina* 122 (TASH); Gallaaral District, Karakuduk, 05.06.1934, *Rybakov* (TASH); plain south of Kyzylcha, 17.04.1952, *Zaprometova* (TASH); Ambulatory Pass, 11.04.1958, *Zaprometova* 402 (TASH); mountains Nuratau, 26.04.1963, *Khaydarov* 70 (TASH); foothills of Nuratau, surroundings of Bogdon (Farish), 16.05.2009, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** Khatyrchi District, 05.05.1928, *Lepeschkin* (TASH). **I-4-b Karatau Range:** Nurata – Kyzyltepe, 21.04.1913, *Korovin* (TASH). **I-4-b Khobduntau Range:** Gallaaral State Farm, 0.5 km south of Milyutinskaya Station, 26.04.1930, *Tarasevich* 12 (TASH); Gallaaral District, experimental station of cereal crops, 25.05.1934, *Toporova* (TASH). **I-4-c North-Nuratau insular low mountains:** between Pistalitau and lake Tuzkan, 08.04.1911, *Dimo*, *Sprygin*, *Shulga* 212 (TASH); plain 7 km east of village Yangiabab, rainfed arable land, 26.04.2020, 14.04.2021, *Beshko*, *Shomurodov*, *Adilov* (plant community description); northern piedmonts of remnant mountains Uchkulach, 5–6 km east of the village Uzunkuduk, 26.04.2020, 14.04.2021, *Beshko*, *Shomurodov*, *Adilov* (plant community description); southern outskirts of the town Band, garden, 30.04.2020, 14.04.2021, *Beshko*, *Shomurodov*, *Adilov* (plant community description).

Vicia L.

451. *Vicia ervilia* (L.) Willd., Sp. Pl., ed. 4, 3: 1103 (1802). Annual, therophyte. Tethyan. Forest, Shrubland, Grassland, Artificial terrestrial. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Nature Reserve, Hayatsay, 28.04.2009, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 05.05.2012, *Beshko* (TASH).

452. *Vicia gracilior* (Popov) Popov, Fl. URSS 13: 467 (1948). Annual, therophyte. Hyrcanian, Mountain Middle Asian. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** 5 km north-west of the village Khukala, 17.05.1958, *Li*, *Zakirov* 534 (TASH); 3 km south-east of the village

Karysay, 19.05.1958, *Li, Zakirov 665* (TASH); 5 km south-east of the village Kokbulak, 23.05.1958, *Li, Zakirov 742* (TASH); Andygensay, Kachak, 17.04.1981, *Mukhina 81052* (TASH, herbarium of the Nuratau Nature Reserve); Bolosay, 25.04.1992, *Beshko 92070–071* (herbarium of the Nuratau Nature Reserve); Hayatsay, Zamezhak, 03.05.2000, *Beshko 00008–009* (herbarium of the Nuratau Nature Reserve); Hayatsay, 20.05.2006, *Beshko 06255–257* (herbarium of the Nuratau Nature Reserve); Hayatsay, Novi Khushk, 24.05.2006, *Beshko 06099–101* (herbarium of the Nuratau Nature Reserve).

453. *Vicia hyrcanica* Fisch. & C.A.Mey., Index Seminum (LE, Petropolitanus) 2: 53 (1836). Annual, therophyte. Irano-Turanian. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Sharaussay, 28.05.1956, *Zaprometova* (TASH); Nuratau Nature Reserve, Hayatsay, 15.05.2007, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 01.05.2009, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** Khatyrchi District, 15.05.1928, *Lepeschkin* (TASH).

454. *Vicia kokanica* Regel & Schmalh., Izv. Imp. Obshch. Lyubit. Estestv. Moskovsk. Univ. 34(2): 20 (1882). Perennial, hemicryptophyte. Western Tien Shan, Western Pamir-Alay. Shrubland, Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** upper reaches of Karysay, 06.07.1992, *Beshko 92380–382* (herbarium of the Nuratau Nature Reserve, TASH).

455. *Vicia michauxii* Spreng., Mant. Prim. Fl. Hal.: 48 (1807). Annual, therophyte. Irano-Turanian. Desert, Forest, Shrubland, Grassland, Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, Khotunon, 11.06.1992, *Beshko 92142* (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** 3 km west of the village Aktash, 12.05.1957, *Momotov, Li 353* (TASH).

456. *Vicia orientalis* (Boiss.) Bég. & Diratz. (*Lens culinaris* subsp. *orientalis* (Boiss.) Ponert, *L. orientalis* (Boiss.) Schmalh.), Contr. Fl. Armen.: 61 (1912). Annual, therophyte. Caucasian, Irano-Turanian. Forest, Shrubland, Grassland, Artificial terrestrial. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** 2 km north of Saurbel Pass, 27.04.1958, *Li, Zakirov 150* (TASH); Nuratau Range, mountains, 28.05.1963, *Khaydarov 1473* (TASH); Karysay, 29.04.1994, *Beshko 94015–016* (herbarium of the Nuratau Nature Reserve, TASH); Hayatsay, 07.05.1995, *Beshko 95032–034* (herbarium of the Nuratau Nature Reserve); Osmansay, 29.04.2011, *Beshko* (www.plantarium.ru).

457. *Vicia sativa* subsp. *nigra* (L.) Ehrh. (*V. angustifolia* L.), Hannover. Mag. 18: 229 (1780). Annual, therophyte. Pluriregional. Desert, Forest, Shrubland, Grassland, Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Sentobsay, 10.05.1958, *Li, Zakirov 457* (TASH); Karysay, 28.06.1984, *Petrochenko 84051* (herbarium of the Nuratau Nature Reserve); Bolosay, 08.05.1992, *Beshko 92429* (herbarium of the Nuratau Nature Reserve); middle reaches of Tykchasay, 25.04.1994, *Beshko 94013* (TASH, herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** Khatyrchi District, 05.05.1928, *Lepeschkin* (TASH); the village Bakhrin, 00.05.1929, *Lepeschkin* (TASH). **I-4-b Khobduntau Range:** 2 verst of Rostovtsevo station, 15.05.1909, *Androssov 62* (TASH).

458. *Vicia subvillosa* (Ledeb.) Boiss., Fl. Orient. 2: 580 (1872). Perennial, hemicryptophyte. Irano-Turanian. Forest, Shrubland, Grassland, Rocky areas. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Koshrabad, mountains Mirishkar, 05.05.1913, *Korovin 330, 345* (TASH); foothills of Nuratau Range on the latitude of town Jizzakh, 16.05.1928, *Sovetkina 230* (TASH); Kyzylcha State Farm, 15.04.1951, *Burygin* (TASH); Koblatysay, 04.04.1952, *Zaprometova* (TASH); valley 2.5 km south-east of Kyzylcha State Farm, 21.04.1954, *Zaprometova* (TASH); Gatchasay, 09.04.1955, *Zaprometova* (TASH); Karasay, 12.04.1955, *Zaprometova* (TASH); 2–3 km south-west of Kyzylcha State Farm, 17.05.1955, *Zaprometova* (TASH); near Kyzylcha State

Farm, 16.04.1955, *Zaprometova* 16, 33 (TASH); Sentobsay, 05.05.1956, *Zaprometova* (TASH); Alaysay, 25.03.1958, *Galkina* (TASH); Sharaussay, 26.03.1958, *Zaprometova* 132 (TASH); Gatchasay, 29.03.1958, *Zaprometova* 199 (TASH); nameless valley near Kyzylcha State Farm, 30.03.1958, *Zaprometova* 229, 242, 244 (TASH); Alaysay, 30.03.1958, *Zaprometova* 8 (TASH); 1 km west of Kyzylcha State Farm, 11.04.1958, *Galkina* (TASH); valley near Kyzylcha State Farm, 15.04.1958, *Galkina* (TASH); 5 km south-east of the village Upper Ukhum, near Ukhum Pass, south-south-east of the village Hayat, 30.04.1958, *Li, Zakirov* 256 (TASH); Ambulatory valley, the pass, 20.05.1960, *Zaprometova, Nikerov* 176 (TASH); southern slope of Mts. Zargar, 27.04.1979, *Pimenov, Boryaev, Kljuykov, Baranova, Vassiljeva* 84 (MW); Andygensay, Kachak, 17.04.1981, *Mukhina* 81053 (herbarium of the Nuratau Nature Reserve); Karysay, 28.04.1982, *Mukhina* 82026–028 (herbarium of the Nuratau Nature Reserve); Karysay, Pubsay, 17.04.1992, *Beshko* 92026 (TASH); Karysay, 19.04.1992, *Beshko* 92313 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 15.04.2009, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, Alichak, 04.05.2012, *Beshko* (TASH); Nuratau Nature Reserve, Hayatsay, 06.05.2012, *Beshko* (TASH); Farish district, watershed of Mts. Koytash, surroundings of Koytash Pass, 40.305271° N, 67.253046° E, 20.04.2013, *lougarou* (www.inaturalist.org); Farish district, Osmansay, 40.328665° N, 67.248565° E, 20.04.2013, *lougarou* (www.inaturalist.org). **I-4-b Aktau Range:** Khanbandy – Chuya, shistaceous mountain slopes, 02.05.1913, *Korovin* 202, 3505 (TASH). **I-4-b Karatau Range:** road Navoi – Nurata, Karakarga Pass, 24.04.1987, *Pimenov, Vassiljeva* 56 (MW).

459. *Vicia villosa* Roth., Tent. Fl. Germ. 2(2): 182 (1793). Annual, therophyte. Euro-Siberian, Tethyan. Forest, Grassland, Artificial terrestrial. Plain, foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, field station of nature reserve, 14.06.2007, *Beshko* 07008–009 (herbarium of the Nuratau Nature Reserve).

Rosaceae Juss.

Agrimonia L.

460. *Agrimonia eupatoria* subsp. *asiatica* (Juz.) Skalický (*Agrimonia asiatica* Juz.), Feddes Repert. 79: 35 (1968). Perennial, hemicyptophyte. Caucasian, Irano-Turanian, Siberian. Forest, Grassland, Artificial terrestrial. Foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Nature Reserve, lower reaches of Madjrumsay, 13.09.2014, *Beshko* (TASH).

Argentina Hill

461. *Argentina anserina* (L.) Rydb. (*Potentilla anserina* L.), Monogr. N. Amer. Potent. 2: 159 (1898). Perennial, hemicyptophyte. Circumtemperate. Wetlands (inland). Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** surroundings of Fazilman Lake, 1646 m a.s.l., 40°32'44" N, 66°35'46" E, 12.07.2019, *Beshko* (TASH, www.plantarium.ru).

Cotoneaster Medik.

462. *Cotoneaster multiflorus* Bunge, Fl. Altaic. 2: 220 (1830). Shrub, phanerophyte. Irano-Turanian. Forest, Shrubland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, slope, about 1300 m a.s.l., 04.08.1978, *unknown collector* (TASH); Hayatsay, at the fork Alichak – Novi Khushk, western slope, about 1250 m a.s.l., 09.08.1978, *unknown collector* (TASH); Hayatsay, slope, about 1200 m a.s.l., 10.08.1978, *unknown collector* (TASH); Nuratau Nature Reserve, Pubsay, 16.08.1980, *Mukhina* (TASH); Bolosay, 11.06.1996, *Beshko* 96076 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 25.09.2021, *Beshko* (www.plantarium.ru).

463. *Cotoneaster nummularioides* Pojark., Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk S.S.S.R. 16: 128 (1954). Shrub, phanerophyte. Irano-Turanian. Forest, Shrubland, Grassland, Rocky areas.

Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, slope, about 1300 m a.s.l., 04.08.1978, *unknown collector* (TASH).

464. *Cotoneaster nummularius* Fisch. & C.A.Mey., Index Seminum (LE, Petropolitanus) 2: 34 (1836). Shrub, phanerophyte. Irano-Turanian. Forest, Shrubland, Grassland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, 17.06.1990, *Beshko, Yakovenko 90034–040* (herbarium of the Nuratau Nature Reserve).

465. *Cotoneaster oliganthus* Pojark., Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk S.S.S.R. 8: 141 (1940). Shrub, phanerophyte. Mountain Middle Asian, Dzungarian. Forest, Shrubland, Grassland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Nature Reserve, Hayatsay, 25.09.2021, *Beshko* (www.plantarium.ru).

466. *Cotoneaster soongoricus* (Regel & Herder) Popov, Byull. Moskovsk. Obshch. Isp. Prir., Otd. Biol., n.s., 44(3): 128 (1935). Shrub, phanerophyte. Mountain Middle Asian, Dzungarian. Forest, Shrubland, Grassland, Rocky areas. Montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Sentobsay, 24.06.1971, *Botschantzev, Kamelin* (LE); Nuratau Nature Reserve, Guzhm, 17.08.1980, *Mukhina 25* (TASH); Guzhm, slope, 18.08.1980, *Mukhina 139* (TASH); Nuratau Nature Reserve, Hayatsay, 25.09.2021, *Beshko* (www.plantarium.ru).

467. *Cotoneaster suavis* Pojark., Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk S.S.S.R. 16: 118 (1954). Shrub, phanerophyte. Caucasian, Irano-Turanian. Forest, Shrubland, Rocky areas. Montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Nature Reserve, Hayatsay, 31.07.1980, *Mukhina 98* (TASH); Nuratau Nature Reserve, Hayatsay, Andebaraut, 19.05.2021, *Beshko, Madaminov NB2021245* (TASH). **I-4-b Aktau Range:** Mts. Aktau near the village Langar, 19–21.05.1941, *Zakirov, Niyazov* (TASH, SAM); mountains Bakhiltai, 10.05.2013, *Beshko* (TASH).

Crataegus L.

468. *Crataegus pontica* K.Koch., Verh. Vereins Beförd. Gartenbaues Königl. Preuss. Staaten 22: 269 (1853). Tree, phanerophyte. Caucasian, Irano-Turanian. Forest, Shrubland, Grassland. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** gorge Ukhum, 06.09.1932, *Knorring, Emme 167* (MW); Hayatsay, 07.07.1990, *Beshko, Yakovenko 90042–043* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 15.11.2014, *Beshko* (www.plantarium.ru); Kyzylkiya, near the village Jakak, 20.04.2020, *Beshko* (www.plantarium.ru); Ilonchisay, 24.09.2020, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 25.09.2021, *Beshko* (www.plantarium.ru). **I-4-b Khobduntai Range:** Bulungur District, Khobduntai, Ingichkasay, 1275 m a.s.l., 39°53'17.33" N, 67°18'07.41" E, *Beshko* (plant community description).

469. *Crataegus songarica* K.Koch., Verh. Vereins Beförd. Gartenbaues Königl. Preuss. Staaten 22: 287 (1853). Tree, shrub, phanerophyte. Irano-Turanian. Forest, Shrubland, Grassland, Rocky areas. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, 04.08.1978, *Korshunov* (TASH); Hayatsay, 10.08.1978, *Korshunov* (TASH); Nuratau Nature Reserve, Hayat, 12.08.1980, *Pjatina* (TASH); Bolosay, 26.04.1992, *Beshko 92419* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 05.09.2006, *Beshko 06292–293* (herbarium of the Nuratau Nature Reserve, www.plantarium.ru); Hayatsay, 14.05.2008, *Beshko 08022–23* (herbarium of the Nuratau Nature Reserve); Hayatsay, field station of Nuratau Nature Reserve, 06.05.2012, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Madjrumsay, 23.09.2017, *Beshko* (www.plantarium.ru); Nuratau District, Kichiksay, 29.10.2019, *Tillaev* (www.plantarium.ru); Nuratau Nature Reserve, upper reaches of Hayatsay, about 1200 m a.s.l., 22.04.2023, *Beshko* (www.plantarium.ru, www.inaturalist.org).

470. *Crataegus turkestanica* Pojark., Fl. URSS 9: 504 (1939). Tree, shrub, phanerophyte. Hyrcanian, Mountain Middle Asian. Forest, Shrubland, Grassland, Rocky areas. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Nature Reserve, Hayatsay, 10.08.1980, *Pjatina* (TASH); Nuratau Nature Reserve, Hayatsay, 05.09.2006, *Beshko 06290–291* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, Novi Khushk, 13.05.2009, *Beshko* (herbarium of the Nuratau Nature Reserve, www.plantarium.ru); Nuratau Nature Reserve, Madjrumsay, 18.04.2019, *Beshko* (www.plantarium.ru); Nuratau District, Kichiksay, 29.10.2019, *Tillaev* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 25.09.2021, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Madjrumsay, 26.09.2021, *Beshko* (www.plantarium.ru). **I-4-b Karatau Range:** Khatyrchi District, 05.05.1928, *Lepeschkin* (TASH); valley Karakarga, 15.09.2012, *Beshko, Karimov* (TASH). **I-4-b Khobduntau Range:** Bulungur District, Khobduntau, Ingichkasay, 1275 m a.s.l., 39°53'17.33" N, 67°18'07.41" E, *Beshko* (plant community description).

Geum L.

471. *Geum heterocarpum* Boiss. (*Orthurus heterocarpus* (Boiss.) Juz.), Biblioth. Universelle Genève 13: 408 (1838). Perennial, hemicryptophyte. Tethyan. Shrubland, Rocky areas, Wetlands (inland). Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, Novi Khushk, 06.05.1996, *Uhlich 96020* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, rocky massif Parrandoz, 11.05.2010, *Beshko* (www.plantarium.ru); Hayatsay, upper reaches of Novi Khushk, 31.05.2012, *Beshko* (TASH, www.plantarium.ru); Nuratau Nature Reserve, northern slope of Mt. Hayatbashi, 1950 m a.s.l., 19.05.2021, *Beshko, Madaminov NB2021233* (TASH).

472. *Geum kokanicum* Regel & Schmalh. (*Orthurus kokanicus* (Regel & Schmalh. ex Regel) Juz.), Izv. Imp. Obshch. Lyubit. Estestv. Moskovsk. Univ. 34(2): 24 (1882). Perennial, hemicryptophyte. Hyrcanian, Mountain Middle Asian. Shrubland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Gurdara, 23.06.1971, *Botschantzev, Kamelin* (LE); Hayatsay, 20.06.1990, *Beshko, Yakovenko 90044–046, 90129–130* (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** gorge Sangijuman, 25.05.1869, *Fedtschenko* (LE).

Hedlundia Sennikov & Kurtto

473. *Hedlundia persica* (Hedl.) Mezhenkyj (*Sorbus persica* Hedl.), NULESU Coll. Fruit Ornament. Pl.: 32 (2018). Tree, phanerophyte. Irano-Turanian. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Nature Reserve, 25.08.1980, *Pjatina* (TASH); Mt. Beshbarmak, 20.06.1992, *Beshko 92289* (TASH); Mt. Beshbarmak, 15.07.1993, *Beshko 93085* (herbarium of the Nuratau Nature Reserve); Tykchasay, Parrandoz, 24.06.2010, *Beshko* (TASH); Nuratau Nature Reserve, Karysay, northern piedmonts of rocky massif Parrandoz, 16.07.2017, *Beshko* (TASH, www.plantarium.ru).

Malus Mill.

474. *Malus sieversii* (Ledeb.) M.Roem. Syn. Rosifl. 216. (1830). Tree, phanerophyte. Mountain Middle Asian, Dzungarian. Forest, Shrubland, Rocky areas. Foothills, montane zone. Frequent. Native. IUCN RL (VU). **Occurrence records: I-4-a Nuratau Range:** Hayatsay, 01.06.1990, *Beshko, Yakovenko 90045–046* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 02.09.2017, *Beshko* (www.plantarium.ru); [same locality], 40.51422° N, 66.74192° E, 26.04.2024, *Beshko* (www.inaturalist.org).

Poterium L.

475. *Poterium sanguisorba* L. (*Poterium lasiocarpum* Boiss. & Hausskn. ex Boiss., *Poterium polygamum* Waldst. & Kitag.), Sp. Pl. 2: 994 (1753). Perennial, hemicryptophyte. Euro-Siberian, Tethyan. Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Foothills, montane zone.

Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, 20.05.1983, *Fominykh* 83040 (herbarium of the Nuratau Nature Reserve); Hayatsay, 28.05.1990, *Beshko, Yakovenko* 90052 (herbarium of the Nuratau Nature Reserve); Hayatsay, 20.05.2006, *Beshko* 06072–073 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 01.05.2009, *Beshko* (www.plantarium.ru); foothills of Nuratau, surroundings of Bogdon (Farish), 09.05.2010, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** Khanbandy – Chuya, 02.05.1913, *Korovin* (TASH).

Potentilla L.

476. *Potentilla pedata* Willd. ex Hornem., Hort. Bot. Hafn.: 477 (1815). Perennial, hemicryptophyte. Euro-Siberian, Tethyan. Forest, Shrubland, Grassland, Rocky areas. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Ustuksay, 03.06.1954, *Burygin* 325 (TASH); plateau Fazilmantau, 15.06.1969, *Mambetjumaev* 195 (TASH); Nuratau Nature Reserve, Hayatsay, 1200 m a.s.l., 13.07.1978, *Korshunov* (TASH); Hayatsay, Novi Mullo, 14.06.1990, *Beshko* 90090 (TASH, herbarium of the Nuratau Nature Reserve); Hayatsay, 07.07.1990, *Beshko, Yakovenko* 90047–050 (herbarium of the Nuratau Nature Reserve); Hayatsay, 20.05.2006, *Beshko* 06108–109 (herbarium of the Nuratau Nature Reserve); Hayatsay, Khotunon, 23.05.2006, *Beshko* 06052–053 (herbarium of the Nuratau Nature Reserve).

477. *Potentilla reptans* L., Sp. Pl.: 499 (1753). Perennial, hemicryptophyte. Euro-Siberian, Tethyan. Wetlands (inland). Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** the village Osmansay, 01.06.1931, *Kobranova* 483 (TASH); near the village Savryukbazar, 25.07.1931, *Kobranova* 207 (TASH); Balamansay, 30.07.1940, *Gomolitsky, Dolgikh, Arkhireev* 229 (TASH); Ustuksay, 12.07.1956, *Vvedensky* 112 (TASH); Koytash, southern slope, 28.06.1971, *Botschantzev, Kamelin* (LE); Nuratau Nature Reserve, Hayatsay, 1100 m a.s.l., 09.08.1980, *Mukhina* (TASH); Hayatsay, Zamezhak, 12.07.1990, *Beshko, Yakovenko* 90051 (herbarium of the Nuratau Nature Reserve); Hayatsay, Andebaraut, 22.05.2006, *Beshko* 06301–302 (TASH, herbarium of the Nuratau Nature Reserve); Madjrumsay, 26.09.2021, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** Khatyrchi District, 09.06.1928, *Lepeschkin* (TASH). **I-4-b Karatau Range:** Sarmysh, 05.06.1967, *students* 157 (TASH). **I-4-b Khobduntau Range:** Gumsay, 11.06.1929, *Kudrjashev* (TASH).

478. *Potentilla soongorica* Bunge, Fl. Altaic. 2: 244 (1830). Perennial, hemicryptophyte. Irano-Turanian, Himalayan. Shrubland, Grassland, Rocky areas. Montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Bolosay, 08.05.1992, *Beshko* 92520 (herbarium of the Nuratau Nature Reserve); Mt. Hayatbashi, 08.06.1992, *Beshko* 92115–117 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, watershed between Hayatsay and Madjrumsay, 09.05.2007, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Tykchasay, surroundings of Parrandoz Pass, 07.05.2012, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, watershed between Hayatsay and Andygensay, 13.04.2013, *Beshko* (TASH); Nuratau Nature Reserve, northern slope of Mt. Hayatbashi, 2145 m a.s.l., 19.05.2021, *Beshko, Madaminov* NB2021229 (TASH). **I-4-b Aktau Range:** top of Mt. Takhkuta, 07.05.1913, *Korovin* (TASH); Mts. Aktau near the village Langar, 21.05.1941, *Zakirov, Niyazov* (TASH, SAM); Charkhansay, about 800 m a.s.l., 17.05.2024, *Beshko* (TASH).

479. *Potentilla supina* L., Sp. Pl.: 497 (1753). Perennial, hemicryptophyte. Circumtemperate. Wetlands (inland). Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** upper reaches of Asrafsay, 11.06.1995, *Beshko* 95073–074 (herbarium of the Nuratau Nature Reserve); Hayatsay, Andebaraut, 22.05.2006, *Beshko* 06303–304 (TASH, herbarium of the Nuratau Nature Reserve).

480. *Potentilla virgata* Lehm. (*Potentilla dealbata* Bunge), Monogr. Potentill.: 75 (1820). Perennial, hemicryptophyte. Euro-Siberian, Irano-Turanian. Wetlands (inland). Montane zone. Rare. Native.

Occurrence records: I-4-a Nuratau Range: surroundings of Fazilman Lake, 05.07.2024, *Beshko* (TASH, www.inaturalist.org); shore of Fazilman Lake, 24.05.2025, *Beshko* (TASH).

Prunus L.

481. *Prunus amygdalus* Batsch (*Amygdalus communis* L.), Beytr. Entw. Gewächreich 1: 30 (1801). Tree, phanerophyte. Caucasian. Forest, Shrubland, Artificial terrestrial. Foothills, montane zone. Rare. Alien (introduced). **Occurrence records: I-4-a Nuratau Range:** Nuratau Nature Reserve, Alichak, 1400 m a.s.l., 10.08.1980, *Mukhina* (TASH); Karysay, 19.06.1992, *Beshko 92512* (herbarium of the Nuratau Nature Reserve).

482. *Prunus armeniaca* L. (*Armeniaca vulgaris* Lam.), Sp. Pl.: 474 (1753). Tree, phanerophyte. Mountain Middle Asian, Dzungarian. Forest, Shrubland, Artificial terrestrial. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, 07.07.2006, *Beshko 06222* (herbarium of the Nuratau Nature Reserve); Jizzakh Region, Farish District, 40.524536°N, 66.758395°E, 21.03.2008, *Beshko* (www.inaturalist.org); Navoi Region, Nurata District, Kichiksay gorge, 29.10.2019, *Tillaev* (www.plantarium.ru).

483. *Prunus bucharica* (Korsh.) B.Fedtsch. ex Rehder (*Amygdalus bucharica* Korsh.), Ann. K. K. Naturhist. Hofmus. 27: 70 (1913). Tree, shrub, phanerophyte. Western Tien Shan, Pamir-Alay. Forest, Shrubland, Grassland, Rocky areas. Foothills, montane zone. Dominant. IUCN RL (VU). **Occurrence records: I-4-a Nuratau Range:** 4 km from the village Khukala, 02.09.1932, *Knorring, Emme 152* (MW); Hayatsay, Zamezhak, 07.04.1992, *Beshko 92007* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Madjrum say, 26.03.2011, *Davkaev* (www.plantarium.ru); Hayatsay, 27.03.2011, *Gaziev* (www.plantarium.ru); Hayatsay, 23.07.2014, *Beshko* (www.plantarium.ru); Hayatsay, 15.03.2016, *Beshko* (www.plantarium.ru); Jizzakh Region, Farish District, 40.504625°N, 66.733821°E, 15.03.2016, *Beshko* (www.inaturalist.org); Gurdara, 17.03.2019, *Beshko* (www.plantarium.ru); lower reaches of Madjrum say, about 0.5 km from the village Madjrum, 15.06.2019, *Beshko* (TASH). Navoi Region, Nurata District, Kichiksay gorge, 29.10.2019, *Tillaev* (www.plantarium.ru); Navoi Region, Nurata District, 40.6168°N, 66.53139°E, 25.02.2020, *denisch* (www.inaturalist.org); Madjrum say, 23.03.2020, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 24.03.2020, *Beshko* (www.plantarium.ru); upper reaches of Osmansay, above Zangori Olov summer camp, 28.04.2020, *Beshko, Shomurodov, Adilov* (plant community description); upper reaches of Osmansay, upstream of the village Baland Osman, 28.04.2020, *Beshko, Shomurodov, Adilov* (plant community description); Jizzakh Region, Farish District, Nuratau Nature Reserve, Madjrum say, 40.58206°N, 66.72179°E, 23.03.2024, *Beshko* (www.inaturalist.org). **I-4-b Aktau Range:** Aktau Range, 29.06.1937, *Demurina 328* (TASH); Yangokly, 19–21.05.1941, *Zakirov, Niyazov* (TASH). **I-4-b Khobduntau Range:** Bulungur District, Khobduntau, Ingichkasay, 1275 m a.s.l., 39°53'17.33" N, 67°18'07.41" E, *Beshko* (plant community description).

484. *Prunus cerasifera* Ehrh. (*Prunus divaricata* Ledeb.), Gartenkalender 4: 190 (1785). Tree, phanerophyte. European, Caucasian, Irano-Turanian. Forest, Shrubland, Artificial terrestrial. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Andygensay, 18.07.1993, *Beshko 93346* (herbarium of the Nuratau Nature Reserve).

485. *Prunus cerasus* L. (*Cerasus vulgaris* Mill.), Sp. Pl.: 474 (1753). Tree, phanerophyte. Caucasian. Forest, Artificial terrestrial. Montane zone. Occasional. Alien (introduced). **Occurrence records: I-4-a Nuratau Range:** Nuratau Nature Reserve, Hayatsay, 1200 m a.s.l., 10.07.1978, *Korshunov* (TASH); Hayatsay, 08.04.2005, *Beshko 05002* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 06.04.2008, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 08.05.2014, *Tojibaev, Sun Hang et al. 17173* (TASH, KUN).

486. *Prunus domestica* L., Sp. Pl.: 475 (1753). Tree, phanerophyte. Hyrcanian. Forest, Artificial terrestrial. Montane zone. Rare. Alien (introduced). **Occurrence records: I-4-a Nuratau Range:** Nuratau Nature Reserve, Hayat, 1100 m a.s.l., 10.08.1980, *Pjatina* (TASH); Nuratau Nature Reserve, Hayatsay, 02.09.2018, *Beshko* (www.plantarium.ru).
487. *Prunus erythrocarpa* (Nevski) Gilli (*Cerasus erythrocarpa* Nevski), Feddes Repert. 72: 51 (1966). Shrub, phanerophyte. Hyrcanian, Mountain Middle Asian. Shrubland, Grassland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Nature Reserve, Hayatsay, Andebaraut, 25.06.2012, *Beshko* (TASH, www.plantarium.ru); Nuratau Nature Reserve, northern slope of Mt. Hayatbashi, 1975 m a.s.l., 19.05.2021, *Beshko*, *Madaminov NB2021231* (TASH).
488. *Prunus mahaleb* L. (*Cerasus mahaleb* (L.) Mill.), Sp. Pl.: 474 (1753). Tree, phanerophyte. European, Tethyan. Forest, Shrubland, Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** gorge Gurdara, 23.06.1971, *Botschantzev, Kamelin* (LE); Bolosay, gorge above a big waterfall, 30.06.1992, *Beshko 92419* (herbarium of the Nuratau Nature Reserve); Jizzakh Region, Farish District, gorge Gurdara, 40.51396°N, 66.91276°E, 24.04.2025, *Beshko* (www.inaturalist.org).
489. *Prunus spinosissima* (Bunge) Franch. (*Amygdalus spinosissima* Bunge), Ann. Sci. Nat., Bot., sér. 6, 16: 281 (1883). Shrub, phanerophyte. Hyrcanian, Mountain Middle Asian. Forest, Shrubland, Grassland, Rocky areas. Foothills, montane zone. Dominant. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau mountains, 24.07.1928, *Yakimova, Moskvina* (TASH); mountains Nuratau, 12.07.1956, *Vvedensky 82* (TASH); Hayatsay gorge, 30.05.1964, *Mambetjumaev 125* (TASH); foothills, lower reaches of Ukhumsay, 21.07.1983, *Petrochenko 83051–052* (herbarium of the Nuratau Nature Reserve); Jizzakh Region, Farish District, 40.339583°N, 67.219714°E, 22.06.2010, *Beshko* (www.inaturalist.org); Osmansay, 22.06.2010, *Beshko* (www.plantarium.ru); Jizzakh Region, Farish District, 40.533255°N, 66.77029°E, 24.06.2012, *Beshko* (www.inaturalist.org); Nuratau Nature Reserve, Hayatsay, 24.06.2012, *Beshko* (www.plantarium.ru); Farish district, Mts. Koytash, the pass between Osmansay and Ilonchisay, 40.318995° N, 67.254859° E, 20.04.2013, *Lougarou* (www.inaturalist.org); Jizzakh Region, Farish District, 40.536727°N, 66.760315°E, 13.03.2016, *Beshko* (www.inaturalist.org); Jizzakh Region, Farish District, 40.508915°N, 66.737202°E, 15.03.2016, *Beshko* (www.inaturalist.org); Jizzakh Region, Farish District, Gurdara, 40.524231°N, 66.921331°E, 17.03.2019, *Beshko* (www.plantarium.ru, www.inaturalist.org); Jizzakh Region, Gallaaral District, surroundings of Koytash, 40.259375°N, 67.343329°E, 06.04.2019, *Beshko* (www.plantarium.ru, www.inaturalist.org); Navoi Region, Nurata District, Kichiksay gorge, 29.10.2019, *Tillaev* (www.plantarium.ru); Nurata District, Kurgansay, upstream of the village Balaybokho, 40.655302°N, 66.552007°E, 25.02.2020, *denisch* (www.inaturalist.org); piedmonts of Mt. Karatash, 28.04.2020, *Beshko*, *Shomurodov, Adilov* (plant community description); upper reaches of Osmansay, above Zangori Olov summer camp, 28.04.2020, *Beshko*, *Shomurodov, Adilov* (plant community description); upper reaches of Osmansay, upstream of the village Baland Osman, 28.04.2020, *Beshko*, *Shomurodov, Adilov* (plant community description); Jizzakh Region, Farish District, Nuratau Nature Reserve, Madjrumsay, 40.58181°N, 66.7212°E, 23.03.2024, *Beshko* (www.inaturalist.org); Samarkand Region, Koshrabad District, Ustuksay, 40.538°N, 66.54108°E, 06.07.2024, *Beshko* (www.inaturalist.org). **I-4-b Aktau Range:** Khanbandy – Chuya, 02.05.1913, *Korovin* (TASH); valley Kokbulak, 01.07.1937, *Demurina 415* (TASH); the village Besh-Bulak, 03.07.1937, *Demurina 397* (TASH); Nurota district, Mts. Aktau, near the town Nurata, 40.549885° N, 65.68237° E, 18.04.2013, *Lougarou* (www.inaturalist.org); Navoi Region, Nurata District, Charkhansay, 40.46067°N, 65.79825°E, 17.05.2024, *Beshko* (www.inaturalist.org). **I-4-b Karatau Range:** between Beshrabort and Dekhibaland, Karakarga Pass, 21.04.1986, *Pimenov, Kljuykov, Vassiljeva, Melibaev 101* (MW); Bukhara Region, Gizhduvan District, western part of Karatau Range, 40.2867°N, 65.20979°E, 25.05.2024, *Beshko*

(www.inaturalist.org); Sarmysh, 40.30483°N, 65.61758°E, 22.03.2025, *nashka1205* (www.inaturalist.org). **I-4-b Khobduntau Range:** Jizzakh Region, Gallaaral District, Khobduntau Range, surroundings of the village Gobdun, 39.92264°N, 67.31533°E, 05.04.2014, *Beshko* (www.inaturalist.org); Bulungur District, Khobduntau, Ingichkasay, 1275 m a.s.l., 39°53'17.33" N, 67°18'07.41" E, *Beshko* (plant community description). **I-4-c North-Nuratau insular low mountains:** pass on the remnant range Pistalitau, 25.04.2020, *Beshko*, *Shomurodov*, *Adilov* (plant community description); crest of Egarbelistag, 27.04.2020, *Beshko*, *Shomurodov*, *Adilov* (plant community description); Jizzakh Region, Farish District, 4 km NNE of the village Uchkulach, 26.05.2023, *Fateryga* (www.plantarium.ru); Jizzakh Region, Farish District, Pistalitau, 40.54176°N, 67.39528°E, 09.05.2024, *Beshko* (www.inaturalist.org).

490. *Prunus verrucosa* Franch. (*Cerasus amygdaliflora* Nevski, *Cerasus verrucosa* (Franch.) Nevski), Ann. Sci. Nat., Bot., sér. 6, 16: 280 (1883). Shrub, phanerophyte. Mountain Middle Asian. Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Nature Reserve, Madjrumsay, 25.03.2016, *Beshko* (TASH, www.plantarium.ru); Nuratau Nature Reserve, watershed Hayat–Madjrum, about 1900 m a.s.l., 19.05.2021, *Beshko*, *Madaminov NB2021237* (TASH).

Pyrus L.

491. *Pyrus communis* L., Sp. Pl.: 479 (1753). Tree, phanerophyte. European, Caucasian. Forest, Artificial terrestrial. Montane zone. Rare. Alien (introduced). **Occurrence records: I-4-a Nuratau Range:** Hayatsay, 26.06.2008, *Beshko 08049* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 08.05.2014, *Tojibaev*, *Sun Hang et al. 17174* (TASH, KUN).

492. *Pyrus regelii* Rehder, J. Arnold Arbor. 20: 97 (1939). Shrub, phanerophyte. Hyrcanian, Mountain Middle Asian. Forest, Shrubland, Grassland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** southern slope of mountains Zargar, 26.04.1979, *Pimenov*, *Kljuykov*, *Boryaev*, *Baranova*, *Vassiljeva 72* (MW); Nuratau Nature Reserve, Karysay, 1200–1300 m a.s.l., 00.08.1980, *Pjatina*, *Mukhina* (TASH); Madjrumsay, 20.09.1991, *Beshko*, *Maximova 91004–005* (herbarium of the Nuratau Nature Reserve); Bolosay, 26.04.1992, *Beshko 92072* (herbarium of the Nuratau Nature Reserve); Karysay, Pubsay, 15.07.2010, *Beshko 10021* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, upper reaches of Madjrumsay, 30.06.2011, *Beshko* (www.plantarium.ru); Bolosay, Black Stone, 23.07.2010, *Beshko 10037* (herbarium of the Nuratau Nature Reserve, www.plantarium.ru); Nuratau Nature Reserve, upper reaches of Hayatsay, 26.05.2017 *Beshko* (www.plantarium.ru); rocky massif Parrandoz, 16.07.2017, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Karysay, Pubsay, 40.48094° N, 66.80801° E, 28.05.2023, *Beshko* (www.inaturalist.org).

Rosa L.

493. *Rosa achburensis* Chrshan., Sp. Pl.: 491 (1753). Shrub, phanerophyte. Western Tien Shan, Pamir-Alay. Forest, Shrubland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Nature Reserve, Hayatsay, 16.05.2008, *Beshko* (www.plantarium.ru).

494. *Rosa beggeriana* Schrenk (*Rosa lehmanniana* Bunge), Enum. Pl. Nov.: 73 (1841). Shrub, phanerophyte. Irano-Turanian. Forest, Shrubland, Wetlands (inland). Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Mt. Beshbarmak, 15.07.1993, *Beshko 93085* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 03.09.2007, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Madjrumsay, middle reaches, 16.08.2010, *Beshko* (TASH, herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Tykchasay, 14.08.2012, *Beshko* (TASH); Nuratau Nature Reserve, Hayatsay, 25.09.2021, *Beshko* (www.plantarium.ru).

495. *Rosa canina* L., Sp. Pl.: 491 (1753). Shrub, phanerophyte. Euro-Siberian, Tethyan. Forest, Shrubland, Grassland, Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Alichaksay, 26.05.1969, *Mambetjumaev* 7 (TASH); Nuratau Nature Reserve, Alichaksay, 10.08.1980, *Pjatina, Mukhina* (TASH); Hayatsay, 28.05.1990, *Beshko, Yakovenko* 90053 (herbarium of the Nuratau Nature Reserve); Sentobsay, 14.05.1993, *Beshko* 93094 (herbarium of the Nuratau Nature Reserve); Hayatsay, 19.05.2000, *Beshko* 00024 (herbarium of the Nuratau Nature Reserve); Navoi Region, Nurata District, Kichiksay gorge, 29.10.2019, *Tillaev* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 25.09.2021, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** Khatyrchi District, 28.08.1928, *Lepeschkin* (TASH). **I-4-b Khobduntau Range:** Khobduntau Range, 20.06.1929, *Kudrjashev* (TASH); Bulungur District, Khobduntau, Ingichkasay, 1275 m a.s.l., 39°53'17.33" N, 67°18'07.41" E, *Beshko* (plant community description).

496. *Rosa corymbifera* Borkh., Vers. Forstbot. Beschr.: 319 (1790). Shrub, phanerophyte. Euro-Siberian, Tethyan. Forest, Shrubland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Koytash, southern slope, thickets in montane zone together with *R. kokanica* and *R. maracandica*, 28.06.1971, *Botschantzev, Kamelin* (LE).

497. *Rosa kokanica* (Regel) Regel ex Juz., Fl. URSS 10: 476 (1941). Shrub, phanerophyte. Irano-Turanian. Forest, Shrubland, Artificial terrestrial. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Koytash, southern slope, thickets in montane zone, 28.06.1971, *Botschantzev, Kamelin* (LE); Karysay, surroundings of village Ukhum, 13.05.2010, *Beshko* (herbarium of the Nuratau Nature Reserve, www.plantarium.ru).

498. *Rosa persica* Michaut ex Juss. (*Hulthemia persica* (Michx. & Juss.) Bornm.). Shrub, phanerophyte. Irano-Turanian. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Ukhum, 01.05.1892, *Komarov* (LE); Hayatsay, 30.05.1990, *Beshko, Yakovenko* 90011 (herbarium of the Nuratau Nature Reserve); Yangikishlak, surroundings of the office of Nuratau Nature Reserve, 05.05.2002, *Beshko* 02059 (herbarium of the Nuratau Nature Reserve); foothills of Nuratau, surroundings of Bogdon (Farish), 25.04.2006, *Beshko* (www.plantarium.ru); Hayatsay, surroundings of the village Upper Hayat, 24.04.2008, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 08.05.2014, *Tojibaev, Sun Hang et al.* 17212 (TASH, KUN). **I-4-b Aktau Range:** Bakhrin, 18.04.1915, *Fedtschenko* (LE).

499. *Rosa* × *piptocalyx* Juz., Fl. URSS 10: 637 (1941). Shrub, phanerophyte. Pamir-Alay. Montane zone. Rare. Native. **Occurrence records: I-4-b Aktau Range:** stony slope in the valley Kokbulak, 01.07.1937, *Demurina* 422 (TASH).

500. *Rosa webbiana* Wall. ex Royle (*Rosa maracandica* Bunge, *R. nanothamnus* Boulenger), Beitr. Fl. Russl.: 119 (1852). Shrub, phanerophyte. Irano-Turanian, Himalayan. Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** pass through Nuratau to Sauk-bulak, 03.08.1931, *Kasimenko* (TASH); 2-nd pass near Deristan, 09.09.1932, *Knorring, Emme* 178 (MW); Sob Pass, 04.08.1940, *Gomolitsky, Dolgikh, Arkhireev* 279 (TASH); Nuratau Range, Farish District, 20.05.1941, *Momotov* (TASH); Ustuksay, 12.07.1956, *Vedensky* 94 (TASH); Koytash, southern slope, thickets in montane zone, 28.06.1971, *Botschantzev, Kamelin* (LE); Nuratau Nature Reserve, Hayatsay, slope, about 1400 m a.s.l., 03.08.1980, *Mukhina* (TASH); Nuratau Nature Reserve, Hayatsay, about 1500 m a.s.l., 08.08.1980, *Mukhina* (TASH); Hayatsay, Alichak, 01.06.1990, *Beshko, Yakovenko* 90054 (herbarium of the Nuratau Nature Reserve); Hayatsay, Bedarak, 22.06.1992, *Beshko* 92482 (herbarium of the Nuratau Nature Reserve); Bolosay, rocks above the waterfall, 30.06.1992, *Beshko* 92498 (herbarium of the Nuratau Nature Reserve); Karysay, Chashmi Mullo, 11.06.1993, *Beshko* 93080 (herbarium of the Nuratau Nature Reserve).

Reserve); Tykchasay, 18.07.1994, *Beshko* 94095 (herbarium of the Nuratau Nature Reserve); Karysay, Pubsay, 30.06.1995, *Beshko* 95110-111 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 23.05.2006, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Tykchasay, surroundings of Parrandoz Pass, 18.06.2010, *Beshko* (www.plantarium.ru); Hayatsay, 27.03.2011, *Gaziev* (www.plantarium.ru); Ustuksay, 10.06.2013, *Beshko* (www.plantarium.ru); Gallaaral District, near the village Koytash, 40.254999°N, 67.343566°E, 22.05.2019, *Yusupov* (www.plantarium.ru, www.inaturalist.org); Navoi Region, Nurata District, Kichiksay gorge, 29.10.2019, *Tillaev* (www.plantarium.ru); Nurata District, Kurgansay, upstream of the village Balaybokho, 40.662085°N, 66.572742°E, 22.02.2020, *denish* (www.inaturalist.org); Nuratau Nature Reserve, Hayatsay, 30.05.2020, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 25.09.2021, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** Khanbandy – Chuya, 02.05.1913, *Korovin* (TASH); 6–8 km south of mountains Takhku, 29.06.1937, *Demurina* 317, 322 (TASH); Aktau Range, 01.07.1937, *Demurina* 405 (TASH); stony slope in the valley Kokbulak, 01.07.1937, *Demurina* 423 (TASH); on the meridian to the village Besh-bulak at the granite outcrops, 03.07.1937, *Demurina* 399 (TASH); mountains Bakhiltai, 10.05.2013, *Beshko* (TASH). **I-4-b Khobduntau Range:** upper reaches of river Bodbod, 20.06.1929, *Kudrjashev* (TASH); Bulungur District, Khobduntau, Ingichkasay, 1275 m a.s.l., 39°53'17.33" N, 67°18'07.41" E, *Beshko* (plant community description).

Rubus L.

501. *Rubus caesius* L., Sp. Pl.: 493 (1753). Shrub, phanerophyte. Euro-Siberian, Tethyan. Forest, Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** Sentob gorge, 31.07.1928, *Yakimova* 1289 (TASH); Hayatsay gorge, 11.06.1969, *Mambetjumaev* 183 (TASH); Nuratau Nature Reserve, Hayatsay, 1000 m a.s.l., 31.07.1980, *Mukhina* (TASH); Hayatsay, field station of Nuratau Nature Reserve, 23.05.2006, *Beshko* 06282 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, upper reaches of Tykchasay, 27.07.2016, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Madjrumsay, 31.08.2020, *Beshko* (www.plantarium.ru); Farish District, Hayatsay, 40.525063°N, 66.768492°E, 31.08.2020, *Beshko* (www.inaturalist.org); Jizzakh Region, Farish District, gorge Gurdara, 40.51389°N, 66.91268°E, 24.04.2025, *Beshko* (www.inaturalist.org); Nuratau Nature Reserve, Madjrumsay, 40.58347°N, 66.72662°E, 03.05.2025, *Beshko* (www.inaturalist.org). **I-4-b Khobduntau Range:** reported by Kudrjashev in “Vegetation of the Khobduntau and Karachatau Mountains” (1929, p. 62).

502. *Rubus creticus* Tourn. ex L. (*Rubus anatolicus* (Focke) Focke ex Hausskn.), Fl. Palaest.: 15 (1756). Shrub, phanerophyte. Eastern Mediterranean, Western Irano-Turanian. Forest, Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Rare. Alien (introduced). **Occurrence records:** **I-4-a Nuratau Range:** Osmansay, the village Baland Osman, 02.07.2020, *Beshko* (field observation); Samarkand Region, Koshrabad District, upstream of the village Baypurushli, 40.42620°N, 66.68581°E, 25.05.2025, *Beshko* (www.inaturalist.org). **I-4-c North-Nuratau insular low mountains:** northern piedmonts of Pistalitau, surroundings of village Yangiabad, near an artesian well, 11.11.2019, *Beshko* (field observation).

Sibbaldianthe Juz.

503. *Sibbaldianthe orientalis* (Juz. ex Soják) Mosyakin & Shiyan (*Potentilla orientalis* Juz.), Phytotaxa 296(2): 110 (2017). Perennial, hemicryptophyte. Euro-Siberian, Irano-Turanian. Grassland, Rocky areas, Wetlands (inland). Montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** upper reaches of Ustuksay, 09.06.2013, *Beshko* (TASH, www.plantarium.ru).

Elaeagnaceae Juss.

Elaeagnus L.

504. *Elaeagnus angustifolia* L., Sp. Pl.: 121 (1753). Tree, phanerophyte. Euro-Siberian, Tethyan. Forest, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Sentob, 09.05.1912, *Polotsky* (LE); Karysay, 21.08.1980, *Mukhina 80027* (herbarium of the Nuratau Nature Reserve); Hayatsay, 03.04.1991, *Beshko, Yakovenko 91080* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 05.09.2006, *Beshko* (www.plantarium.ru); Jizzakh Region, Farish District, Hayatsay, 40.525269°N, 66.763707°E, 11.09.2006, *Beshko* (www.inaturalist.org); Hayatsay, 18.05.2008, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** valley Kokbulak, 01.07.1937, *Demurina 388* (TASH).

Rhamnaceae Juss.*Rhamnus* L.

505. *Rhamnus cathartica* L., Sp. Pl.: 193 (1753). Tree, shrub, phanerophyte. Euro-Siberian, Irano-Turanian. Forest, Shrubland, Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Asrafsay, 04.06.1996, *Beshko 96111–112* (herbarium of the Nuratau Nature Reserve); Bolosay, gorge above of the big waterfall, 13.06.1996, *Beshko 96161* (herbarium of the Nuratau Nature Reserve).

506. *Rhamnus songorica* Gontsch. (*Rhamnus coriacea* (Regel) Kom.). Shrub, phanerophyte. Mountain Middle Asian, Dzungarian. Shrubland, Rocky areas. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Koshrabad, Mt. Mirishkar, 05.05.1913, *Korovin* (TASH); Madjrumsay, Fashtak, 17.07.2010, *Beshko 10017* (herbarium of the Nuratau Nature Reserve); Sobsay, 09.05.2013, *Beshko* (TASH, www.plantarium.ru); Sobsay, 07.06.2018, *Beshko* (TASH, www.plantarium.ru); Navoi Region, Nurata District, Sob Pass, 40.61569° N, 66.57516° E, *Beshko* (www.inaturalist.org). **I-4-b Aktau Range:** Khanbandy – Chuya, 02.05.1913, *Korovin 204* (TASH); south of the well Uzunkuduk, 02.08.1937, *Mironov 97* (TASH); mountains Aktau, 3 km west of the village Aktash, 12.05.1957, *Momotov, Li 368* (TASH).

Sageretia Brongn.

507. *Sageretia thea* (Osbeck) M.S.Johnst. (*Sageretia laetevirens* (Kom). Gontsch.), J. Arnold Arbor. 49: 378 (1968). Shrub, phanerophyte. Tethyan. Shrubland, Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** valley Sentob, right side, near ruins Kurgan, lateral watershed, 24.06.1983, *Bulgakova* (TASH); valley Sentob, left side, opposite ruins Kurgan, watershed crest, 29.06.1983, *Bulgakova* (TASH); upper reaches of Madjrumsay, 19.09.1991, *Beshko 91102* (herbarium of the Nuratau Nature Reserve).

Ulmaceae Mirb.*Celtis* L.

508. *Celtis caucasica* Willd., Sp. Pl., ed. 4, 4: 994 (1806). Tree, phanerophyte. Caucasian, Irano-Turanian. Forest, Shrubland, Rocky areas. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, 1979, *Korshunov 79010–012* (herbarium of the Nuratau Nature Reserve); Madjrumsay, 12.08.1983, *Petrochenko 83058* (herbarium of the Nuratau Nature Reserve); Madjrumsay, ruins of the village, 21.04.2010, *Beshko* (www.plantarium.ru); Madjrumsay, 18.07.2010, *Beshko* (www.plantarium.ru); Gurdara, valley, 03.05.2012, *Beshko* (TASH); Navoi Region,

Nurata District, Kichiksay gorge, 29.10.2019, *Tillaev* (www.plantarium.ru); Nuratau Nature Reserve, Gurdara, 04.04.2022, *Beshko* (www.plantarium.ru); eastern part of the range Nuratau, 4 km south-west of the village Gandumtosh, northern slope, about 700 m a.s.l., 15.07.2023, *Beshko* (www.plantarium.ru).

Ulmus L.

509. *Ulmus glabra* Huds., Fl. Angl.: 95 (1762). Tree, phanerophyte. Euro-Siberian, Caucasian. Forest, Artificial terrestrial. Foothills, montane zone. Occasional. Alien (introduced). **Occurrence records: I-4-a Nuratau Range:** Madjrumsay valley, 26.08.2010, *Beshko* (TASH). **Khobduntau Range:** upper reaches of river Bodbod, 20.06.1929, *Kudrjashev* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 07.04.1911, *Dimo, Sprygin, Shulga 1060* (TASH).

510. *Ulmus laevis* Pall., Fl. Ross. 1(1): 75 (1784). Tree, phanerophyte. Euro-Siberian, Caucasian. Forest, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Alien (introduced). **Occurrence records: I-4-a Nuratau Range:** Hayatsay, 07.07.2006, *Beshko 06221* (herbarium of the Nuratau Nature Reserve).

511. *Ulmus minor* Mill., Gard. Dict. ed. 8: n.º 6 (1768). Tree, phanerophyte. Euro-Siberian, Tethyan. Forest, Shrubland, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** upper reaches of Karysay, Chashmi Mullo, 22.07.2010, *Beshko 10117* (herbarium of the Nuratau Nature Reserve); Madjrumsay valley, 16.08.2010, *Beshko* (TASH, www.plantarium.ru).

512. *Ulmus pumila* L., Sp. Pl.: 226 (1753). Tree, shrub, phanerophyte. Siberian, Eastern Irano-Turanian, Oriental. Forest, Shrubland, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Alien (introduced). **Occurrence records: I-4-a Nuratau Range:** 3 km north-east of the village Narvan, 21.05.1958, *Li, Zakirov 687, 688* (TASH); Gurdara, valley, 23.06.1971, *Botschantzev, Kamelin* (LE).

Moraceae Gaudich.

Morus L.

513. *Morus alba* L., Sp. Pl.: 986 (1753). Tree, phanerophyte. Oriental. Forest, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Alien (introduced). **Occurrence records: I-4-a Nuratau Range:** Hayatsay, 04.08.1978, *Korshunov 78030* (herbarium of the Nuratau Nature Reserve); Hayatsay, field station of nature reserve, 07.07.2006, *Beshko 06226* (herbarium of the Nuratau Nature Reserve); Gurdara, 03.05.2012, *Beshko* (www.plantarium.ru); Madjrumsay, 03.05.2014, *Beshko* (www.plantarium.ru); Navoi Region, Nurata District, Kichiksay gorge, 29.10.2019, *Tillaev* (www.plantarium.ru); Hayatsay, 25.09.2021, *Beshko* (www.plantarium.ru); Navoi Region, Nurata District, near the village Simbulak, 31.05.2023, *Fateryga* (www.plantarium.ru).

514. *Morus nigra* L., Sp. Pl.: 986 (1753). Tree, phanerophyte. Hyrcanian. Forest, Artificial terrestrial. Plain, foothills, montane zone. Rare. Alien (introduced). **Occurrence records: I-4-a Nuratau Range:** Gurdara, abandoned gardens, 23.06.1971, *Botschantzev, Kamelin* (LE); Sentob, abandoned gardens, 24.06.1971, *Botschantzev, Kamelin* (LE); Karysay, Kazhum, 22.07.1992, *Beshko 92591* (herbarium of the Nuratau Nature Reserve); Hayatsay, field station, 07.07.2006, *Beshko 06226* (herbarium of the Nuratau Nature Reserve).

Urticaceae Juss.

Parietaria L.

515. *Parietaria debilis* G.Forst (*Parietaria micrantha* Ledeb.), Fl. Ins. Austr.: 73 (1786). Annual, therophyte. Pluriregional. Forest, Rocky areas, Wetlands (inland). Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** upper reaches of Ustusay, 29.05.1964, *Zuckerwanik* 355 (TASH); Nuratau Nature Reserve, Hayatsay, Andebaraut, 21.05.2011, *Beshko* 11035 (TASH, herbarium of the Nuratau Nature Reserve).

516. *Parietaria lusitanica* subsp. *serbica* (Pančić) P.W.Ball (*Parietaria serbica* Pančić), Feddes Repert. Spec. Nov. Regni Veg. 68: 186. (1963). Annual, therophyte. Tethyan. Rocky areas, Wetlands (inland). Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Koblatysay, 06.04.1958, *Zaprometova* 331 (TASH); gorge Gurdara, 23.06.1971, *Botschantzev, Kamelin* (LE); Hayatsay, about 1000 m a.s.l., 14.05.2024, *Beshko* (www.plantarium.ru, www.inaturalist.org).

Urtica L.

517. *Urtica dioica* L., Sp. Pl.: 984 (1753). Perennial, hemicryptophyte. Pluriregional. Forest, Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** valley Sentobsay, upper reaches, 06.08.1940, *Gomolitsky, Yakovlev* (TASH); gorge Gurdara, along the valley of stream, 23.06.1971, *Botschantzev, Kamelin* (LE); Hayatsay, 23.05.2006, *Beshko* 06285 (herbarium of the Nuratau Nature Reserve); Hayatsay, 12.06.2008, *Beshko* (www.plantarium.ru); Jizzakh Region, Farish District, Hayatsay, field station of nature reserve, 40.52705° N, 66.77483° E, 28.05.2023, *Beshko* (www.inaturalist.org); Nuratau Nature Reserve, Hayatsay, 14.05.2024, *Beshko* (www.plantarium.ru).

Juglandaceae DC. ex Perleb

Juglans L.

518. *Juglans regia* L., Sp. Pl.: 997 (1753). Tree, phanerophyte. Irano-Turanian. Forest, Artificial terrestrial. Montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Tykchasay, 3–7 south of the village Yukary Ukhum, 02.05.1958, *Li, Zakirov* 278 (TASH); Sentobsay gorge, 15.06.1969, *Mambetjumaev* 196 (TASH); Hayatsay, 09.08.1980, *Pjatina* 80018–019 (herbarium of the Nuratau Nature Reserve); Hayatsay, 26.04.2006, *Beshko* (www.plantarium.ru); Hayatsay, 07.07.2006, *Beshko* 06220 (herbarium of the Nuratau Nature Reserve); Hayatsay, 05.09.2006, *Beshko* (www.plantarium.ru); Tykchasay, 25.04.2007, *Beshko* (www.plantarium.ru); Hayatsay, 01.06.2008, *Beshko* (www.plantarium.ru); Hayatsay, 22.10.2009, *Beshko* (www.plantarium.ru); Ilonchisay, 15.10.2011, *Beshko* (www.plantarium.ru); Hayatsay, 01.06.2013, *Beshko* (www.plantarium.ru); Hayatsay, 29.03.2014, *Beshko* (www.plantarium.ru); Hayatsay, 25.09.2021, *Beshko* (www.plantarium.ru, www.inaturalist.org); Jizzakh Region, Farish District, Nuratau Nature Reserve, Madjrumsay, 40.56369° N, 66.71597° E, 16.09.2023, *Beshko* (www.inaturalist.org).

Cucurbitaceae Juss.

Bryonia L.

519. *Bryonia alba* L., Sp. Pl.: 1012 (1753). Perennial, hemicryptophyte, climber. European, Mediterranean. Shrubland, Rocky areas. Foothills, montane zone. Rare. Alien. **Occurrence records: I-4-b Aktau Range:** Navoi Region, Nurata District, Charkhansay, 40.45951°N, 65.79775°E, 17.05.2024, *Beshko* (TASH, www.inaturalist.org).

520. *Bryonia cretica* subsp. *dioica* (Jacq.) Tutin (*Bryonia dioica* Jacq.), Feddes Repert. 79: 61 (1968). Perennial, hemicryptophyte, climber. European, Mediterranean. Rocky areas, Wetlands (inland).

Foothills, montane zone. Rare. Alien. **Occurrence records: I-4-a Nuratau Range:** Nurata State Farm, 1943, *Zakirov* (LE).

Datisceae Dumort.

Datisca L.

521. *Datisca cannabina* L., Sp. Pl.: 1037 (1753). Perennial, hemicryptophyte. Irano-Turanian. Wetlands (inland). Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Nature Reserve, Farishsay, about 1100 m a.s.l., 25.07.1980, *Mukhina* (TASH); Farishsay, 29.07.1980, *Mukhina* (TASH); Madjrumsay, 14.08.1983, *Petrochenko* 83037–039 (herbarium of the Nuratau Nature Reserve); Madjrumsay, 12.07.2007, *Beshko* (www.plantarium.ru); Jizzakh Region, Farish District, Madjrumsay, 40.582071°N, 66.724081°E, 31.08.2020, *Beshko* (www.plantarium.ru, www.inaturalist.org); Jizzakh Region, Farish District, Madjrumsay, 40.57951°N, 66.72259°E, 16.09.2023, *Beshko* (www.inaturalist.org). **I-4-b Khobduntau Range:** reported by Kudrjashev in “Vegetation of the Khobduntau and Karachatau Mountains” (1929, p. 64).

Hypericaceae Juss.

Hypericum L.

522. *Hypericum perforatum* L., Sp. Pl.: 785 (1753). Perennial, hemicryptophyte. Palearctic. Forest, Shrubland, Grassland, Rocky areas, Wetlands (inland). Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Koshrabad, Mt. Mirishkar, 05.05.1915, *Korovin* (TASH); Mts. Koytash, the village Osmansay, 25.05.1931, *Kobranova* (TASH); Payaryk District, 1 km south of the village Ugat, 21.07.1931, *Kobranova* 176 (TASH); Payaryk District, near the village Savryukbazar, 25.07.1931, *Kobranova* 203 (TASH); Mts. Koytash, northern slope, 29.07.1931, *Kobranova* (TASH); Hayatsay, 13.07.1978, *Korshunov* 78003–004 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, about 1300 m a.s.l., 04.08.1980, *Mukhina* (TASH); Hayatsay, 13.07.1983, *Baskakova* 83012 (herbarium of the Nuratau Nature Reserve); surroundings of Farish, Karl Marx collective farm, 1984, *Yuldashev* (TASH); near the village Garasha, 1984, *Yuldashev* (TASH); Hayatsay, Novi Khushk, 24.05.2006, *Beshko* 06247–248 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 12.06.2008, *Beshko* (www.plantarium.ru); Jizzakh Region, Farish District, Madjrumsay, 40.581827°N, 66.723649°E, 29.05.2016, *Beshko* (www.inaturalist.org); Jizzakh Region, Farish District, Hayatsay, 40.519152°N, 66.730976°E, 16.06.2019, *Beshko* (www.inaturalist.org, www.plantarium.ru). **I-4-b Karatau Range:** near the village Sarmysh, 05.06.1967, *Pryakhin* (TASH). **I-4-b Khobduntau Range:** reported by Kudrjashev in “Vegetation of the Khobduntau and Karachatau Mountains” (1929, p. 64).

523. *Hypericum scabrum* L., Cent. Pl. I: 25 (1755). Perennial, hemicryptophyte. Caucasian, Irano-Turanian. Forest, Shrubland, Grassland, Rocky areas. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Koshrabad, Mt. Mirishkar, 05.05.1915, *Korovin* 310 (TASH); Mts. Koytash, southern slope, 23.07.1931, *Kobranova* 67 (TASH); Nuratau mountains, north-western slopes, 20.07.1931, *Kobranova* 24 (TASH); Mts. Koytash, north-western slope, 23.07.1931, *Kobranova* 55 (TASH); 2–3 km north-west of the village Kokbulak, 18.07.1937, *Demurina* 588 (TASH); Koytash Mts., southern slopes, upper reaches of Garashasay, 20.07.1937, *Demurina* 633 (TASH); Tykchabel Pass, 02.08.1940, *Gomolitsky*, *Dolgikh*, *Arkhireev* 240 (TASH); Nuratau Range, Farish District, 18.05.1941, *Momotov* (TASH); Karl Marx State Farm, basin of Narvansay, 22.05.1967, *Perelygina* (TASH); gorge Alichaksay, 26.05.1969, *Mambetjumaev* 31 (TASH); Hayatsay gorge, 01.06.1969, *Mambetjumaev* 31 (TASH); north slopes of Nuratau Range, 2–3 km south-west of the

village Kulbasay, 27.06.1973, *unknown collector* (TASH); Nuratau Nature Reserve, Karysay, slope, about 1500 m a.s.l., 05.08.1980, *Mukhina* (TASH); Hayatsay, 29.05.1990, *Beshko, Yakovenko 90078–079* (herbarium of the Nuratau Nature Reserve); Hayatsay, 20.05.2006, *Beshko 06083–084* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, watershed between Hayatsay and Madjrumsay, 22.05.2011, *Beshko* (www.plantarium.ru); upper reaches of Ustuksay, 08.06.2013, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 08.05.2014, *Tojibaev, Sun Hang et al. 17215* (TASH, KUN); Jizzakh Region, Farish District, Hayatsay, 40.51917°N, 66.74833°E, 02.06.2022, *Selyutina* (www.inaturalist.org); Jizzakh Region, Farish District, Nuratau Nature Reserve, Hayatsay, 40.500965° N 66.732767° E, 27.05.2023, *Beshko* (www.inaturalist.org); Nuratau Nature Reserve, Pubsay, foot of Mt. Parrandoz, 40.48386° N 66.80434° E, 28.05.2023, *Beshko* (www.inaturalist.org); Jizzakh Region, Farish District, Karysay, 40.51571°N, 66.78761°E, 13.05.2024, *langli* (www.inaturalist.org). **I-4-b Aktau Range:** near the village Shamaly, 27.05.1925, *Popov 350* (TASH); Aktau, south of well Uzunkuduk, 02.08.1937, *Mironov 91* (TASH); mountains Aktau, May 1963, *Khaydarov 602* (TASH); mountains Aktau, 29.05.1963, *Khaydarov 1564* (TASH). **I-4-b Khobduntau Range:** reported by Kudrjashev in “Vegetation of the Khobduntau and Karachatau Mountains” (1929, p. 64).

Violaceae Batsch

Viola L.

524. *Viola occulta* Lehm., Index Seminum (HBG, Hamburgensis) 1829: 9 (1829). Annual, therophyte. Pontic, Caucasian, Irano-Turanian. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Asrafsay, 10.05.1956, *Zaprometova 97* (TASH); Sentob, 0.5 km south of the village Yukary-Kurgan, 11.05.1958, *Li, Zakirov 512* (TASH); 6 km north-west of the village Khukala, 17.05.1958, *Li, Zakirov 646* (TASH); Hayatsay gorge, 28.05.1969, *Mambetjumaev 97* (TASH); Hayatsay, 13.03.1978, *Korshunov 78025* (herbarium of the Nuratau Nature Reserve); Hayatsay, 07.09.1992, *Beshko 92009* (herbarium of the Nuratau Nature Reserve); Hayatsay, 06.05.1992, *Beshko 92413* (herbarium of the Nuratau Nature Reserve); Hayatsay, 21.04.2006, *Beshko 06011* (herbarium of the Nuratau Nature Reserve); Hayatsay, field station of nature reserve, 23.04.2009, *Beshko 09005, 09028* (TASH, herbarium of the Nuratau Nature Reserve); Hayatsay, 25.03.2012, *Beshko* (www.plantarium.ru); Hayatsay, 12.04.2016, *Beshko* (www.plantarium.ru).

525. *Viola suavis* M.Bieb., Fl. Taur.-Caucas. 3: 164 (1819). Perennial, hemicryptophyte. Euro-Siberian, Tethyan. Forest, Wetlands (inland), Artificial terrestrial. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, 31.03.1981, *Mukhina 81110–112* (herbarium of the Nuratau Nature Reserve); Hayatsay, field station of nature reserve, 07.04.1992, *Beshko 92008* (TASH, herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, valley, about 950 m a.s.l., 17.03.2013, *Beshko* (www.plantarium.ru).

Salicaceae Mirb.

Populus L.

526. *Populus alba* L., Sp. Pl.: 1034 (1753). Tree, phanerophyte. Euro-Siberian, Tethyan. Forest, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Sentobsay, 10.05.1958, *Li, Zakirov* (TASH); Hayatsay, juvenile shoots, 10.08.1978, *Korshunov 78012–013* (herbarium of the Nuratau Nature Reserve); [same locality], generative shoots, 10.08.1980, *Mukhina 80014* (herbarium of the Nuratau Nature Reserve).

Nature Reserve); Hayatsay, juvenile shoots, 30.07.2003, *Beshko 03018–019, 03022* (herbarium of the Nuratau Nature Reserve); [same locality], generative shoots, 30.07.2003, *Beshko 03020* (herbarium of the Nuratau Nature Reserve); Hayatsay, 07.07.2006, *Beshko 06227* (herbarium of the Nuratau Nature Reserve); Hayatsay, 27.03.2011, *Beshko* (www.plantarium.ru); Hayatsay, about 1100 m a.s.l., 03.04.2022, *Beshko* (www.plantarium.ru, www.inaturalist.org); Navoi Region, Nurata District, Sentobsay, 40.58079° N, 66.65749° E, 28.09.2023, *Yusupov* (www.inaturalist.org).

527. *Populus euphratica* Olivier, Voy. Emp. Othoman, ed. Quatra, 3: 449 (1807). Tree, phanerophyte. Irano-Turanian. Forest, Wetlands (inland), Artificial aquatic. Plain, foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Navoi Region, Nurata District, Ukansay, 40.70178°N, 66.2822°E, 23.05.2023, *Alexey Katz* (www.inaturalist.org).

528. *Populus nigra* L. (*Populus afghanica* (Aitch. & Hemsl.) C.K.Schneid.), Sp. Pl.: 1034 (1753). Tree, phanerophyte. Euro-Siberian, Tethyan. Forest, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, 30.07.2003, *Beshko 03021* (herbarium of the Nuratau Nature Reserve); Hayatsay, 07.07.2006, *Beshko 06228* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 08.09.2010, *Beshko* (TASH, herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 04.05.2012, *Beshko* (TASH); Jizzakh Region, Farish District, Hayatsay, 40.51568°N, 66.744306°E, 25.09.2021, *Beshko* (www.inaturalist.org); Madjrumsay, 26.09.2021, *Beshko* (www.plantarium.ru).

529. *Populus pruinosa* Schrenk, Bull. Cl. Phys.-Math. Acad. Imp. Sci. Saint-Pétersbourg 3: 210 (1845). Tree, phanerophyte. Turanian. Wetlands (inland), Artificial aquatic. Plain, foothills. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Reported by Zakirov in «Botanical geography of low mountains of Kyzylkum and Nuratau Range» (1971, p. 56).

Salix L.

530. *Salix blakii* Goerz (*Salix linearifolia* E.Wolf), Repert. Spec. Nov. Regni Veg. 36: 31 (1934). Tree, shrub, phanerophyte. Irano-Turanian. Forest, Wetlands (inland). Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** gorge Gurdara, valley, 23.06.1971, *Botschantzev, Kamelin* (LE); Madjrumsay, 09.05.1984, *Petrochenko 84046* (herbarium of the Nuratau Nature Reserve).

531. *Salix excelsa* S.G.Gmel., Reise Russland 3: 308 (1774). Tree, phanerophyte. Caucasian, Irano-Turanian. Forest, Wetlands (inland), Artificial aquatic. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, 24.05.1984, *Petrochenko 84045* (herbarium of the Nuratau Nature Reserve); Hayatsay, 10.04.2008, *Beshko 08020* (herbarium of the Nuratau Nature Reserve, TASH); Amandara, 13.07.2010, *Beshko* (www.plantarium.ru); Navoi Region, Nurata District, Kichiksay gorge, 29.10.2019, *Tillaev* (www.plantarium.ru). **I-4-b Khobduntau Range:** Bulungur District, Khobduntau, Ingichkasay, 1275 m a.s.l., 39°53'17.33" N, 67°18'07.41" E, *Beshko* (plant community description); Jizzakh Region, Gallaaral District, Khobduntau Range, surroundings of the village Khodzha-Kabud, 1000 m a.s.l., 03.07.2021, *Beshko* (www.plantarium.ru).

532. *Salix wilhelmsiana* M.Bieb., Fl. Taur.-Caucas. 3: 627 (1819). Shrub, phanerophyte. Caucasian, Irano-Turanian. Forest, Wetlands (inland). Plain, foothills. **Occurrence records: I-4-a Nuratau Range:** Reported by Zakirov in «Botanical geography of low mountains of Kyzylkum and Nuratau Range» (1971, p. 56).

Phyllanthaceae Martinov

Andrachne L.

533. *Andrachne fedtschenkoi* Kossinsky, Bot. Mater. Gerb. Glavn. Bot. Sada R.S.F.S.R. 2: 89 (1921). Subshrub, chamaephyte. Pamir-Alay. Shrubland, Rocky areas. Montane zone. Occasional. Native.

Occurrence records: I-4-a Nuratau Range: Hayatsay, Novi Daroz, 24.06.2012, *Beshko* (TASH). **I-4-b Aktau Range:** valley Yangokly, north of the village Khodzha-Kolishan, 28.06.1926, *Popov* 3 (TASH); northern slope of Aktau Range, Charkhansay, about 800 m a.s.l., 17.05.2024, *Beshko* (www.plantarium.ru).

534. *Andrachne telephioides* L., Sp. Pl.: 1014 (1753). Subshrub, chamaephyte. Tethyan, Saharo-Arabian. Shrubland, Rocky areas, Artificial terrestrial. Foothills, montane zone. Occasional. Native.

Occurrence records: I-4-a Nuratau Range: fallow land 12 verst south of town Jizzakh, 11.05.1928, *Sovetkina* 132 (TASH); valley of river Sanzar near town Jizzakh, 28.05.1931, *Kasimenko* (TASH); Gallaaral District, Gallaaral State Farm, 3rd farm, Karakuduk, 06.06.1934, *Rybakov* (TASH); Asrafsay, 20.05.1956, *Zaprometova* (TASH); 5 km north-east of the village Karasay, gentle upland of Nuratau valley, 20.05.1958, *Li, Zakirov* 679 (TASH); Akbel, 14.06.1963, *Khaydarov* 1729 (TASH). **I-4-b Aktau Range:** near the spring Pashat, 04.06.1936, *Kharchenko* 1210 (TASH); piedmont plain near district center Nurata, 08.05.1963, *Markova* (TASH). **I-4-b Karatau Range:** surroundings of town Kanimekh, north of town, 10.07.1934, *Tyshchenko* 17 (TASH). **I-4-b Mt. Kokcha:** southern slope of remnant mountain Kokchatau, 18.05.1964, *Adylov* 2415 (TASH). **I-4-b Khobduntau Range:** Gallaaral District, surroundings of Milyutinskaya Station, experimental station of cereal crops, 08.06.1934, *Toporova* (TASH).

Euphorbiaceae Juss.*Chrozophora* Neck.

535. *Chrozophora sabulosa* Kar. & Kir. (*Ch. gracilis* Fisch. & C.A.Mey. ex Ledeb.), Bull. Soc. Imp. Naturalistes Moscou 15: 446 (1842). Annual, therophyte. Turanian. Desert. Plain. Occasional. Native.

Occurrence records: I-4-a Nuratau Range: Nuratau Range (reported in «Conspectus Florae Asiae Mediae», vol. 7, 1983, p. 52).

536. *Chrozophora tinctoria* (L.) A.Juss. (*Ch. hierosolymitana* Spreng., *Ch. obliqua* (Vahl.) A.Juss. ex. Spreng.), Euphorb. Gen.: 110 (1824). Annual, therophyte. Tethyan, Saharo-Arabian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native.

Occurrence records: I-4-a Nuratau Range: Nuratau Nature Reserve, Jizzakh Region, village Hayat, 21.08.1980, *Mukhina* (MW); Hayatsay, 21.08.1980, *Pjatina* 80028 (herbarium of the Nuratau Nature Reserve); Hayatsay, Novi Daroz, 30.07.2006, *Beshko* 06258–259 (herbarium of the Nuratau Nature Reserve); Jizzakh Region, Gallaaral District, 5–6 km west of town Gallaaral, southern foothills of Nuratau, about 600 m a.s.l., fallow land, 03.07.2021, *Beshko* (www.plantarium.ru). **I-4-b Khobduntau Range:** reported by Kudrjashev in “Vegetation of the Khobduntau and Karachatau Mountains” (1929, p. 63). **I-4-c North-Nuratau insular low mountains:** southern outskirts of the town Band, garden, 30.06.2020, *Beshko, Shomurodov, Adilov* (plant community description).

Euphorbia L.

537. *Euphorbia anisopetala* (Prokh.) Prokh. (*Chamaesyce anisopetala* Prokh.), Fl. URSS 14: 492 (1949). Annual, therophyte. Turanian. Desert, Artificial terrestrial. Plain, foothills. Occasional.

Occurrence records: I-4-b Aktau Range: Khatyrchi District, 08.07.1927, *Lepeschkin* (TASH). **I-4-b Karatau Range:** mountains Karatau, 3 km north of the well Karim-kuduk 25.10.1956, *Momotov* 534 (TASH).

538. *Euphorbia chamaesyce* L. (*Chamaesyce canescens* (L.) Prokh.), Sp. Pl.: 455 (1753). Annual, therophyte. Tethyan. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Foothills, montane zone. Occasional. **Occurrence records: I-4-a Nuratau Range:** lower reaches of Sentobsay, 01.10.1958, *Li, Zakirov* 974 (TASH); Hayatsay, field station of nature reserve, 07.07.2006, *Beshko* 06238–239 (herbarium of the Nuratau Nature Reserve); Hayatsay, Novi Daroz, 30.07.2006, *Beshko* 06292 (herbarium of the Nuratau Nature Reserve, TASH). **I-4-b Khobduntau Range:** reported by Kudrjashev in “Vegetation of the Khobduntau and Karachatau Mountains” (1929, p. 63).

539. *Euphorbia densa* Schrenk, Bull. Cl. Phys.-Math. Acad. Imp. Sci. Saint-Petersbourg 3: 308 (1845). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Artificial terrestrial. Plain, foothills. Rare. Native. **Occurrence records: I-4-b Aktau Range:** on the way from the village Sadyr to Koshrabad, 15.04.1913, *Teplov* (TASH); piedmont valley 3 km NE of the village Khodzha-Akhmeti-Kabir, 21.06.1937, *Demurina* (TASH); variegated foothills near the village Karakishlak, 17.05.1941, *Popov* (TASH). **I-4-b Karatau Range:** surroundings of town Kanimekh, 5 km north of the town, plain, 15.07.1934, *Tyshchenko* (TASH). **I-4-b Mt. Kokcha:** slope of remnant mountain Kokchatau, 17.05.1964, *Adylov* (TASH); 8 km north of the village Kokcha, 22.05.1964, *Adylov* (TASH). **I-4-b Khobduntau Range:** Khobduntau Range: Gallaaral District, surroundings of Milyutinskaya Station, experimental station of cereal crops, 14.07.1934, *Toporova* (TASH); [same locality], 03.08.1934, *Toporova* (TASH).

540. *Euphorbia esula* L. (*E. jaxartica* Prokh.), Sp. Pl.: 461 (1753). Perennial, hemicryptophyte. Euro-Siberian, Irano-Turanian. Forest, Wetlands (inland), Artificial aquatic. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, Khotunon, 11.06.1992, *Beshko* 92153–155 (herbarium of the Nuratau Nature Reserve, TASH); Hayatsay, Khotunon, 08.06.2006, *Beshko* 06208 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, valley of mountain river, walnut forest, 15.06.2014, *Beshko* (www.plantarium.ru).

541. *Euphorbia falcata* L., Sp. Pl.: 456 (1753). Annual, therophyte. Euro-Siberian, Tethyan. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Tykchasay, 27.07.1981, *Mukhina* 81119 (herbarium of the Nuratau Nature Reserve); Hayatsay, 17.07.1996, *Beshko* 96051 (herbarium of the Nuratau Nature Reserve); Hayatsay, Novi Daroz, 10.07.2006, *Beshko* 06340–341 (herbarium of the Nuratau Nature Reserve); Hayatsay, 20.06.2007, *Beshko* 07052–053 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 26.05.2017, *Beshko* (www.plantarium.ru); Jizzakh Region, Farish District, Yangikishlak, 40.42595° N, 67.17224° E, 04.07.2024, *Beshko* (www.inaturalist.org). **I-4-b Khobduntau Range:** Gallaaral District, experimental station of cereal crops, 06.07.1934, *Toporova* (TASH).

542. *Euphorbia ferganensis* B.Fedtsch., Consp. Fl. Turkest. 6: 304 (1916). Perennial, hemicryptophyte. Western Tien Shan, Pamir-Alay. Shrubland, Grassland, Rocky areas. Foothills. Rare. Native. **Occurrence records: I-4-b Aktau Range:** 2–3 km south of the village Kokbulak, 01.07.1937, *Demurina* (TASH).

543. *Euphorbia franchetii* B.Fedtsch., Rastitel'n. Turkestana: 559 (1915). Annual, therophyte. Hyrcanian, Mountain Middle Asian. Shrubland, Grassland, Rocky areas, Artificial terrestrial. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Range, Farish District, 21.05.1941, *Momotov* (TASH); Karl Marx State Farm, eastern part of Nuratau Range, basin of Narvansay, mountains, 23.05.1967, *Perelygina* (TASH); Hayatsay, 20.06.2007, *Beshko* 07049 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Karysay, Pubsay, 40.4861° N, 66.80536° E, 28.05.2023, *Beshko* (TASH).

544. *Euphorbia granulata* Forssk. (*Chamaesyce turcomanica* (Boiss.) Prokh.), Fl. Aegypt.-Arab.: 94 (1775). Annual, therophyte. Tethyan, Paleotropical. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** near the village Yambash, 25.07.1937, *Mironov* 27 (TASH); Mt. Fazilmantau, *unknown date and collector* (TASH). **I-4-b Aktau Range:** piedmont valley 3 km NE of the village Khodzha-Akhmeti-Kabir, 21.06.1937, *Demurina* 247, 248 (TASH). **I-4-b Karatau Range:** the well Jizlan, 20.07.1931, *Tyshchenko* 377 (TASH).

545. *Euphorbia helioscopia* L., Sp. Pl.: 459 (1753). Annual, therophyte. Pluriregional (native to Eurasia, North Africa). Desert, Forest, Shrubland, Grassland, Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** near, town Jizzakh, 10.05.1928, *Sovetkina* 108 (TASH); Payaryk District, 1 km south of Ugat, 21.07.1931, *Kobranova* 182 (TASH); Payaryk District, near the village Savryukbazar, 25.07.1931, *Kobranova* 215 (TASH); Nuratau Range, Karatash, valley, 26.04.1941, *Bukasov* (TASH); gorge Zamezhak, 28.05.1969, *Mambetjumaev* 96 (TASH); Nuratau Nature Reserve, Hayatsay, 1979, *Korshunov* (TASH); Hayatsay, 25.03.1981, *Mukhina* 81127 (herbarium of the Nuratau Nature Reserve); Hayatsay, field station of nature reserve, 10.04.1993, *Beshko* 93005–006 (herbarium of the Nuratau Nature Reserve); [same locality], 21.04.2006, *Beshko* 06012–013 (herbarium of the Nuratau Nature Reserve); [same locality], 03.06.2006, *Beshko* 06169 (herbarium of the Nuratau Nature Reserve); Jizzakh Region, Farish District, Nuratau Nature Reserve, Hayatsay, 40.525174°N, 66.760642°E, 15.04.2007, *Beshko* (www.plantarium.ru, inaturalist.org); Sentobsay, surroundings of village Sentob, 19.04.2012, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 08.05.2014, *Tojibaev, Sun Hang et al.* 17198 (TASH, KUN); Nurata District, Kurgansay, upstream of the village Balaybokho, 40.661436°N, 66.573172°E, 27.02.2020, *denisch* (www.inaturalist.org); Jizzakh Region, Farish District, Hayatsay, 40.52541°N, 66.76191°E, 26.04.2024, *Beshko* (inaturalist.org); Jizzakh Region, Farish District, Hayatsay, field station of nature reserve, 40.52778°N, 66.77552°E, 27.04.2024, *Beshko* (inaturalist.org). **I-4-b Aktau Range:** town Nurata, piedmont plain, irrigated field, 04.04.1963, *Markova* (TASH).

546. *Euphorbia inderiensis* Less. ex Kar. & Kir., Bull. Soc. Imp. Naturalistes Moscou 15: 448 (1842). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Nurata District, clayey desert, Ukan, Kyzylcha State Farm, 03.06.1951, *Zaprometova* (TASH); the village Kara, 15.05.1963, *Khaydarov* (TASH); Akbel, 14.06.1963, *Khaydarov* (TASH). **I-4-b Aktau Range:** near the village Bakhrin, 07.05.1925, *Popov* (TASH); piedmont plain near the town Nurata, 08.05.1963, *Markova* (TASH); valley Chashma, 13.06.1963, *Khaydarov* (TASH); Nurata District, on the loess cliff near the village Samari, 05.06.1964, *Pryakhin* (TASH). **I-4-b Karatau Range:** near the village Dekhibaland, 28.05.1936, *Kharchenko* (TASH); Bukhara Region, Gizhduvan District, Nuratau mountains, southern foothills of Karatau Range, about 370 m a.s.l., 21.04.2024, *Beshko* (www.plantarium.ru). **I-4-b Mt. Kokcha:** slope of remnant mountain Kokchatau, 17.05.1964, *Adylov* (TASH). **I-4-b Khobduntau Range:** Gallaaral District, surroundings of Milyutinskaya Station, experimental station of cereal crops, 27.04.1934, *Toporova* (TASH).

547. *Euphorbia kanaorica* Boiss. (*Euphorbia polytimetica* Prokh.). Perennial, hemicryptophyte. Western Pamir-Alay. Shrubland, Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-b Aktau Range:** Kattasay, 40.339269° N, 66.008395° E, 07.05.2020, *Akbarov, Turdiev, Juramurodov* 7052020155 (TASH).

548. *Euphorbia prostrata* Aiton, Hort. Kew. 2: 139 (1789). Annual, therophyte. Pluriregional (native to America). Rocky areas, Artificial terrestrial. Foothills, montane zone. Occasional. Alien. **Occurrence records: I-4-a Nuratau Range:** Nuratau Nature Reserve, Hayatsay, 25.06.2012, *Beshko* (TASH).

549. *Euphorbia rapulum* Kar. & Kir., Bull. Soc. Imp. Naturalistes Moscou 15: 448 (1842). Perennial, hemicryptophyte. Eastern Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Range, Farish District, 29.04.1941, *Bukasov* (TASH); Nuratau Range, Farish District, 06.05.1941, *Momotov* (TASH); Deristan, slopes, 22.06.1971, *Belolipov, Botschantzev, Kamelin* (LE). **I-4-b Aktau Range:** mountains Aktau, near the village Shamaly, 24.05.1925, *Popov* (TASH); mountains Aktau near the pass 3 km south of village Sarygul, 12.05.1957, *Momotov, Li* (TASH); upper reaches of river Bitau, surroundings of the village, 26.05.1964, *Zuckerwanik* (TASH); northern slope of Aktau Range, west of village Chuya, gorge Ambarkhana, 28.04.1979, *Pimenov, Kljuykov, Boryaev, Baranova, Vassiljeva* 126 (MW). **I-4-b Karatau Range:** mountains Karatau, eastern part, north-western slope, 20.05.1936, *Kharchenko* (TASH); between Beshrabot and Dekhibaland, Karakarga Pass, 21.04.1986, *Pimenov, Kljuykov, Vassiljeva, Melibaev* 100 (MW); Karakarga Pass, 19.03.2013, *Beshko* (www.plantarium.ru); near Karakarga Pass, 40°22'29" N, 65°30'00" E, 19.03.2013, *Tojibaev, Shomurodov, Beshko, Batashov* (TASH); Karatau, 3–4 km below of Karakarga Pass, 04.08.2013, *Tojibaev* (TASH).

Linaceae DC. ex Perleb

Linum L.

550. *Linum corymbulosum* Rchb., Fl. Germ. Excurs. 2: 834 (1832). Annual, therophyte. Euro-Siberian, Tethyan. Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Range, Farish District, 18.05.1941, *Momotov* (TASH); Koytash, southern slopes, 28.06.1971, *Botschantzev, Kamelin* (LE). **I-4-b Aktau Range:** village Angudan, foothills, 10.06.1928, *Lepeschkin* (TASH).

551. *Linum macrorhizum* Juz., Fl. URSS 14: 714 (1949). Perennial, hemicryptophyte. Middle Asian. Shrubland, Grassland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** 6–7 km west of the village Guzhum, 23.07.1937, *Demurina* 731 (TASH); Farish District, upper reaches of the river Garasha, 18.05.1961, *Khokhryakov, Vlasov* (TASH); Karysay, Pubsay, 08.06.1990, *Beshko, Yakovenko* 90068 (herbarium of the Nuratau Nature Reserve); watershed between Hayatsay and Andygensay, 12.06.1992, *Beshko* 92161 (herbarium of the Nuratau Nature Reserve); Mt. Dushokh, 08.06.1994, *Beshko* 94052–054 (herbarium of the Nuratau Nature Reserve); Mt. Dushokh, 17.05.1995, *Beshko* 95047 (herbarium of the Nuratau Nature Reserve); Hayatsay, 09.06.2010, *Beshko* (www.plantarium.ru); southern slope of Mt. Kichik Fazilman, 09.06.2013, *Beshko* (TASH); surroundings of Fazilman Lake, 09.06.2018, *Beshko* (www.plantarium.ru).

552. *Linum usitatissimum* L. (*L. humile* Mill.), Sp. Pl.: 277 (1753). Annual, therophyte. Pontic, Caucasian, Hyrcanian. Artificial terrestrial. Plain, foothills, montane zone. Rare. Alien. **Occurrence records: I-4-a Nuratau Range:** Nurata District, surroundings of Kyzylcha State Farm, piedmont plain, 05.05.1952, *Zaprometova* (TASH).

Geraniaceae Juss.

Erodium L'Her.

553. *Erodium ciconium* (Jusl.) L'Her., W.Aiton, Hort. Kew. 2: 415 (1789). Annual, therophyte. European, Tethyan. Desert, Shrubland, Rocky areas, Artificial terrestrial. Plain, foothills. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Sanguzarsay, 07.05.1992, *Beshko* 92444 (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** piedmont plain near the town Nurata, 08.05.1963, *Markova* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 07.04.1911,

Dimo, *Sprygin*, *Shulga 1064* (TASH); Pistalitau, 08.04.1915, *Kultiasow 63, 99* (TASH); northern piedmonts of Pistalitau, 24.04.2020, *Beshko*, *Shomurodov*, *Adilov* (plant community description); pass on the remnant range Pistalitau, 25.04.2020, *Beshko*, *Shomurodov*, *Adilov* (plant community description); 5 km north of town Band, between two dumps of the Uchkulach open pit, 26.04.2020, *Beshko*, *Shomurodov*, *Adilov* (plant community description); northern piedmonts of remnant mountains Uchkulach, 40.541° N, 67.22406° E, 26.03.2019, *Beshko* (www.inaturalist.org); northern piedmonts of remnant mountains Uchkulach, 26.04.2020, *Beshko*, *Shomurodov*, *Adilov* (plant community description), [same locality], 26.04.2020, *Beshko* (www.plantarium.ru, www.inaturalist.org).

554. *Erodium cicutarium* (L.) L'Her., W.Aiton, Hort. Kew. 2: 414 (1789). Annual, therophyte. Pluriregional. Desert, Forest, Shrubland, Grassland, Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** near the town Jizzakh, gravelly slopes, 01.04.1921, *Vvedensky 107* (TASH); 12 verst south of Jizzakh, 04.05.1928, *Sovetkina 122* (TASH); foothills near Jizzakh, 06.05.1928, *Sovetkina 5* (TASH); northern slope of Nuratau Range, Farish District, 20.04.1941, *Momotov 51* (TASH); Mts. Koytash, 3 km north-east of the village Kuvakiya, piedmonts of Mt. Piyazli, 24.04.1941, *Momotov 20* (TASH); Yangi-Hayat, 28.05.1969, *Mambetjumaev 101* (TASH); Hayatsay, 15.03.1978, *Korshunov 78028* (herbarium of the Nuratau Nature Reserve); Hayatsay, 14.04.1981, *Mukhina 81126* (herbarium of the Nuratau Nature Reserve); Hayatsay, 07.04.1992, *Beshko 92012* (herbarium of the Nuratau Nature Reserve); Sanguzarsay, 07.05.1992, *Beshko 92445* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 24.03.2009, *Beshko* (www.plantarium.ru); Navoi Region, Nuratau District, Sentobsay, village Sentob, 40.586815° N, 66.654128° E, 19.04.2012, *Beshko* (www.inaturalist.org); Farish district, Mts. Koytash, Ilonchisay, near the village Chuprak, 40.339674° N, 67.252842° E, 19.04.2013, *Lougarou* (www.inaturalist.org); Jizzakh Region, Farish District, Nuratau Nature Reserve, Madjrumsay, 40.5815° N, 66.7225° E, 23.03.2024, *Beshko* (www.inaturalist.org). **I-4-b Aktau Range:** Bakhrin, 03.04.1912, *Neustruev 28* (LE); near district center Nuratau, 16.03.1963, *Markova* (TASH). **I-4-b Karatau Range:** 5 km south-east of the village Zyum, 05.05.1955, *Momotov, Li 103* (TASH); valley Karakarga, 11.05.2014, *Tojibaev, Sun Hang et al. 17333* (TASH, KUN). **I-4-b Khobduntau Range:** Gallaaral District, experimental station of cereal crops, 10.06.1934, *Toporova* (TASH); [same locality], 24.07.1934, *Titov* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 07.04.1911, *Dimo*, *Sprygin*, *Shulga 878, 1064* (TASH); on the way from Pistalitau to the lake Tuzkan, 09.04.1911, *Dimo*, *Sprygin*, *Shulga 1005* (TASH); Pistalitau, 08.04.1915, *Kultiasow 63* (TASH); Pistalitau, 09.04.1915, *Kultiasow 75* (TASH); northern piedmonts of Pistalitau, 24.04.2020, *Beshko*, *Shomurodov*, *Adilov* (plant community description); pass on the remnant range Pistalitau, 25.04.2020, *Beshko*, *Shomurodov*, *Adilov* (plant community description); 5 km north of town Band, between two dumps of the Uchkulach open pit, 26.04.2020, *Beshko*, *Shomurodov*, *Adilov* (plant community description); northern piedmonts of remnant mountains Uchkulach, 26.04.2020, *Beshko*, *Shomurodov*, *Adilov* (plant community description).

555. *Erodium oxyrrhynchum* M.Bieb., Fl. Taur.-Caucas. 2: 133 (1808). Annual, biennial, therophyte. Irano-Turanian. Desert, Shrubland, Rocky areas. Plain, foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** reported by Zakirov in «Vegetation cover of Nuratau Mountains» (1969, p. 32) and «Botanical geography of low mountains of Kyzylkum and Nuratau Range» (1971, p. 65), as well as in «Conspectus Florae Asiae Mediae», vol. 7, 1983, p. 15–16. **I-4-b Aktau Range:** piedmont plain near district center Nuratau, 17.04.1963, *Markova* (TASH). **I-4-c North-Nuratau insular low mountains:** southern piedmonts of Pistalitau, 31.03.2002, *Beshko 02013* (herbarium of the Nuratau Nature Reserve).

Geranium L.

556. *Geranium collinum* Stephan ex Willd., Sp. Pl., ed. 4, 3: 705 (1800). Perennial, hemicryptophyte. Euro-Siberian, Caucasian, Irano-Turanian. Wetlands (inland). Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, Savryuksay, 20.07.1931, *Kobranova 153* (TASH); upper reaches of Gurdara, 30.06.1992, *Beshko 92493–494* (herbarium of the Nuratau Nature Reserve, TASH); upper reaches of Bolosay, 15.07.2010, *Beshko 10031–032* (herbarium of the Nuratau Nature Reserve); Bolosay, 22.07.2010, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** 15 km east of the village Tikalik, 08.07.1932, *Knorring, Emme 37* (MW).

557. *Geranium divaricatum* Ehrh., Beitr. Naturk. Verw. Wiss. 7: 164 (1792). Annual, therophyte. Euro-Siberian, Tethyan. Forest, Shrubland, Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Jingildysay, 12.04.1952, *Zaprometova* (TASH); Madjrumsay, 06.05.1993, *Beshko 93016–017* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 03.05.2008, *Beshko* (www.plantarium.ru).

558. *Geranium kotschyi* subsp. *charlesii* (Aitch. & Hemsl.) P.H.Davis (*G. charlesii* (Aitch. & Hemsl.) Vved. ex Nevski). Perennial, geophyte. Hyrcanian, Mountain Middle Asian. Shrubland, Grassland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Kyzylcha, piedmont plain, April 1952, *Burygin* (TASH); Gatchasay, 09.04.1955, *Zaprometova* (TASH); upper reaches of Ustuksay, surroundings of Fazilman Lake, 28.05.1964, *Zuckerwanik 344* (TASH); Hayatsay, 06.05.2012, *Beshko* (TASH); Sobsay, 09.05.2013, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 08.05.2014, *Tojibaev, Sun Hang et al. 17186* (TASH, KUN); Nuratau Nature Reserve, Hayatsay, 08.05.2014, *Beshko* (www.plantarium.ru); about 2 km east of Saurbel Pass, 28.04.2020, *Beshko* (www.plantarium.ru). **Aktau Range:** Khanbandy – Chuya, 02.05.1913, *Korovin* (TASH); Mt. Takhkutau, 07.05.1913, *Korovin 402, 468* (TASH).

559. *Geranium linearilobum* DC. (*Geranium transversale* (Kar. & Kir.) Vved. ex Pavlov). Perennial, geophyte. Pontic, Caucasian, Irano-Turanian. Desert, Forest, Shrubland, Grassland, Rocky areas. Plain, foothills, montane zone. **Occurrence records: I-4-a Nuratau Range:** Koshrabad, Mt. Mirishkar, 05.05.1913, *Korovin 339* (TASH); Nuratau Range, Farish District, 07.05.1941, *Momotov 187, 177* (TASH); Kyzylcha, piedmont plain, 00.04.1952, *Burygin* (TASH); Alaysay, 16.04.1954, *Zaprometova* (TASH); valley 2.5 km from Kyzylcha State Farm, 21.04.1954, *Zaprometova* (TASH); between valleys Karchegay and Sentob, near mountains Fazilmantau, 11.05.1956, *Korotkova 5130* (TASH); Mt. Zargar, 3 km north-east of the village Urtasay, 11.05.1957, *Momotov, Li 219, 261* (TASH); Alaysay, 25.03.1958, *Zaprometova 106* (TASH); Nurata District, Kyzylcha State Farm, 30.03.1958, *Galkina* (TASH); gorge Alichaksay, 26.05.1969, *Mambetjumaev 34* (TASH); Andygensay, 17.04.1981, *Mukhina 81125* (herbarium of the Nuratau Nature Reserve); Karysay, Pubsay, 20.04.1992, *Beshko 92040–044* (herbarium of the Nuratau Nature Reserve); Mt. Dushokh, 17.05.1995, *Beshko 95050* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 08.04.2009, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, Alichak, 04.05.2012, *Beshko* (TASH); Nuratau Nature Reserve, Gurdara, 10.04.2013, *Beshko* (www.plantarium.ru); Farish district, Mts. Koytash, pass between Osmansay and Ilonchisay, between the villages Baland Osman and Chuprak, 40.325326° N, 67.257966° E, 20.04.2013, *lougarou* (www.inaturalist.org). **I-4-b Aktau Range:** near the pass Tikalik, 3 km south of village Sarygul, 12.05.1957, *Momotov, Li 317* (TASH). **I-4-b Khobduntau Range:** Gallaaral District, experimental station of cereal crops, 15.04.1934, *Toporova* (TASH).

560. *Geranium pusillum* L., Syst. Nat. ed. 10, 2: 1144 (1759). Annual, therophyte. Euro-Siberian, Tethyan. Desert, Forest, Shrubland, Grassland, Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, 11.06.1992, *Beshko 92156–157* (herbarium of the Nuratau Nature Reserve);

Sanguzarsay, 07.05.1992, *Beshko* 92443–444 (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** piedmont plain, southern outskirts of district center Nurata, 09.05.1964, *Markova* (TASH). **I-4-b Karatau Range:** valley Karakarga, 11.05.2014, *Tojibaev, Sun Hang et al.* 17349 (TASH, KUN).

561. *Geranium robertianum* L., Sp. Pl.: 681 (1753). Annual, therophyte. Circumtemperate. Forest, Wetlands (inland). Montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** Nuratau Nature Reserve, Tykcha, 03.06.1982, *Mukhina* 82043 (herbarium of the Nuratau Nature Reserve, TASH); Nuratau Nature Reserve, upper reaches of Tykchasay, Hovzi Shohum, 27.07.2016, *Beshko* (TASH).

562. *Geranium rotundifolium* L., Sp. Pl.: 683 (1753). Annual, therophyte. Euro-Siberian, Tethyan. Forest, Shrubland, Rocky areas, Wetlands (inland), Artificial terrestrial. Foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** Mt. Mirishkar, 05.05.1913, *Korovin* (TASH); Nuratau Range, Farish District, 05.05.1941, *Momotov* (TASH); Koblatysay, 30.03.1958, *Zaprometova* 250 (TASH); Koblatysay, 07.04.1952, *Zaprometova* (TASH); Gatchasay, 09.04.1958, *Zaprometova* 390 (TASH); Gatchasay, 07.04.1952, *Zaprometova* (TASH); Hayatsay, 27.04.1983, *Fominykh* 83059–060 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 40.530781° N, 66.769461° E, 08.04.2009, *Beshko* (www.plantarium.ru, www.inaturalist.org); Nuratau Nature Reserve, Hayatsay, 40.525208° N, 66.762973° E, 29.04.2009, *Beshko* (www.plantarium.ru, www.inaturalist.org); Nuratau Nature Reserve, Hayatsay, 08.05.2014, *Tojibaev, Sun Hang et al.* 17205 (TASH, KUN). **I-4-b Aktau Range:** Khanbandy – Chuya, shistaceous mountain slopes, 02.05.1913, *Korovin* 213 (TASH). **I-4-b Khobduntau Range:** reported by Kudrjashev in “Vegetation of the Khobduntau and Karachatau Mountains” (1929, p. 63). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 08.04.1915, *Kultiasow* 40, 63 (TASH); mountains Balyklitau south of the village Chimbkurgan, 31.05.1958, *Vvedensky, Nabiev* (TASH).

Lythraceae J.St.-Hil.

Lythrum L.

563. *Lythrum hyssopifolia* L., Sp. Pl.: 447 (1753). Annual, therophyte. Euro-Siberian, Tethyan. Wetlands (inland), Artificial aquatic. Plain, foothills, montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** Nuratau Range (reported in «Conspectus Florae Asiae Mediae», vol. 7, 1983, p. 150).

Onagraceae Juss.

Epilobium L.

564. *Epilobium hirsutum* L. (*E. velutinum* Nevski), Sp. Pl.: 347 (1753). Perennial, hemicryptophyte. Pluriregional. Wetlands (inland), Artificial aquatic. Plain, foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** lower reaches of Farishsay, 29.07.1980, *Mukhina* 80022–023 (TASH, herbarium of the Nuratau Nature Reserve); Hayatsay, 12.08.1980, *Mukhina* 80021 (herbarium of the Nuratau Nature Reserve); Karysay, 07.06.1981, *Mukhina* (TASH); middle reaches of Bolosay, 24.08.1984, *Saenko* 84053–054 (TASH, herbarium of the Nuratau Nature Reserve); the village Hayat, 07.07.1990, *Beshko, Yakovenko* 90081 (herbarium of the Nuratau Nature Reserve); Hayatsay, field station of nature reserve, 01.09.2003, *Beshko* 03040–043 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Madjrumsay, 25.09.2010, *Beshko* (www.plantarium.ru); Hayatsay, field station of Nuratau Nature Reserve, 14.08.2012, *Beshko* (TASH); Nuratau Nature Reserve, Hayatsay, 30.08.2020, *Beshko* (www.plantarium.ru, www.inaturalist.org); Jizzakh Region,

Farish District, Nuratau Nature Reserve, Madjrumsay, 40.58195° N, 66.72398° E, 31.08.2020, *Beshko* (www.inaturalist.org). **I-4-b Aktau Range:** Khatyrchi District, 25.07.1928, *Lepeschkin* (TASH).

565. *Epilobium komarovii* Ovcz., Dokl. Akad. Nauk Tadzhiksk. S.S.R. 23: 671 (1980). Perennial, hemicryptophyte. Western Tien Shan, Western Pamir-Alay. Wetlands (inland). Montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** Gurdara, 23.06.1971, *Botschantzev, Kamelin* (LE); upper reaches of Gurdara, 30.06.1992, *Beshko 92399–400* (TASH, herbarium of the Nuratau Nature Reserve).

566. *Epilobium minutiflorum* Hausskn., Oesterr. Bot. Z. 29: 55 (1879). Perennial, hemicryptophyte. Irano-Turanian. Wetlands (inland), Artificial aquatic. Plain, foothills, montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** Nakrutsay, near the village Chalakarga, 23.07.1940, *Gomolitsky, Dolgikh, Arkhireev* (TASH); lower reaches of Sentobsay, 01.01.1958, *Li, Zakirov 973* (TASH); floodplain of Karysay, 07.06.1981, *Mukhina 81118* (TASH, herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Madjrumsay, Fargun, 02.06.2000, *Beshko 00039* (TASH, herbarium of the Nuratau Nature Reserve); Hayatsay, Khotunon, 23.05.2006, *Beshko 06037–038* (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** Khatyrchi District, 25.07.1928, *Lepeschkin* (TASH). **I-4-b Karatau Range:** Aksakalata, 18.05.1941, *Popov* (TASH).

567. *Epilobium roseum* subsp. *subsessile* (Boiss.) P.H.Raven (*E. nervosum* Boiss.), Notes Roy. Bot. Gard. Edinburgh 24: 194 (1962). Perennial, hemicryptophyte. Euro-Siberian, Irano-Turanian. Wetlands (inland). Montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** Koytash, 25.05.1914, *Mikhelson* (LE).

568. *Epilobium tetragonum* L., Sp. Pl.: 348 (1753). Perennial, hemicryptophyte. Euro-Siberian, Irano-Turanian. Wetlands (inland), Artificial aquatic. Plain, foothills, montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** Nakrutsay, near the village Chalakarga, 23.07.1940, *Gomolitsky, Dolgikh, Arkhireev 209* (TASH). **I-4-b Aktau Range:** Khatyrchi District, 25.07.1928, *Lepeschkin* (TASH).

569. *Epilobium tianschanicum* Pavlov, Uchen. Zap. Moskovsk. Gosud. Univ. 2: 327 (1934). Perennial, hemicryptophyte. Siberian, Middle Asian. Rocky areas, Wetlands (inland). Montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** Koytash, southern slope, 28.06.1971, *Botschantzev, Kamelin* (LE).

570. *Epilobium turkestanicum* Pazij & Vved., Fl. Uzbekistan. 4: 489 (1959). Perennial, hemicryptophyte. Western Tien Shan, Pamir-Alay. Rocky areas, Wetlands (inland). Montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** Sentob, 24.06.1971, *Botschantzev, Kamelin* (LE).

Biebersteiniaceae Schnizl.

Biebersteinia Steph.

571. *Biebersteinia multifida* DC., Prodr. 1: 708 (1824). Perennial, geophyte. Irano-Turanian. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** Koshrabad, Mt. Mirishkar, 05.05.1913, *Korovin 302* (TASH); Mts. Koytash, north-eastern slopes, west of the village Jizzakly, near the village Bereshek, 28.05.1940, *Gomolitsky, Dolgikh, Arkhireev 42* (TASH); Nuratau Range, Farish District, 29.04.1941, *Bukasov* (TASH); Nuratau Range, Farish District, 07.05.1941, *Momotov 180* (TASH); north slopes near Kyzylcha State Farm, 20.05.1951, *Zaprometova* (TASH); Koblatysay, 07.04.1952, *Zaprometova* (TASH); [same locality], 15.05.1955, *Zaprometova* (TASH); Pistalisay, 24.03.1958, *Zaprometova 35* (TASH); eastern part of Nuratau Range,

20 km south of the village Farish on the way Farish – Karabagana, 17.05.1961, *Vlasov, Khokhryakov 139* (MW); gorge Alichaksay, 26.05.1969, *Mambetjumaev 5* (TASH); plateau Fazilmantau, opposite of the village Sentob, 15.06.1969, *Mambetjumaev 197* (TASH); Madjrumsay, 08.05.1984, *Petrochenko 84052* (herbarium of the Nuratau Nature Reserve); Karysay, Pubsay, 20.04.1992, *Beshko 92055–057* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Gurdara, 03.05.2012, *Beshko* (TASH); Nuratau Nature Reserve, Hayatsay, 21.04.2015, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Madjrumsay, lower reaches, 25.03.2016, *Beshko* (TASH); Nuratau Nature Reserve, Hayatsay, 12.04.2016, *Beshko* (www.plantarium.ru); upper reaches of Osmansay, above Zangori Olov summer camp, 28.04.2020, *Beshko, Shomurodov, Adilov* (plant community description); watershed crest of Nuratau Range, about 2 km east of Saurbel Pass, 28.04.2020, *Beshko, Shomurodov, Adilov* (plant community description); upper reaches of Osmansay, upstream of the village Baland Osman, 28.04.2020, *Beshko, Shomurodov, Adilov* (plant community description); Jizzakh Region, Farish District, Nuratau Nature Reserve, Hayatsay, 40.504551° N 66.730495° E, 22.04.2023, *Beshko* (www.plantarium.ru, www.inaturalist.org); Jizzakh Region, Farish District, Nuratau Nature Reserve, Hayatsay, 40.51348° N 66.7394° E, 26.04.2024, *Beshko* (www.inaturalist.org). **I-4-b Aktau Range:** mountain slopes between Nurata and well Pashat, 24.04.1913, *Korovin 71, 77* (TASH); near the pass Tikalik, 3 km south of village Sarygul, 12.05.1957, *Momotov, Li 296* (TASH). **I-4-b Karatau Range:** valley Bakachinak, 05.05.1955, *Momotov, Li 118, 119* (TASH); road Navoi – Nurata, Karakarga Pass, 24.04.1987, *Pimenov, Vassiljeva 47* (MW). **I-4-b Karachatau Range:** southern slopes 1 km from the village Ingichka, 07.07.1937, *Demurina 551* (TASH). **I-4-b Khobduntau Range:** reported by Kudrjashev in “Vegetation of the Khobduntau and Karachatau Mountains” (1929, p. 63). **I-4-c North-Nuratau insular low mountains:** crest of Egarbelistag, 27.04.2020, *Beshko, Shomurodov, Adilov* (plant community description).

Nitrariaceae Lindl.

Peganum L.

572. *Peganum harmala* L., Sp. Pl.: 444 (1753). Perennial, hemicryptophyte. Tethyan, Saharo-Arabian. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** Karysay, 21.08.1981, *Pjatina 81113–116* (herbarium of the Nuratau Nature Reserve); Hayatsay, 27.05.1984, *Petrochenko 84081* (herbarium of the Nuratau Nature Reserve); Hayatsay, 09.06.1992, *Beshko 92139* (herbarium of the Nuratau Nature Reserve); foothills of Nuratau, surroundings of Bogdon (Farish), 19.05.2010, *Beshko* (www.plantarium.ru); Hayatsay, Novi Daroz, 23.05.2006, *Beshko 06141* (herbarium of the Nuratau Nature Reserve); Nurata district, Uzbekistan, 40.739387° N, 66.463738° E (piedmont plain of Nuratau Range, near the village Temirqovuy), 19.04.2013, *Lougarou* (www.inaturalist.org); Jizzakh Region, Farish District, near the village Lower Hayat, 40.538283° N, 66.791482° E, 05.05.2021, *Gafforov* (www.inaturalist.org). **I-4-b Aktau Range:** near district center Nurata, 08.05.1963, *Markova* (TASH). **I-4-b Karatau Range:** Navoi Region, Navbakhor District, Sarmysh, 40.286932° N, 65.593135° E, 09.08.2007, *M.A. Casado* (www.inaturalist.org). **I-4-b Khobduntau Range:** reported by Kudrjashev in “Vegetation of the Khobduntau and Karachatau Mountains” (1929, p. 63). **I-4-c North-Nuratau insular low mountains:** Jizzakh Region, Farish District, 40.483911° N, 67.458311° E, 13.05.2012, *Beshko* (www.inaturalist.org, www.plantarium.ru); northern piedmonts of Pistalitau, 24.04.2020, *Beshko, Shomurodov, Adilov* (plant community description); pass on the remnant range Pistalitau, 25.04.2020, *Beshko, Shomurodov, Adilov* (plant community description); 5 km north of town Band, between two dumps of the Uchkulach open pit, 26.04.2020, *Beshko, Shomurodov, Adilov* (plant community description); northern piedmonts of remnant mountains Uchkulach, 26.04.2020, *Beshko, Shomurodov, Adilov* (plant community description); Jizzakh Region, Farish District, southern

piedmonts of Pistalitau, 40.53441° N, 67.39654° E, 09.05.2024, *Beshko* (www.inaturalist.org); Jizzakh Region, Farish District, northern piedmonts of Pistalitau, 40.54357° N, 67.39697° E, 09.05.2024, *Beshko* (www.inaturalist.org).

Tetradiclis Stev.

573. *Tetradiclis tenella* (Ehrenb.) Litw., Trudy Bot. Muz. Imp. Akad. Nauk 3: 122 (1907). Annual, therophyte. Pontic, Tethyan. Wetlands (inland), Artificial aquatic. Plain, foothills. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Gatchasay, 20.04.1958, *Zaprometova* (TASH).

Anacardaceae R.Br.

Pistacia L.

574. *Pistacia vera* L., Sp. Pl.: 1025 (1753). Tree, shrub, phanerophyte. Irano-Turanian. Shrubland, Grassland, Rocky areas, Artificial terrestrial. Occasional. Native. IUCN RL NT. **Occurrence records: I-4-a Nuratau Range:** mountains near Tamerlane's Gate gorge, left bank of river Sanzar, 03.05.2021, *Kultiasow* 78 (TASH); near the village Ustakhan, 23.08.1937, *Titov* (TASH); Sentob, 10.09.1952, *Zaprometova* (TASH); Kichiksay, 16.06.1956, *Zaprometova* (TASH); Nurata District, Kyzylcha State Farm, Ukansay, 1951, *Novikova* (TASH); Pistalisay valley, near the pass, 08.05.1958, *Li, Zakirov* 449, 451 (TASH); gorge Yangi-Hayat, 27.05.1969, *Mambetjumaev* 45, 46 (TASH); Andygensay, Kachak, 15.06.1981, *Mukhina* 81128 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 01.09.2007, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 30.04.2008, *Beshko* (www.plantarium.ru); Uzbekistan, viloyat Navoiy, 35 km NE from city Nurata (Nurota), Karamola mts., 40°42'57" N, 66°03'52" E, 15.05.2013, *Lyskov* (MW); Nuratau Nature Reserve, Hayatsay, 02.09.2018, *Beshko* (www.plantarium.ru); Nurata District, Kichiksay gorge, 29.10.2019, *Tillaev* (www.plantarium.ru); Jizzakh Region, Farish District, Nuratau Nature Reserve, Hayatsay, 40.525023° N, 66.760291° E, 25.09.2021, *Beshko* (www.inaturalist.org); Jizzakh Region, Farish District, 4 km south-west of town Yangikishlak, 02.06.2023, *Fateryga* (www.plantarium.ru). **I-4-b Aktau Range:** Bitau, 13.06.1931, *Knorring* 41 (MW); Aktau Range, stony slope of Kokbulak valley, 01.07.1937, *Demurina* 386, 387 (TASH); Mts. Koytash, 3–4 km south-east of the village Sulukly, watershed, 02.08.1937, *Demurina* 766 (TASH); west of the village Chuya, gorge Ambarkhana, 28.04.1979, *Pimenov, Kljuykov, Boryaev, Baranova, Vassiljeva* 119 (MW); Nurata District, northern slope of Aktau Range, mountains Bakhiltau, 40.46242° N, 65.81955° E, 10.05.2013, *Beshko* (TASH, www.inaturalist.org); Navoi Region, Nurata District, Charkhansay, 40.45969°N, 65.79736°E, 17.05.2024, *Beshko* (www.inaturalist.org). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 08.04.1911, *Dimo, Sprygin, Shulga* 875 (TASH); Pistalitau, 09.04.1915, *Kultiasow* (TASH).

Sapindaceae Juss.

Acer L.

575. *Acer pentapomicum* J.L.Stewart (*Acer pubescens* Franch.), D.Brandis, Forest Fl. N.W. India: 111 (1874). Tree, phanerophyte. Pamir-Alay, Himalaya. Shrubland, Grassland, Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Farish District, northern slope of Mts. Koytash, Amandara, 13.07.2010, *Beshko* 10013–014 (TASH, herbarium of the Nuratau Nature Reserve, www.plantarium.ru). **I-4-b Khobduntau Range:** valley Bodbod, 20.06.1929, *Kudrjashev* (MW).

576. *Acer tataricum* subsp. *semenovii* (Regel & Herder) A.E.Murray (*Acer semenovii* Regel & Herder), Kalmia 12: 17 (1982). Tree, phanerophyte. Mountain Middle Asian. Forest, Shrubland, Grassland, Rocky areas. Montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Ukhum

Pass, 04.09.1932, *Knorring, Emme 161* (MW); near the village Ustakhan, 23.08.1937, *Titov* (TASH); upper reaches of Sentobsay, near the pass, 02.08.1940, *Gomolitsky, Dolgikh, Arkhireev 260* (TASH); Mts. Koytash, 28.05.1941, *Lepeschkin* (TASH); Koblatysay, 02.05.1943, *Djanaeva 112* (TASH); Koblatysay, 07.04.1952, *Zaprometova* (TASH); Sentobsay, 10.09.1952, *Zaprometova 411* (TASH); Sharaussay, 28.05.1956, *Zaprometova* (TASH); Kichiksay, 15.06.1956, *Zaprometova* (TASH); Ustuksay, 12.07.1956, *Vvedensky 101* (TASH); Ukansay, May 1958, *Zaprometova* (TASH); upper reaches of Ustuksay, 29.05.1964, *Zuckerwanik 364* (TASH); upper reaches of Ukhumsay, 02.06.1964, *Zuckerwanik 470* (TASH); Hayatsay gorge, 10.06.1969, *Mambetjumaev 167* (TASH); Hayatsay, 10.08.1978, *Korshunov 78026* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 1400–1500 m a.s.l., 12.08.1980, *Mukhina, Pjatina* (TASH); Hayatsay, 01.06.1990, *Beshko, Yakovenko 90074–075* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 02.08.2006, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 08.05.2014, *Tojibaev, Sun Hang et al. 17161* (TASH, KUN); Nuratau Nature Reserve, Hayatsay, 23.07.2014, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 02.05.2018, *Beshko* (www.plantarium.ru); Navoi Region, Nurata District, Kichiksay gorge, 29.10.2019, *Tillaev* (www.plantarium.ru); Jizzakh Region, Farish District, gorge Gurdara, 40.51388°N, 66.91267°E, 24.04.2025, *Beshko* (www.inaturalist.org). **I-4-b Aktau Range:** 5 km west of village Chuya, between mountains Aktau and Bakhiltau, 14.07.1932, *Knorring, Emme 73* (MW); 6–8 km south of mountains Takhku, 29.06.1937, *Demurina 326, 329* (TASH); valley Aktepa, 30.06.1937, *Demurina 346* (TASH); Aktau Range, stony slope of Kokbulak valley, 01.07.1937, *Demurina 410, 412* (TASH).

Rutaceae Juss.

Haplophyllum Juss.

577. *Haplophyllum acutifolium* (DC.) G.Don. (*H. perforatum* (M.Bieb.) Vved.), Gen. Hist. 1: 780 (1831). Perennial, hemicryptophyte. Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** Kyzylchali, 28.04.1913, *Korovin 131* (TASH); Mts. Koytash, the village Osmansay, 01.06.1931, *Kobranova 458* (TASH); Payaryk District, 1 km south of the village Ugat, 21.07.1931, *Kobranova 181* (TASH); Gallaaral District, Karakuduk, 03.06.1934, *Rybakov* (TASH); northern spurs of Nuratau Mts., surroundings of the well Kozybay, 05.05.1939, *Mikhaylova, Popova* (TASH); Nuratau Range, Farish District, 07.05.1941, *Momotov 158* (TASH); foothills of Nuratau Range, Farish District, Kirov State Farm, 03.05.1943, *Vernik, Raykova 30* (TASH); Ukansay, 13.05.1951, *Zaprometova* (TASH); Gatchasay, 14.05.1955, *Zaprometova* (TASH); left side of the river Ustuksay, 17.05.1956, *Korotkova 5793* (TASH); 6 km north of the well Ernazar, 13.05.1957, *Momotov, Li 376* (TASH); Farish District, 4 km north-east of the village Deristan, 28.04.1958, *Li, Zakirov 204* (TASH); Koblatysay, 13.05.1958, *Zaprometova* (TASH); mountains Nuratau, 21.05.1963, *Khaydarov 1198* (TASH); mountains Nuratau, 06.07.1963, *Khaydarov 1787* (TASH); Hayatsay, 29.05.1990, *Beshko, Yakovenko 90070–073* (herbarium of the Nuratau Nature Reserve); watershed between Hayatsay and Andygensay, 12.06.1992, *Beshko 92184–185* (herbarium of the Nuratau Nature Reserve); Hayatsay, Khotunon, 23.05.2006, *Beshko 06045* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 08.05.2014, *Tojibaev, Sun Hang et al. 17170* (TASH, KUN). **I-4-b Aktau Range:** Koshrabad, *Iris* steppe, 03.05.1913, *Korovin 268* (TASH); Dzhush – Koshrabad, *Iris* steppe, 03.05.1913, *Korovin 275* (TASH); 10 km south of the village Dekhibaland, 23.05.1936, *Kharchenko 1183* (TASH); near the pass Tikalik, 3 km south of village Sarygul, 12.05.1957, *Momotov, Li 322* (TASH); the village Raimbay, 28.05.1963, *Khaydarov 1466* (TASH). **I-4-b Karatau Range:** mountains Karatau, eastern part, south-eastern slope, 20.05.1936, *Kharchenko 1082, 1085* (TASH); south of the pass Jizlan, 26.05.1964, *Pryakhin* (TASH); Sarmysh, 05.06.1967, *Pryakhin* (TASH). **I-4-b**

Karachatau Range: 1.5–2 km east of the village Kursafar, 08.07.1937, *Demurina 460* (TASH). **I-4-b Khobduntau Range:** reported by Kudrjashev in “Vegetation of the Khobduntau and Karachatau Mountains” (1929, p. 63).

578. *Haplophyllum latifolium* Kar. & Kir., Bull. Soc. Imp. Naturalistes Moscou 14: 398 (1841). Perennial, hemicryptophyte. Mountain Middle Asian, Dzungarian. Shrubland, Grassland, Rocky areas, Artificial terrestrial. Foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** Nuratau Range, Farish District, 10.05.1941, *Momotov 198* (TASH); Hayatsay gorge, 28.05.1969, *Mambetjumaev 72* (TASH); Hayatsay, 28.05.1990, *Beshko, Yakovenko 90069* (herbarium of the Nuratau Nature Reserve); watershed between Hayatsay and Andygensay, 12.06.1992, *Beshko 92181–183* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 05.05.2006, *Beshko* (www.plantarium.ru); Hayatsay, Novi Khushk, 24.05.2006, *Beshko 06249* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 09.05.2014, *Tojibaev, Sun Hang et al. 17265* (TASH, KUN); Nuratau Nature Reserve, Hayatsay, 30.05.2020, *Beshko* (www.plantarium.ru); Jizzakh Region, Farish District, Nuratau Nature Reserve, Hayatsay, 40.51895° N, 66.7416° E, 15.05.2024, *Beshko* (www.inaturalist.org).

579. *Haplophyllum pedicellatum* Bunge ex Boiss., Fl. Orient. 1: 925 (1867). Perennial, hemicryptophyte. Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** Mts. Koytash, the village Osmansay, 25.05.1931, *Kobranova* (TASH); Sentobsay, 26.05.1954, *Zaprometova* (TASH); Alaysay, 28.04.1957, *Zaprometova* (TASH); piedmont plain near Kyzylcha State Farm, 21.05.1957, *Zaprometova* (TASH); 5 km north-east of the village Karasay, gentle upland of Nuratau valley, 20.05.1958, *Li, Zakirov 677* (TASH); Uruskuduk, 21.04.1962, *Khaydarov 200* (TASH); Akbel, 10.05.1962, *Khaydarov 65* (TASH); Chashma, 13.06.1963, *Khaydarov 1719* (TASH); lower reaches of Madjrumsey, 05.05.2011, *Beshko 011002* (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** sagebrush steppe near the well Pashat, 24.04.1913, *Korovin 41* (TASH); Khatyrchi District, 15.05.1928, *Lepeschkin* (TASH); mountains Nurata, 18.05.1936, *Kharchenko 1012* (TASH); piedmont plain, vineyard near district center Nurata, 22.04.1963, *Markova* (TASH); near the town Nurata, 23.05.1964, *Pryakhin* (TASH); near the village Gazgan, 25.05.1964, *Pryakhin* (TASH); surroundings of district center Nurata, 25.05.1964, *Zuckerwanik 219* (TASH); near the village Dekhibaland, 12.05.1976, *Pratov* (TASH); south of district center Nurata, 22.05.1975, *Pratov* (TASH). **I-4-b Karatau Range:** 5 km east of the village Zyum, 05.05.1955, *Momotov, Li 108* (TASH); 1 km north of the ruins of the village Sarmysh, 05.05.1955, *Momotov, Li 153* (TASH). **I-4-b Karachatau Range:** Samarkand Region, Koshrabad District, along the road Chelek – Koshrabad, 20.06.1978, *Rakhmankulov, Melibaev* (TASH). **I-4-b Khobduntau Range:** Gallaaral District, experimental station of cereal crops, 10.06.1934, *Toporova* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 07.04.1915, *Kultiasow 43* (TASH); plain between mountains Koytash and Balyklitau, 23.05.1931, *Kobranova 408* (TASH).

580. *Haplophyllum robustum* Bunge, Schriften Naturf. Vereins Riga 1: 208 (1847). Perennial, hemicryptophyte. Turanian. Desert, Shrubland, Rocky areas, Artificial terrestrial. Plain, foothills. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** near Kyzylchali, sagebrush steppe, 01.08.1932, *Knorring, Emme 110* (MW). **I-4-b Aktau Range:** near the village Dekhibaland, 28.05.1936, *Kharchenko 1124* (TASH); north of the village Gazgan, 15.07.1937, *Mironov 13* (TASH); piedmont plain near district center Nurata, May 1963, *Markova* (TASH); [same locality], 09.06.1964, *Markova* (TASH). **I-4-b Karatau Range:** Kanimekh District, foothills 16 km north of town, 24.05.1931, *Muravlyansky 8* (TASH); surroundings of town Kanimekh, 7 km north of town, 15.07.1934, *Tyshchenko 191, 195* (TASH); hills 6 km north of Kanimekh, 12.08.1934, *Anfilov, Ivanova 58* (TASH);

Bukhara Region, Gzhduvan District, Nuratau mountains, western part of Karatau Range, 40.423145° N, 65.149783° E, 27.05.2024, *Beshko* (field observation).

581. *Haplophyllum versicolor* Fisch. & C.A.Mey., Bull. Cl. Phys.-Math. Acad. Imp. Sci. Saint-Petersbourg 3: 307 (1845). Perennial, hemicryptophyte. Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Gallaaral District, Karakuduk, 10.06.1934, *Rybakov* (TASH); Nuratau Range, Farish District, 14.05.1941, *Momotov* (TASH); foothills of Nuratau Range, Farish District, Kirov State Farm, 24.05.1943, *Vernik, Raykova 84* (TASH); Nurata District, piedmont plain, 27.05.1951, *Novikova* (TASH); Nurata District, Kyzylcha State Farm, piedmont plain, 06.06.1951, *Zaprometova* (TASH); Karasay, 30.05.1954, *Zaprometova* (TASH); Farish District, 4 km north of the village Deristan, 28.04.1958, *Li, Zakirov 223* (TASH); plain north of Nuratau Mts., 12.05.1958, *Li, Zakirov 519* (TASH); Akbel, 09.06.1962, *Khaydarov 124* (TASH); mountains Nuratau, 04.05.1963, *Khaydarov 1175* (TASH); mountains Nuratau, 12.06.1963, *Khaydarov 1702* (TASH); Karl Marx State Farm, eastern part of Nuratau Range, basin of Tegirmansay, 26.05.1967, *Pereyagina* (TASH); piedmont plain, 25.05.1993, *Beshko 93078* (herbarium of the Nuratau Nature Reserve); foothills near Yangikishlak, 13.05.2012, *Beshko* (TASH). **I-4-b Aktau Range:** piedmont plain near district center Nurata, 08.04.1963, *Markova* (TASH); surroundings of Nurata, 22.05.1964, *Zuckerwanik 218* (TASH); near the town Nurata, 23.05.1964, *Pryakhin* (TASH); near the village Dekhibaland, 22.05.1974, *Pratov* (TASH); Navoi Region, town Nurata, 40.57408° N, 65.69202° E, 17.05.2024, *Beshko* (www.inaturalist.org, www.plantarium.ru). **I-4-b Karatau Range:** surroundings of town Kanimekh, 5 km north of town, 15.07.1934, *Tyshchenko 106* (TASH). **I-4-b Khobduntau Range:** Gallaaral District, experimental station of cereal crops, 07.06.1934, *Toporova* (TASH); [same locality], 30.07.1934, *Toporova* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 09.04.1915, *Kultiasow 94* (TASH); remnant mountains Pistalitau, 26.04.2020, *Beshko* (www.plantarium.ru).

Simaroubaceae DC.

Ailanthus Desf.

582. *Ailanthus altissima* (Mill.) Swingle, J. Washington Acad. Sci. 6: 495 (1916). Tree, phanerophyte. Oriental. Forest, Artificial terrestrial. Plain, foothills, montane zone. Rare. Alien (introduced). **Occurrence records: I-4-a Nuratau Range:** Madjrumsey, 20.07.1981, *Mukhina 81121* (herbarium of the Nuratau Nature Reserve); Madjrumsey, 10.07.1990, *Beshko, Yakovenko 90077* (herbarium of the Nuratau Nature Reserve).

Malvaceae Juss.

Abutilon Mill.

583. *Abutilon theophrasti* Medik., Malvenfam.: 28 (1787). Annual, therophyte. Eastern Irano-Turanian, Oriental. Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Rare. Probably alien. **Occurrence records: I-4-a Nuratau Range:** mountains Nuratau, October 1963, *Khaydarov 2007* (TASH). **I-4-c North-Nuratau insular low mountains:** Jizzakh Region, Farish District, Balyklitau, near the village Ok-tom, 14.04.2011, *Batashov* (TASH).

Alcea L.

584. *Alcea litwinowii* (Iljin) Iljin, Fl. URSS 15: 111 (1949). Perennial, hemicryptophyte. Middle Asian. Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau mountains, south-eastern part,

10.05.1915, *Spiridonov* (LE); Nuratau Nature Reserve, Hayatsay, 1100 m a.s.l., 20.08.1977, *Levichev* (TASH); Hayatsay, 1400 m a.s.l., 20.08.1977, *Levichev* (TASH); Hayatsay, field station, 30.07.2003, *Beshko* 03022–023 (herbarium of the Nuratau Nature Reserve); Hayatsay, Novi Khushk, 07.06.2006, *Beshko* 06192 (www.plantarium.ru, herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 28.06.2009, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 30.08.2020, *Beshko* (www.plantarium.ru).

585. *Alcea nudiflora* (Lindl.) Boiss., Fl. Orient. 1: 833 (1867). Perennial, hemicryptophyte. Altay, Middle Asian. Shrubland, Grassland, Rocky areas, Artificial terrestrial. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau mountains, 20.07.1931, *Botschantzev* (TASH); Nuratau Range, Farish District, 20.05.1941, *Momotov* (TASH); surroundings of Saurbel Pass, 21.06.2010, *Beshko* (www.plantarium.ru); Mts. Koytash, upper reaches of Ilonchisay, 21.06.2010, *Beshko* (www.plantarium.ru); Hayatsay, Andebaraut, 25.06.2012, *Beshko* (TASH); Osmansay, about 950 m a.s.l., 02.07.2020, *Beshko* (www.plantarium.ru, www.inaturalist.org); Madjrumsay, about 800 m a.s.l., 31.08.2020, *Beshko* (www.plantarium.ru, www.inaturalist.org). **I-4-b Khobduntau Range:** reported by Kudrjashev in “Vegetation of the Khobduntau and Karachatau Mountains” (1929, p. 63). **I-4-c North-Nuratau insular low mountains:** mountains Balyklitau south of the village Chimkurgan, 30.05.1958, *Vvedensky, Nabiev* (TASH).

586. *Alcea rhyticarpa* (Trautv.) Iljin, Fl. URSS 15: 115 (1949). Perennial, hemicryptophyte. Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** 8–9 km west of the village Temirqovuq, 26.07.1937, *Demurina* 777 (TASH); Alaysay, 29.05.1956, *Zaprometova* (TASH); lower reaches of Hayatsay, 25.05.1978, *Korshunov* 78029 (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** village Angudan, 20.06.1928, *Lepeschkin* (TASH); foothills near the village Chashma, 05.06.1964, *Pryakhin* (TASH). **I-4-b Karachatau Range:** southern slope, 1 km north-east of the village Ingichka, 07.07.1937, *Demurina* 550 (TASH). **I-4-b Khobduntau Range:** reported by Kudrjashev in “Vegetation of the Khobduntau and Karachatau Mountains” (1929, p. 63). **I-4-c North-Nuratau insular low mountains:** mountains Balyklitau south of the village Chimkurgan, 30.05.1958, *Vvedensky, Nabiev* (TASH); Jizzakh Region, Farish District, 4 km NNE of the village Uchkulach, 26.05.2023, *Fateryga* (www.plantarium.ru); Jizzakh Region, Farish District, northern slope of Pistalitau Range, 09.05.2024, *Beshko* (www.plantarium.ru, www.inaturalist.org).

Althaea L.

587. *Althea armeniaca* Ten., Index Seminum (NAP, Neapolitano) 1839: 11 (1839). Perennial, hemicryptophyte. Caucasian, Irano-Turanian. Wetlands (inland), Artificial aquatic. Plain, foothills. Rare. Native. **Occurrence records: I-4-b Aktau Range:** Khatyrchi District, May 1928, *Lepeschkin* (TASH).

Malva L.

588. *Malva neglecta* Wallr., Syll. Pl. Nov. 1: 140 (1824). Perennial, hemicryptophyte. Euro-Siberian, Tethyan. Desert, Forest, Shrubland, Grassland, Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Probably alien. **Occurrence records: I-4-a Nuratau Range:** Nuratau District, surroundings of Kyzylcha State Farm, piedmont plain, 29.04.1952, *Zaprometova* (TASH); mountains Nuratau, 04.05.1963, *Khaydarov* 61 (TASH); mountains Nuratau, 06.07.1963, *Khaydarov* 1786 (TASH); Hayatsay gorge, gentle slopes, 04.06.1969, *Mambetjumaev* 151 (TASH); Hayatsay, 1979, *Korshunov* 79013 (herbarium of the Nuratau Nature Reserve); Hayatsay, 15.08.1980, *Pjatina* 80029 (herbarium of the Nuratau Nature Reserve); Hayatsay, field station of Nuratau Nature Reserve, 16.07.2007, *Beshko* 07046–047 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 14.05.2009, *Beshko* (www.plantarium.ru).

www.inaturalist.org); Nuratau Nature Reserve, Hayatsay, 08.05.2014, *Tojibaev, Sun Hang et al.* 17207 (TASH, KUN). **I-4-b Aktau Range:** Khatyrchi District, 05.05.1928, *Lepeschkin* (TASH). **I-4-b Karatau Range:** station Karmana – mountains Karakarga, *Iris*-sagebrush steppe, 22.04.1913, *Korovin* 3 (TASH). **I-4-b Khobduntau Range:** reported by Kudrjashev in “Vegetation of the Khobduntau and Karachatau Mountains” (1929, p. 63); Bulungur District, Khobduntau, Ingichkasay, 1275 m a.s.l., 39°53'17.33" N, 67°18'07.41" E, *Beshko* (plant community description).

589. *Malva sylvestris* L. (*M. mauritiana* L.), Sp. Pl.: 689 (1753). Biennial, perennial, hemicryptophyte. Euro-Siberian, Tethyan. Artificial terrestrial. Plain, foothills. Rare. Probably alien. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, June 1979, *Korshunov* (TASH).

Thymelaceae Juss.

Diarrhron Turcz.

590. *Diarrhron vesiculosum* (Fisch. & C.A.Mey.) C.A.Mey., Bull. Cl. Phys.-Math. Acad. Imp. Sci. Saint-Petersbourg 1: 355 (1843). Annual, therophyte. Caucasian, Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, Novi Daroz, 20.06.2006, *Beshko* 06093 (herbarium of the Nuratau Nature Reserve); Hayatsay, 20.06.2007, *Beshko* 07050–052 (herbarium of the Nuratau Nature Reserve); Farish District, piedmont plain of Nuratau Range, about 4 km north of the village Osmansay, 40.40523° N, 67.2901° E, *Beshko* (www.inaturalist.org); piedmont plain between the villages Uchma and Safarota, 28.04.2020, 02.07.2020, 24.09.2020, *Beshko, Shomurodov, Adilov* (plant community description); fallow land between towns Band and Bogdon (Yangikishlak), 02.07.2020, *Beshko, Shomurodov, Adilov* (plant community description); piedmont plain of Nuratau Range, about 4 km north of the village Osmansay, 30.06.2020, *Beshko, Shomurodov, Adilov* (plant community description); piedmonts of Mt. Karatash, 28.04.2020, 03.07.2020, 22.09.2020, *Beshko, Shomurodov, Adilov* (plant community description). **I-4-b Khobduntau Range:** reported by Kudrjashev in “Vegetation of the Khobduntau and Karachatau Mountains” (1929, p. 64); Bulungur District, Khobduntau, Ingichkasay, 1275 m a.s.l., 39°53'17.33" N, 67°18'07.41" E, *Beshko* (plant community description). **I-4-c North-Nuratau insular low mountains:** northern piedmonts of Pistalitau, 24.04.2020, 30.06.2020, 23.09.2020, *Beshko, Shomurodov, Adilov* (plant community description); pass on the remnant range Pistalitau, 25.04.2020, 02.07.2020, 23.09.2020, *Beshko, Shomurodov, Adilov* (plant community description); 5 km north of town Band, between two dumps of the Uchkulach open pit, 26.04.2020, 01.07.2020, *Beshko, Shomurodov, Adilov* (plant community description); northern piedmonts of remnant mountains Uchkulach, 26.04.2020, 01.07.2020, *Beshko, Shomurodov, Adilov* (plant community description); piedmonts of remnant mountains Pistalitau, surroundings of Uchkulach, 25.04.2020, 30.06.2020, 23.09.2020, *Beshko, Shomurodov, Adilov* (plant community description); crest of Egarbelistag Range, 1.5 km west of the Carbonat JSC quarry, 03.07.2020, *Beshko, Shomurodov, Adilov* (plant community description); southern piedmonts of Pistalitau, about 7 km east of the villages Yangiabad and Uchkulach, 02.07.2020, *Beshko, Shomurodov, Adilov* (plant community description).

Thymelaea Mill.

591. *Thymelaea passerina* (L.) Coss. & Germ., Syn. Anal. Fl. Paris, ed. 2: 360 (1859). Annual, therophyte. Euro-Siberian, Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Sentob, 24.06.1971, *Botschantzev, Kamelin* (LE); Hayatsay, 20.06.2007, *Beshko* 07054 (herbarium of the Nuratau Nature Reserve).

Resedaceae Martinov

Reseda L.

592. *Reseda lutea* L., Sp. Pl.: 449 (1753). Biennial, perennial, hemicryptophyte. European, Tethyan. Desert, Shrubland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Alien. **Occurrence records: I-4-a Nuratau Range:** pass on the road from Nakrutsay to Farish, 01.06.1964, *Zuckerwanik* 441 (TASH); surroundings of Bogdon (Farish), 16.05.2009, *Beshko* (www.plantarium.ru, www.inaturalist.org); Samarkand Region, Koshrabad District, near Fazilman Lake, 40.55126° N, 66.57386° E, 05.07.2024, *Beshko* (www.inaturalist.org). **I-4-b Khobduntau Range:** Gallaaral District, experimental station of cereal crops, 1934, *Toporova* (TASH).

593. *Reseda luteola* L., Sp. Pl.: 448 (1753). Biennial, therophyte. European, Tethyan. Desert, Shrubland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Rare. Alien. **Occurrence records: I-4-a Nuratau Range:** Jizzakh Region, Farish District, 4 km south-west of town Yangikishlak, 02.06.2023, *Fateryga* (www.plantarium.ru). **I-4-b Khobduntau Range:** plain between mountains Khobduntau and Karachatau, near the village Almali, 12.06.1929, *Kudrjashev* (TASH).

Capparaceae Juss.

Capparis L.

594. *Capparis spinosa* L., Sp. Pl.: 503 (1753). Perennial, hemicryptophyte. Euro-Siberian, Irano-Turanian. Desert, Shrubland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, 10.08.1978, *Korshunov* 78031–032 (herbarium of the Nuratau Nature Reserve); Hayatsay, 02.06.2006, *Beshko* 06167 (herbarium of the Nuratau Nature Reserve); piedmont plain of Nuratau Range, about 4 km north of the village Osmansay, 28.03.2019, 26.06.2019, *Beshko*, *Shomurodov*, *Adilov* (plant community description); fallow land between towns Band and Yangikishlak, N 40°28'35", E 67°14'22", 27.04.2020, 02.07.2020, 23.09.2020, *Beshko*, *Shomurodov*, *Adilov* (plant community description); northern foothills of Nuratau, between the village Ilonchi and Osmansay, foothills south of the road P-36, N 40°23'27" E 67°15'45", 27.04.2020, 03.07.2020, 22.09.2020, *Beshko*, *Shomurodov*, *Adilov* (plant community description); piedmont plain Nuratau Range, lower reaches of Ukhumsay, about 3 km north of the village Mulla, N 40°36'39" E 66°49'20", 28.04.2020, 02.07.2020, 24.09.2020, *Beshko*, *Shomurodov*, *Adilov* (plant community description); Jizzakh Region, Farish District, 40.356723° N, 67.579277° E, 02.06.2021, *Beshko* (www.inaturalist.org). **I-4-c North-Nuratau insular low mountains:** northern piedmonts of Pistalitau, 24.04.2020, 30.06.2020, 23.09.2020, *Beshko*, *Shomurodov*, *Adilov* (plant community description); pass on the remnant range Pistalitau, 25.04.2020, 02.07.2020, 23.09.2020, *Beshko*, *Shomurodov*, *Adilov* (plant community description); 5 km north of town Band, between two dumps of the Uchkulach open pit, 26.04.2020, 01.07.2020, *Beshko*, *Shomurodov*, *Adilov* (plant community description); northern piedmonts of remnant mountains Uchkulach, 26.04.2020, 01.07.2020, *Beshko*, *Shomurodov*, *Adilov* (plant community description); piedmonts of remnant mountains Pistalitau, surroundings of Uchkulach, 25.04.2020, 30.06.2020, 23.09.2020, *Beshko*, *Shomurodov*, *Adilov* (plant community description); crest of Egarbelistag Range, 1.5 km west of the Carbonat JSC quarry, N 40°21'44" E 67°29'06", 03.07.2020, *Beshko*, *Shomurodov*, *Adilov* (plant community description); plain between remnant ranges Egarbelistag and Pistalitau, between the well Karaman and 5th department of Bogdon State Farm, N 40°23'45" E 67°29'27", 28.04.2020, 03.07.2020, 22.09.2020, *Beshko*, *Shomurodov*, *Adilov* (plant community description).

Cleomaceae Bercht. & J.Presl*Cleome* L

595. *Cleome quinquenervia* DC. (*Cleome fimbriata* Vicary), Prodr. 1: 239 (1824). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Artificial terrestrial. Foothills. Rare. Native. **Occurrence records: I-4-b Karatau Range:** dry riverbed of valley Karakarga, descent from Karakarga Pass to Navoi, 15.09.2012, *Tojibaev, Beshko, Batashov, Karimov* (TASH).

Brassicaceae Burnett (Cruciferae Juss.)*Aethionema* W.T.Aiton

596. *Aethionema carneum* (Banks & Soland.) B.Fedtsch. (*Campyloptera carnea* (Banks & Soland.) Botsch. & Vved.), Fl. Zap. Tian Shan: 176 (1905). Annual, therophyte. Irano-Turanian. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Reported by Zakirov in «Vegetation cover of Nuratau Mountains» (1969, p. 27) and «Botanical geography of low mountains of Kyzylkum and Nuratau Range» (1971, p. 60).

Alliaria Scop.

597. *Alliaria petiolata* (M.Bieb.) Cavara & Grande, Bull. Orto Bot. Regia Univ. Napoli 3: 418 (1913). Biennial, therophyte. European, Tethyan. Forest, Shrubland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Madjrumsay, Fargun, 13.05.1995, *Beshko 95031* (herbarium of the Nuratau Nature Reserve); Asrafsay, 04.06.1996, *Beshko 96114–116* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Tykchasay, Parrandoz, 40.48717° N, 66.77725° E, 02.05.2025, *Beshko*, (www.inaturalist.org).

Alyssum L.

598. *Alyssum dasycarpum* Stephan ex Willd., Sp. Pl., ed. 4, 3: 469 (1800). Annual, therophyte. Irano-Turanian. Desert. Plain, foothills. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Nurata District, Kyzylcha State Farm, 06.04.1952, *Novikova* (TASH); piedmont plain north of Nuratau Range, near Kyzylcha State Farm, 27.04.1954, *Zaprometova* (TASH); Koblatysay, 06.04.1958, *Zaprometova 332* (TASH).

599. *Alyssum simplex* Rudolphi (*Alyssum campestre* auct. non L.), J. Bot. (Schrader) 1799(2): 290 (1799). Annual, therophyte. Euro-Siberian, Irano-Turanian. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Jizzakh District, 26.05.1919, *Keyzer* (TASH); Mts. Koytash, 5 km north-east of the village Narvan, 19.07.1937, *Demurina 610* (TASH); pass near the sources of Guzhumsay, 23.07.1937, *Demurina 688* (TASH); Nuratau Range, Farish District, 15.05.1941, *Momotov* (TASH); [same locality], 19.05.1941, *Momotov* (TASH); upper reaches of Parrandozsay, on the way to Ukhum Pass, 31.05.1964, *Zuckerwanik 418* (TASH); Hayatsay, Khotunon, 11.06.1992, *Beshko 92152* (herbarium of the Nuratau Nature Reserve); Karysay, 29.04.1994, *Beshko 94090* (herbarium of the Nuratau Nature Reserve); Mt. Hayatbashi, 06.06.1995, *Beshko 95063* (herbarium of the Nuratau Nature Reserve); Hayatsay, field station of nature reserve, 07.05.2005, *Beshko 05018* (herbarium of the Nuratau Nature Reserve); Hayatsay, Novi Daroz, 18.04.2008, *Beshko 08029* (TASH, herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, about 1200 m a.s.l., 22.04.2023, *Beshko* (www.plantarium.ru, www.inaturalist.org). **I-4-b Aktau Range:** Dzhusk – Koshrabad, *Iris* steppe, 03.05.1913, *Korovin 274* (TASH).

600. *Alyssum szovitsianum* Fisch. & C.A.Mey. (*Alyssum marginatum* Steud.), Index Seminum (LE, Petropolitanus) 4: 31 (1838). Annual, therophyte. Irano-Turanian. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Range, Farish District, 07.05.1941, *Momotov 179* (TASH); [same locality], 18.05.1941, *Momotov* (TASH); Alaysay, 01.04.1958, *Zaprometova* (TASH); Sharaussay, 05.04.1958, *Zaprometova 313* (TASH); Gatchasay, 08.04.1958, *Zaprometova 370* (TASH); Hayatsay, 07.04.1992, *Beshko 92010* (herbarium of the Nuratau Nature Reserve); Karysay, 29.04.1994, *Beshko 94089* (herbarium of the Nuratau Nature Reserve); Hayatsay, Novi Daroz, 18.04.2008, *Beshko 08031* (TASH, herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 05.05.2012, *Beshko* (TASH, herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, about 1300 m a.s.l., 15.05.2024, *Beshko* (www.plantarium.ru, www.inaturalist.org). **I-4-b Aktau Range:** near the town Nurata, 01.05.1913, *Korovin 381* (TASH); Dzhush – Koshrabad, *Iris* steppe, 03.05.1913, *Korovin* (TASH); 8 km south-west of the village Chuya, 29.06.1937, *Demurina 301* (TASH); near the town Nurata, 13.04.1963, *Markova* (TASH); 12 km north of the town Nurata, Chashma, 27.03.1963, *Markova* (TASH); near the town Nurata, 24.04.1964, *Markova* (TASH). **I-4-b Mt. Kokcha:** surroundings of the well Kokcha, 22.03.1958, *Adylov 35* (TASH); southern slopes of Kokchatau, 01.05.1964, *Adylov, Shoraimov 2417* (TASH). **I-4-b Karachatau Range:** southern slope 1 km north-east of the village Ingichka, 07.07.1937, *Demurina 555* (TASH). **I-4-b Khobduntau Range:** Mts. Khobduntau, northern slope, 11.06.1929, *Kudrjashev* (TASH).

601. *Alyssum turkestanicum* Regel & Schmalh. (*A. desertorum* Stapf.), Izv. Imp. Obshch. Lyubit. Estestv. Moskovsk. Univ. 34(2): 6 (1882). Annual, therophyte. Euro-Siberian, Irano-Turanian. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Milyutinskaya Station, Gallaaral State Farm, 4 km north-west of the village Alyamli, 01.04.1930, *Tarasevich 31* (TASH); Mts. Koytash, 3 km north-east of the village Kuvakiya, piedmonts of Mt. Piyazli, 24.04.1941, *Momotov 11* (TASH); Nuratau Range, Farish District, 29.04.1941, *Bukasov 8* (TASH); Mt. Zargar 2 km north-east of the village Urtasay, 11.05.1957, *Momotov, Li 235* (TASH); Nurata District, piedmont plain, 17.04.1952, *Zaprometova* (TASH); clayey desert, lower reaches of Ukhumsay, 14.04.1994, *Beshko 94005* (herbarium of the Nuratau Nature Reserve); Hayatsay, field station, 23.04.2009, *Beshko 09006* (TASH, herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 05.05.2012, *Beshko* (TASH, herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** mountain slopes between Nurata and well Pashat, 24.04.1913, *Korovin 82* (TASH); sandy steppe between well Pashat and Kara-Yuzgan, 25.04.1913, *Korovin 91* (TASH); Dzhush – Koshrabad, *Iris* steppe, 03.05.1913, *Korovin* (TASH); Khatyrchi District, loess hills, 15.05.1928, *Lepeschkin* (TASH); near the village Karakisa, 30.07.1937, *Mironov 53* (TASH); upper reaches of river Bitau, surroundings of the village, 26.05.1964, *Zuckerwanik 254* (TASH). **I-4-b Karatau Range:** mountains Karakarga, near the pass Jizlan, 22.04.1913, *Korovin 11* (TASH). **I-4-b Mt. Kokcha:** Kokchatau, 28.03.1958, *Adylov 672* (TASH); southern slopes of Kokchatau, 21.04.1964, *Adylov, Shoraimov 2327a* (TASH); [same locality], 24.04.1964, *Adylov, Shorakhimov 2331* (TASH). **I-4-b Khobduntau Range:** Milyutinskaya Station, Gallaaral State Farm, 2–2.5 km west-south-west of the village Upper Kutal, 01.04.1930, *Tarasevich 1* (TASH); surroundings of Milyutinskaya Station, experimental station of cereal crops, 13.05.1934, *Toporova* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 08.04.1911, *Dimo, Sprygin, Shulga 83* (TASH); Pistalitau, 08.04.1915, *Kultiasow 98* (TASH); mountains Balyklitau, 25.05.1931, *Kobranova 445* (TASH).

Arabis L.

602. *Arabis auriculata* Lam., Encycl. 1: 219 (1783). Annual, therophyte. European, Tethyan. Shrubland, Rocky areas. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a**

Nuratau Range: Hayatsay, Zamezhak, 03.05.2000, *Beshko* 00007, 00027 (herbarium of the Nuratau Nature Reserve); Hayatsay, rocks, 24.03.2009, *Beshko* (www.plantarium.ru); Jizzakh Region, Farish District, Nuratau Nature Reserve, Hayatsay, 40.50416° N, 66.72803° E, 22.04.2023, *Beshko* (www.inaturalist.org). **I-4-b Aktau Range:** northern slope of Aktau Range, west of the village Chuya, gorge Ashbarana, 28.04.1979, *Pimenov, Kljuykov, Boryaev, Baranova, Vassiljeva* 128 (MW). **I-4-c North-Nuratau insular low mountains:** southern slope of Pistalitau, about 400 m a.s.l., 18.03.2013, *Tojibaev, Shomurodov, Beshko, Batashov* (TASH).

603. *Arabis montbretiana* Boiss., Ann. Sci. Nat., Bot., sér. 2, 17: 53 (1842). Annual, therophyte. Irano-Turanian. Shrubland, Rocky areas. Foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** Hayatsay, Zamezhak, 01.04.1981, *Mukhina* (TASH); Hayatsay, Khotunon, 14.05.2008, *Beshko* 08005 (herbarium of the Nuratau Nature Reserve); piedmonts of Mt. Karatash, N 40°22'03" E 67°22'00", 28.04.2020, 03.07.2020, *Beshko, Shomurodov, Adilov* (plant community description); upper reaches of Ilonchisay, above Zangori Olov summer camp, N 40°20'13" E 67°13'22", 28.04.2020, *Beshko, Shomurodov, Adilov* (plant community description).

Asperuginoides Rauschert

604. *Asperuginoides axillaris* (Boiss. & Hohen.) Rauschert (*Buchingera axillaris* Boiss.), Taxon 31: 558 (1982). Annual, therophyte. Irano-Turanian. Forest, Shrubland, Rocky areas. Montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** upper reaches of Kyzylalmasay, 18.05.1956, *Zakirov* 206 (TASH); Tykchasay, Parrandoz, 11.05.2010, *Beshko* 10042 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, western slope of rocky massif Parrandoz, 13.05.2010, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 04.05.2012, *Beshko* (www.plantarium.ru); Jizzakh Region, Farish District, Nuratau Nature Reserve, Hayatsay, 40.512841° N 66.740611° E, 22.04.2023, *Beshko* (www.plantarium.ru, www.inaturalist.org).

Barbarea Beck.

605. *Barbarea plantaginea* DC., Syst. Nat. 2: 208 (1821). Biennial, therophyte. Pontic, Caucasian, Irano-Turanian. Wetlands (inland), Artificial aquatic. Plain, foothills, montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** on the way from Milyutinskaya to the village Yangichayanly, 29.05.1931, *Kasimenko* (TASH). **I-4-b Khobduntau Range:** Gumsay, 28.06.1929, *Kudrjashev* (TASH).

606. *Barbarea vulgaris* R.Br., Hortus Kew. 4: 109 (1812). Biennial, therophyte. Euro-Siberian, Tethyan. Forest, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** Nuratau Mts., south of the village Upper Ukhum, 03.05.1958, *Li, Zakirov* 196 (TASH); Tykchasay, 03.08.1982, *Mukhina* 82042 (herbarium of the Nuratau Nature Reserve); Tykchasay, 21.04.1992, *Beshko* 92109 (herbarium of the Nuratau Nature Reserve); Hayatsay, 18.07.1992, *Beshko* 92188–189 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 08.05.2014, *Tojibaev, Sun Hang et al.* 17191 (TASH, KUN); Nuratau Nature Reserve, upper reaches of Hayatsay, about 1400 m a.s.l., 40.50463° N, 66.73174° E, 22.04.2023, *Beshko* (www.plantarium.ru, www.inaturalist.org). **I-4-b Aktau Range:** Khatyrchi District, 05.05.1928, *Lepeschkin* (TASH). **I-4-b Khobduntau Range:** Gumsay, 28.06.1929, *Kudrjashev* (TASH).

Brassica L.

607. *Brassica rapa* L. (*Brassica campestris* L.), Sp. Pl.: 666 (1753). Annual, therophyte. Mediterranean, Western Irano-Turanian. Artificial terrestrial. Plain, foothills, montane zone. Occasional. Alien (introduced). **Occurrence records:** **I-4-a Nuratau Range:** Hayatsay, 18.04.1981, *Mukhina* 81108

(herbarium of the Nuratau Nature Reserve); village Hayat, 25.04.1992, *Beshko 92108* (herbarium of the Nuratau Nature Reserve).

Camelina Crantz.

608. *Camelina microcarpa* Andr. ex DC. (*Camelina sylvestris* Wallr.), Syst. Nat. 2: 517 (1821). Annual, therophyte. Euro-Siberian, Tethyan. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Ustuksay, left bank, 29.05.1964, *Zuckerwanik 389* (TASH). **I-4-b Aktau Range:** Kattasay, 07.05.2020, *Akbarov, Turdiev, Juramurodov 7052020175* (TASH). **I-4-b Karatau Range:** foothills near Sarmyshsay, 26.04.1965, *Pryakhin* (TASH). **I-4-b Khobduntau Range:** Gallaaral District, experimental station of cereal crops, 07.04.1934, *Toporova* (TASH).

609. *Camelina rumelica* Velen., Sitzungsber. Königl. Böhm. Ges. Wiss., Math.-Naturwiss. Cl. 1887: 448 (1887). Annual, therophyte. Pontic, Caucasian, Irano-Turanian. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. **Occurrence records: I-4-a Nuratau Range:** Gatchasay, 08.04.1958, *Zaprometova 386* (TASH); south-west of Jizzakh, gorge of river Sanzar, Tamerlane's Gate, 26.04.1975, *Pimenov, Pimenova, Baranova 64* (MW).

610. *Camelina sativa* (L.) Crantz, Stirp. Austr. Fasc. 1: 17 (1762). Annual, therophyte. Euro-Siberian. Artificial terrestrial. Foothills, montane zone. Alien (introduced). **Occurrence records: I-4-a Nuratau Range:** surroundings of Saurbel Pass, 40°21'34,06"N, 67°06'40,12"E, left bank of Kulbasay, 09.05.2024, *German, Karimov* (ALTB). **I-4-b Khobduntau Range:** reported by Kudrjashev in "Vegetation of the Khobduntau and Karachatau Mountains" (1929, p. 61).

Capsella Medik.

611. *Capsella bursa-pastoris* (L.) Medik., Pfl.-Gatt.: 85 (1792). Annual, therophyte. Pluriregional. Desert, Forest, Shrubland, Grassland, Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** 5 km east of the village Koytash, 24.04.1956, *Zakirov 59* (TASH); Hayatsay, field station of nature reserve, 22.04.2006, *Beshko 06026, 06027* (herbarium of the Nuratau Nature Reserve); Hayatsay, field station of Nuratau Nature Reserve, 22.04.2008, *Beshko* (www.plantarium.ru); Jizzakh Region, Farish District, Hayatsay, 40.52887° N, 66.77526° E, 27.04.2024, *Beshko* (www.inaturalist.org). **I-4-b Aktau Range:** Khatyrchi District, 05.05.1928, *Lepeschkin* (TASH). **I-4-c North-Nuratau insular low mountains:** southern outskirts of the town Band, garden, 30.06.2020, *Beshko, Shomurodov, Adilov* (plant community description).

Cardamine L.

612. *Cardamine impatiens* L., Sp. Pl.: 655 (1753). Biennial, therophyte. Euro-Siberian, Irano-Turanian, Oriental. Forest, Wetlands (inland). Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Jizzakh Region, Farish District, Nuratau Nature Reserve, Madjrumsay, 40.57345° N, 66.71457° E, 02.05.2025, *Beshko* (TASH, www.inaturalist.org).

Chorispora R.Br.

613. *Chorispora tenella* (Pall.) DC., Syst. Nat. 2: 435 (1821). Annual, therophyte. Euro-Siberian, Irano-Turanian. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Koblatysay, 07.04.1952, *Zaprometova* (TASH); [same locality], 17.04.1952, *Zaprometova* (TASH); piedmont plain north of Nuratau Range, near Kyzylcha State Farm, 27.03.1958, *Zaprometova 176* (TASH); Gatchasay, 29.03.1958, *Zaprometova 190* (TASH); [same locality], 08.04.1958, *Zaprometova* (TASH); piedmont plain between Yangikishlak and Ukhum, 04.05.1958, *Li, Zakirov 333* (TASH); Yangikishlak, clayey

desert, 13.04.1995, *Beshko 95105* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, lower reaches of Madjrumsay, about 800 m a.s.l., 40.58369° N, 66.72542° E, 13.04.2016, *Beshko* (www.plantarium.ru, www.inaturalist.org); Nuratau Nature Reserve, upper reaches of Hayatsay, about 1500 m a.s.l., 40.50443° N, 66.73083° E, 22.04.2023, *Beshko* (www.plantarium.ru, www.inaturalist.org). **I-4-b Aktau Range:** Nurata, 02.05.1913, *Popov 194* (TASH); Khatyrchi District, 05.05.1928, *Lepeschkin* (TASH); [same locality], 09.06.1928, *Lepeschkin* (TASH). **I-4-b Karatau Range:** foothills near Sarmysh, 26.04.1965, *Pryakhin* (TASH). **I-4-b Khobduntau Range:** reported by Kudrjashev in “Vegetation of the Khobduntau and Karachatau Mountains” (1929, p. 62).

Clypeola L.

614. *Clypeola jonthlaspi* L., Sp. Pl.: 652 (1753). Annual, therophyte. Tethyan. Shrubland, Rocky areas. Plain, foothills, montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** Gatchasay, 19.04.1956, *Zaprometova 3* (TASH); Gatchasay, 29.03.1958, *Zaprometova 208* (TASH); [same locality], 16.05.1960, *Zaprometova 103* (TASH); Hayatsay, 25.04.1996, *Beshko 96002* (herbarium of the Nuratau Nature Reserve); [same locality] 22.04.2006, *Beshko 06023* (herbarium of the Nuratau Nature Reserve); [same locality] 23.04.2007, *Beshko 07028* (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** mountains Aktau, near the village Andak, 04.05.1925, *Popov 36* (TASH); surroundings of Nurata, 24.04.1964, *Markova* (TASH). **I-4-b Karatau Range:** 800 m north of the ruins of the village Sarmysh, 05.05.1955, *Momotov, Li 146* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitu, 31.03.2002, *Beshko* (TASH).

Conringia Heist. ex Fabr.

615. *Conringia clavata* Boiss., Ann. Sci. Nat., Bot., sér. 2, 17: 84 (1842). Annual, therophyte. Irano-Turanian. Shrubland, Rocky areas. Foothills, montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** foothills south-west of Jizzakh railway station, near the bridge over the river Sanzar, left bank, 02.05.1921, *Kultiasow 24* (TASH); Karasay, 12.04.1958, *Zaprometova 419* (TASH); Gatchasay, 14.04.1958, *Zaprometova 445, 450* (TASH); 2 km north of Saurbel Pass, 27.04.1958, *Li, Zakirov 137* (TASH); 5 km south-east of village Ukhum, near Ukhum Pass, 29.04.1958, *Li, Zakirov 241* (TASH); 7 km north-east of the village Narvan, 21.05.1958, *Li, Zakirov 705* (TASH); valley Uchma, above the village, 01.06.1964, *Zuckerwanik 448* (TASH); Hayatsay, 25.04.1992, *Beshko 92102* (herbarium of the Nuratau Nature Reserve); Hayatsay, Novi Daroz, 24.03.2009, *Beshko 09001* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 08.04.2009, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Madjrumsay, 26.03.2016, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** 12 km north of district center Nurata, Chashma, 27.03.1963, *Markova* (TASH); upper reaches of river Bitau, surroundings of the village, 26.05.1964, *Zuckerwanik 259* (TASH). **I-4-b Karatau Range:** 2.5 km south-west of the ruins of the village Sarmysh, 06.05.1955, *Momotov 201* (TASH).

Crambe L.

616. *Crambe cordifolia* subsp. *kotschyana* (Boiss.) Jafri (*Crambe kotschyana* Boiss.), Fl. W. Pakistan 55: 37 (1973). Perennial, hemicryptophyte. Irano-Turanian. Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** Mts. Koytash, south-west of the village Jizzakly, 28.05.1940, *Gomolitsky, Dolgikh 62* (TASH); valley 2.5 km south-east of Kyzylcha State Farm, 27.04.1954, *Zaprometova* (TASH); Alaysay, 25.03.1958, *Galkina* (TASH); surroundings of town Jizzakh, foothills, 20.04.1965, *Pryakhin* (TASH); southern slope of Mt. Zargar, 27.04.1979, *Pimenov, Boryaev, Kljuykov, Baranova, Vassiljeva 88* (MW); Bolosay, 26.04.1992, *Beshko 92426, 92427, 92428* (herbarium of the Nuratau Nature Reserve); Navoi Region, Nurata District, Sanguzarsay, *Beshko 92446, 92447, 92448* (herbarium of the Nuratau Nature Reserve); Hayatsay, Khotunon, 23.05.2006, *Beshko 06041, 06042* (herbarium of the

Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 13.04.2013, *Beshko* (www.plantarium.ru); Osmansay, upstream of the village Baland Osman, 05.04.2019, *Beshko, Adilov* (TASH); Nuratau Nature Reserve, Madjrumsay, river valley, 18.04.2019, *Beshko* (www.plantarium.ru); basin of Sentobsay, about 1300 m a.s.l., 24.04.2024, *Turdiyev* (www.plantarium.ru). **I-4-b Aktau Range:** mountain slopes between Nurata and well Pashat, 24.04.1913, *Korovin 45, 47, 48, 144, 149* (TASH). **I-4-b Karatau Range:** surroundings of the ruins of the village Sarmysh in the valley of river Sarmysh, 05.05.1955, *Momotov 143* (TASH). **I-4-b Khobduntau Range:** reported by Kudrjashev in "Vegetation of the Khobduntau and Karachatau Mountains" (1929, p. 62). **I-4-c North-Nuratau insular low mountains:** 5 km north of town Band, between two dumps of the Uchkulach open pit, 25.09.2019, 26.04.2020, *Beshko, Shomurodov, Adilov* (plant community description); the crest of Egarbelistag, 1.5 km west of the Carbonat JSC quarry, 25.03.2019, 27.04.2020, *Beshko, Shomurodov, Adilov* (plant community description); plain between remnant ranges Egarbelistag and Pistalitau, between the well Karaman and 5th department of Bogdon State Farm, N 40°23'45" E 67°29'27", 06.04.2019, 28.06.2019, 28.04.2020, *Beshko, Shomurodov, Adilov* (plant community description); northern piedmonts of Pistalitau, 24.04.2020, *Beshko, Shomurodov, Adilov* (plant community description).

Cryptospora Kar. & Kir.

617. *Cryptospora falcata* Kar. & Kir. (*C. omissa* Botsch.), Bull. Soc. Imp. Naturalistes Moscou 15: 161 (1842). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** Gatchasay, 09.04.1958, *Zaprometova 391* (TASH); Gatchasay, 10.04.1958, *Zaprometova 396* (TASH); near the pass through Pistalisay, 07.05.1958, *Li, Zakirov 408* (TASH); 5 km north-east of the village Karasay, gentle upland of Nuratau valley, 20.05.1958, *Li, Zakirov 683* (TASH); surroundings of town Jizzakh, 19.04.1965, *Pryakhin* (TASH). **I-4-b Aktau Range:** between the well Pashat and Karayuzgan, 25.04.1913, *Korovin 91* (TASH); Khatyrchi District, 05.05.1928, *Lepeschkin* (TASH); Aktau, near the village Langar, 21.05.1941, *Zakirov, Niyazov* (TASH); surroundings of Koshrabad, 26.04.1979, *Pimenov, Kljuykov, Boryaev, Baranova, Vassiljeva 63* (MW); 2.5 km south-east of the village Aksakalata, 07.05.1955, *Momotov, Li 214* (TASH). **I-4-b Karatau Range:** valley Bakachinak, 05.05.1955, *Momotov, Li 126* (TASH). **I-4-b Khobduntau Range:** plain between mountains Khobduntau and Karachatau, near the village Khobdun, 12.06.1929, *Kudrjashev* (TASH); Gallaaral District, 23.04.1934, *Titov* (TASH).

618. *Cryptospora inconspicua* (Kom.) O.E.Schulz (*Trichochiton inconspicuum* Kom.), Bot. Jahrb. Syst. 66: 97 (1933). Annual, therophyte. Irano-Turanian. Shrubland, Rocky areas. Montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** Bolosay, near the spring, 10.06.1996, *Beshko 96081* (herbarium of the Nuratau Nature Reserve).

Descurainia Webb & Berth.

619. *Descurainia sophia* (L.) Webb. & Prantl, H.G.A.Engler & K.A.E.Prantl, Nat. Pflanzenfam. 3(2): 192 (1892). Annual, therophyte. Euro-Siberian, Tethyan. Desert, Forest, Shrubland, Grassland, Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** Urganchi, 01.05.1913, *Popov 10* (TASH); Nurata District, Nuratau Range, northern slope, 04.04.1952, *Zaprometova* (TASH); Nuratau Range, north slopes, 06.04.1958, *Zaprometova 321* (TASH); Gatchasay, 13.04.1958, *Zaprometova 439* (TASH); Hayatsay, field station of nature reserve, 30.04.1981, *Mukhina 81107* (herbarium of the Nuratau Nature Reserve); Hayatsay, 22.04.2006, *Beshko 06028* (herbarium of the Nuratau Nature Reserve); Hayatsay, Novi Daroz, 05.05.2006, *Beshko 06334* (herbarium of the Nuratau Nature Reserve); proluvial plain, fallow land 5 km north-west of village Tulibay and 3 km north of the well Usarbay, N 40°37'01", E 67°03'39", 28.04.2020, *Beshko, Shomurodov, Adilov* (plant community

description); Jizzakh Region, Farish District, Hayatsay, village Upper Hayat, field station of nature reserve, 40.527614° N 66.775199° E, 22.04.2023, *Beshko* (www.plantarium.ru, www.inaturalist.org). **I-4-b Aktau Range:** Khatyrchi District, slopes, 05.05.1928, *Lepeschkin* (TASH). **I-4-b Khobduntau Range:** Gallaaral District, experimental station of cereal crops, 05.06.1934, *Toporova* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 07.04.1911, *Dimo*, *Sprygin*, *Shulga* 173 (TASH).

Diptychocarpus Trautv.

620. *Diptychocarpus strictus* (Fisch. ex M.Bieb.) Trautv., Bull. Soc. Imp. Naturalistes Moscou 33(I): 108 (1860). Annual, therophyte. Caucasian, Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** north slopes of Nuratau Mts., 23.04.1913, *Popov* 30 (TASH); Nuratau District, surroundings of Kyzylcha State Farm, piedmont plain, 06.04.1952, *Zaprometova* (TASH); 6 km north of the well Ernazar, rocky southern slope, 13.05.1957, *Momotov*, *Li* 373 (TASH); piedmont plain near Kyzylcha State Farm, 27.03.1958, *Zaprometova* 168 (TASH); Gatchasay, 27.03.1958, *Zaprometova* 145 (TASH); Gatchasay, 08.04.1958, *Zaprometova* 390 (TASH); Hayatsay, field station of nature reserve, 15.05.1995, *Beshko* 95080 (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** upper reaches of Bitausay in surroundings of the village, 26.05.1964, *Zuckerwanik* 224 (TASH); sources of river Bitau, south-western slope, 27.05.1964, *Zuckerwanik* 321 (TASH); northern slope of Aktau Range, Charkhansay, 17.05.2024, *Beshko*, *Volis et al.* (TASH). **I-4-b Karatau Range:** mountains Karakarga, near the pass Jizlan, 22.04.1913, *Popov* 15 (TASH); 2.5 km south-west of the village Sarmysh-say, 06.05.1955, *Momotov*, *Li* 195 (TASH); dry riverbed near Sarmysh, 26.04.1965, *Pryakhin* (TASH). **I-4-b Khobduntau Range:** reported by Kudrjashev in "Vegetation of the Khobduntau and Karachatau Mountains" (1929, p. 62). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 08.04.1911, *Dimo*, *Sprygin*, *Shulga* 92 (TASH); Pistalitau, 08.04.1911, *Popov* 88 (TASH); Pistalitau, 08.04.1915, *Kultiasow* 2 (TASH).

Draba L.

621. *Draba minima* (C.A.Mey.) Steud. (*Erophila minima* C.A.Mey.), Nomencl. Bot., ed. 2, 1: 528 (1840). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** Alaysay, 03.02.1958, *Zaprometova* (TASH).

622. *Draba nuda* (Bel.) Al. Shehbaz & M.Koch. (*Drabopsis nuda* (Bel.) Stapf), Novon 13: 173 (2003). Annual, therophyte. Irano-Turanian. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** Pistalisay, 24.03.1953, *Zaprometova* 55 (TASH); Alaysay, 28.02.1958, *Zaprometova* (TASH); 2 km north of the village Kuduk, 26.04.1958, *Li*, *Zakirov* 76 (TASH); 4 km north-east of the village Kara-baganli, 26.04.1958, *Li*, *Zakirov* 91 (TASH); Hayatsay, Zamezhak, 01.04.1981, *Mukhina* (TASH); [same locality], 01.04.1981, *Mukhina* 81105 (herbarium of the Nuratau Nature Reserve); [same locality], 07.04.1992, *Beshko* 92011 (herbarium of the Nuratau Nature Reserve); Hayatsay, Novi Khushk, 27.04.1996, *Stock* 96007 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 03.04.2022, *Beshko* (www.inaturalist.org; www.plantarium.ru). **I-4-b Aktau Range:** mountains Aktau, near the village Andak, 01.05.1925, *Popov* 26 (TASH).

623. *Draba verna* L. (*Erophila verna* (L.) DC.), Sp. Pl.: 642 (1753). Annual, therophyte. Euro-Siberian, Irano-Turanian. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Abundant. Native. **Occurrence records:** **I-4-a Nuratau Range:** Hayatsay, Novi Daroz, 18.04.2008, *Beshko* 08030 (herbarium of the Nuratau Nature Reserve); Jizzakh Region, Farish District, Nuratau Nature Reserve, Madjrumsay, 40.57869° N, 66.71908° E, 23.03.2024, *Beshko* (www.inaturalist.org; www.plantarium.ru). **I-4-b Aktau Range:** Khatyrchi District, Kuruk-tepa,

05.05.1928, *Lepeschkin* (TASH); Langar, 40.39805° N, 65.96111° E, 22.04.2024, *Selyutina* (www.inaturalist.org).

Eruca Hill

624. *Eruca sativa* Mill., Gard. Dict., ed. 8.: n.° 1 (1768). Annual, therophyte. Tethyan, Saharo-Arabian, Oriental. Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Rare. Probably alien (introduced). **Occurrence records: I-4-a Nuratau Range:** Karysay, 19.06.1992, *Beshko* 92511 (herbarium of the Nuratau Nature Reserve); Yangikishlak, 23.06.1992, *Beshko* 92516–517 (herbarium of the Nuratau Nature Reserve); Jizzakh Region, Farish District, 40.323262° N, 67.539393° E, *Beshko* (www.inaturalist.org); Jizzakh Region, Farish District, surroundings of Farish, Nuratau Nature Reserve, 40.530644° N, 66.899746° E, 20.05.2019, *Yusupov* (www.inaturalist.org; www.plantarium.ru). **I-4-c North-Nuratau insular low mountains:** plain 7 km east of village Yangiabad, rainfed arable land, 26.04.2020, 14.04.2021, *Beshko*, *Shomurodov*, *Adilov* (plant community description).

Erysimum L.

625. *Erysimum violascens* Popov (*E. nuratense* Popov ex Botsch. & Vved.), Byull. Sredne-Aziatsk. Gosud. Univ. 9(Suppl.): 24 (1925). Biennial, therophyte. Western Tien Shan, Western Pamir-Alay. Shrubland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, surroundings of village Kokbulak, 05.07.1934, *Botschantzev* (TASH); Nurata District, north slopes of Nuratau Range, Koksay, 10.05.1951, *Zaprometova* (TASH); Karasay, 12.04.1955, *Zaprometova* (TASH, LE); the pass 2–3 km south-east of Nurata State Farm, 20.05.1955, *Zaprometova* (TASH); south-west of the village Kokbulak, 24.04.1956, *Zakirov* 54 (TASH); Ambulatory Pass, 01.04.1958, *Zaprometova* 267 (TASH); the pass near Kyzylcha State Farm, 11.04.1958, *Zaprometova* 409 (TASH); north slopes of Nuratau Range, valley near Kyzylcha State Farm, 14.04.1958, *Galkina* (TASH); Lenin State Farm, 1963, *Makarchuk* (TASH); Nuratau Mts., north-east of district center Nurata, 07.04.1964, *Markova* (TASH); Farish District, upper reaches of Amandarasay, 40°15'56" N, 67°23'47" E, 13.07.2010, *Beshko* 10010 (TASH). **I-4-b Aktau Range:** mountain slopes between Nurata and well Pashat, 24.04.1913, *Korovin* (TASH); near the village Chuya, 01.08.1937, *Mironov* 71 (TASH); valley Yangokly near the village Langar, 21.05.1941, *Zakirov*, *Niyazov* (TASH001288); foothills south of Bakhiltau Mts., near the village Kuray, 06.06.1964, *Pryakhin* (TASH); valley Altynsay, downstream of the village Langar, 28.04.1979, *Pimenov*, *Kljuykov*, *Boryaev*, *Baranova*, *Vassiljeva* 138 (MW). **I-4-b Khobduntau Range:** 3 km north of the village Gum, foothills, 14.05.1958, *Li*, *Zakirov* 575 (TASH).

Euclidium R.Br.

626. *Euclidium syriacum* (L.) R.Br., Hortus Kew. 4: 74 (1812). Annual, therophyte. Pontic, Caucasian, Irano-Turanian. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Gallaaral District, Karakuduk, 03.06.1934, *Rybakov*, *Shishov* (TASH); Koblatysay, 07.04.1952, *Zaprometova* (TASH); Farish District, piedmont plain, 17.04.1952, *Novikova* (TASH); 6 km north of the well Ernazar, rocky southern slope, 13.05.1957, *Momotov*, *Li* 374 (TASH); Yangikishlak, clayey desert, 13.04.1995, *Beshko* 95006 (herbarium of the Nuratau Nature Reserve); Jizzakh Region, Farish District, Hayatsay, village Upper Hayat, field station of nature reserve, 40.5276° N 66.77522° E, 23.04.2023, *Beshko* (www.plantarium.ru, www.inaturalist.org). **I-4-b Aktau Range:** Dzhus – Koshrabad, *Iris* steppe, 03.05.1913, *Korovin* (TASH); Khatyrchi District, slopes, 05.05.1928, *Lepeschkin* (TASH). **I-4-b Khobduntau Range:** reported by Kudrjashev in “Vegetation of the Khobduntau and Karachatau Mountains” (1929, p. 62).

Eutrema R.Br.

627. *Eutrema renifolium* (Boiss. & Hohen.) Al-Shehbaz, G.Q.Hao & J.Quan Liu (*Chalcanthus renifolius* (Boiss. & Hohen.) Boiss.), Bot. J. Linn. Soc. 184: 218 (2017). Perennial, hemicryptophyte. Irano-Turanian. Shrubland, Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Tykchasay, 10.05.1993, *Beshko* 93018, 93019 (TASH, herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, rocky massif Parrandoz, 11.05.2009, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Tykchasay, Parrandoz, 07.05.2012, *Beshko* (TASH); Nuratau Nature Reserve, Hayatsay, Novi Khushk, 14.04.2013, *Beshko* (TASH); Nuratau Nature Reserve, upper reaches of Hayatsay, 27.05.2023, *Beshko* (www.plantarium.ru).

Goldbachia DC.

628. *Goldbachia laevigata* (M.Bieb.) DC., Syst. Nat. 2: 577 (1821). Annual, therophyte. Euro-Siberian, Irano-Turanian. Desert, Shrubland, Rocky areas, Artificial terrestrial. Plain, foothills. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Urganchi, 01.05.1913, *Korovin* 10 (TASH); Koblatysay, 04.04.1952, *Zaprometova* (TASH). **I-4-b Aktau Range:** Nurata valley, 1913, *Korovin* (TASH); surroundings of Nurata, *Iris* steppe, west of the town, 23.04.1913, *Popov* 34 (TASH); south-west of district center Nurata, piedmont plain, 15.04.1952, *Zaprometova* (TASH). **I-4-b Khobduntau Range:** Gallaaral State Farm, 13.06.1951, *unknown collector* (TASH).

629. *Goldbachia pendula* Botsch., Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk S.S.S.R. 22: 140 (1963). Annual, therophyte. Irano-Turanian. Desert. Plain. Occasional. Native. **Occurrence records: I-4-b Aktau Range:** sagebrush steppe 7 verst of town Nurata near the well Pashat, 24.06.1913, *Popov* 41 (TASH).

630. *Goldbachia torulosa* DC., Syst. Nat. 2: 577 (1821). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Urganchi – Ak-Chap, 01.05.1913, *Popov* 172 (TASH); Yangikishlak, clayey desert, 10.04.1995, *Beshko* 95004 (herbarium of the Nuratau Nature Reserve); Hayatsay, 15.05.1995, *Beshko* 95081 (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** Nurata, sagebrush-gravelly steppe, 21.04.1913, *Korovin* (TASH); Dzhush – Koshrabad, 03.05.1913, *Popov* 243 (TASH); Nurata, Koshrabad, 06.05.1913, *Popov* 399, 401 (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 08.04.1911, *Dimo, Sprygin, Shulga* 86 (TASH).

631. *Goldbachia verrucosa* Kom., Trudy Imp. S.-Peterburgsk. Obshch. Estestvoisp., Vyp. 3, Otd. Bot. 26: 78 (1896). Annual, therophyte. Irano-Turanian. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Reported by Zakirov in «Vegetation cover of Nuratau Mountains» (1969, p. 28) and «Botanical geography of low mountains of Kyzylkum and Nuratau Range» (1971, p. 61).

Hornungia Rchb.

632. *Hornungia procumbens* (L.) Hayek (*Hymenolobus procumbens* (L.) Nutt.), Repert. Spec. Nov. Regni Veg. Beih. 30(1): 480 (1925). Annual, therophyte. Euro-Siberian, Tethyan. Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Koblatysay, 06.04.1958, *Zaprometova* 323 (TASH). **I-4-b Aktau Range:** Nurata, 01.05.2013, *Korovin* (TASH); Khatyrchi District, 05.05.1928, *Lepeschkin* (TASH).

Iljinskaea Al-Shehbaz, Özüdoğru & D.A.German

633. *Iljinskaea planisiliqua* (Fisch. & C.A.Mey.) Al-Shehbaz, Özüdoğru & D.A.German (*Conringia planisiliqua* Fisch. & C.A.Mey.), Phytotaxa 500: 143 (2021). Annual, therophyte. Pontic, Caucasian, Irano-Turanian. Shrubland, Rocky areas. Foothills, montane zone. Rare. Native. **Occurrence records: I-4-b Aktau Range:** Navoi Region, northern slope of Aktau Range, Charkhansay, about 800 m a.s.l., 40.45947° N, 65.79755° E, 17.05.2024, *Beshko* (www.plantarium.ru, www.inaturalist.org).

Isatis L.

634. *Isatis brevipes* (Bunge) Jafri (*Pachypterygium brevipes* Bunge), Fl. W. Pakistan 55: 72 (1973). Annual, therophyte. Irano-Turanian. Shrubland, Rocky areas. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, Khotunon, 11.06.1992, *Beshko* 92144–145 (herbarium of the Nuratau Nature Reserve, TASH); Hayatsay, Zamezhak, 22.05.2007, *Beshko* 07001–002 (herbarium of the Nuratau Nature Reserve).

635. *Isatis gymnocarpa* (Fisch. ex DC.) Al-Shehbaz, Moazzeni & Mumm. (*Tauscheria lasiocarpa* Fisch. & DC.), Taxon 61: 948 (2012). Annual, therophyte. Euro-Siberian, Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-b Aktau Range:** Aktau, near the village Langar, 19–21.05.1941, *Zakirov, Niyazov* (TASH, SAM). **I-4-b Khobduntau Range:** along the road Samarkand – Jizzakh, 29.04.1979, *Pimenov, Kljuykov, Boryaev, Baranova, Vassiljeva* 153 (MW). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 08.04.1911, *Dimo, Sprygin, Shulga* 90 (TASH); remnant mountain Egarbelistag, near the Carbonat JSC quarry, upper part of stony northern slope, 563 m a.s.l. 40.35575° N 67.50249° E, 03.05.2013, *Tojibaev, Beshko, Batashov, Azimova* (TASH).

636. *Isatis densiflora* (Bunge ex Boiss.) D.A.German (*Pachypterygium densiflorum* Bunge), Turczaninowia 19(4): 130 (2016). Annual, therophyte. Irano-Turanian. Shrubland, Rocky areas. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau District, plain, 02.06.1951, *Zaprometova* (TASH).

Lachnoloma Bunge

637. *Lachnoloma lehmanii* Bunge, Index Seminum (TU, Dorpatensis) 1843: viii (1843). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Rocky areas. Plain, foothills. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Range (reported in «Conspectus Florae Asiae Mediae», vol. 4, 1974, p. 159). **I-4-c North-Nuratau insular low mountains:** piedmont plain at the foot of remnant range Uchkulach, 5–6 km east of the village Uzunkuduk, 26.04.2020, *Beshko, Shomurodov, Adilov* (plant community description).

Lepidium L.

638. *Lepidium botschantseyanum* Al-Shehbaz (*Stroganowia angustifolia* Botsch. & Vved.), Novon 12: 8 (2002). Perennial, hemicryptophyte. Nuratau, Kuhistan (subendemic). Shrubland, Rocky areas. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Mt. Mirishkar, 05.05.1913, *Popov* (TASH); Sentobsay, 26.05.1954, *Zaprometova* (TASH); Sharaussay, 04.06.1957, *Zaprometova* (TASH); Koblatysay, 13.05.1958, *Zaprometova* (TASH); Ambulatory valley 2 km west of Kyzylcha State Farm, 20.05.1960, *Zaprometova* (TASH); middle reaches of Nakrutsay, 30.06.1964, *Zuckerwanik* 400 (TASH); Sentob, right side, near ruins Kurgan, 24.06.1983, *Bulgakova* 65 (TASH); Hayatsay, Bedarak, 01.06.1990, *Beshko, Yakovenko* 90118 (herbarium of the Nuratau Nature Reserve); Hayatsay, Novi Daroz, 17.07.1990, *Beshko, Yakovenko* 90036 (herbarium of the Nuratau Nature Reserve); Hayatsay, 1991, *Maximova* 91012 (herbarium of the Nuratau Nature Reserve); Andygensay, Sukhta, 05.06.2006, *Beshko* 06115 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Tykchasay, 24.06.2010, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 05.06.2022, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** mountains Aktau, near the village Shamaly, 04.05.1925, *Popov* 39 (TASH); 4–8 km south of Mt. Takhkuta, 29.06.1937, *Demurina* 338 (TASH); near the village Langar, 21.04.1941, *Zakirov, Niyazov* (TASH); upper reaches of river Bitau, surroundings of the village, 26.05.1964, *Zuckerwanik* 260 (TASH); northern slope of Aktau Range, Charkhansay, about 800 m a.s.l., 17.05.2024, *Beshko* (www.plantarium.ru).

639. *Lepidium chalepense* L. (*Cardaria repens* (Schrenk) Jarm.), Cent. Pl. II: 23 (1756). Perennial, hemicryptophyte. Irano-Turanian. Forest, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Jizzakh State Farm of Zernotrest, 19.05.1930, *Koshurnikova 137* (TASH); foothills Koytash Mts., surroundings of town Jizzakh, 26.05.1931, *Kasimenko 1619* (TASH); Koblatysay, 07.04.1952, *Zaprometova* (TASH); plain south of Kyzylkum State Farm, 17.04.1952, *Zaprometova* (TASH); Farish District, 17.04.1952, *Novikova* (TASH); southern slope of Nuratau near Kyzylcha State Farm, 16.04.1955, *Zaprometova 26* (TASH); 3 km south of village Midzhigan, 15.05.1958, *Li, Zakirov 592* (TASH); Hayatsay, Novi Daroz, 28.05.1990, *Beshko, Yakovenko 90033* (herbarium of the Nuratau Nature Reserve); Hayatsay, field station of nature reserve, 21.04.2006, *Beshko 06009, 0610* (herbarium of the Nuratau Nature Reserve); Hayatsay, Andebaraut, 22.05.2006, *Beshko 06322, 06323* (herbarium of the Nuratau Nature Reserve); Hayatsay, Andebaraut, 16.05.2008, *Beshko 08016* (herbarium of the Nuratau Nature Reserve); surroundings of village Ukhum, Ukhumsay, 05.05.2020, *Akbarov, Turdiev, Juramurodov 5052020007* (TASH); Nuratau Nature Reserve, Hayatsay, 09.06.2020, *Ortikov, Pulatov, Turdiev, Juramurodov, Makhmudjanov 9062020596* (TASH). **I-4-b Aktau Range:** Khatyrchi District, 05.05.1928, *Lepeschkin* (TASH). **I-4-b Khobduntau Range:** Gallaaral District, surroundings of Milyutinskaya Station, experimental station of cereal crops, 13.05.1934, *Toporova* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 13.04.2011, *Batashov* (TASH).

640. *Lepidium ferganense* Korsh., Izv. Imp. Akad. Nauk, ser. 5, 9: 417 (1898). Perennial, hemicryptophyte. Middle Asian. Rocky areas. Foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, 20.06.1990, *Beshko, Yakovenko 90037, 90038* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 05.05.2020, *Akbarov, Turdiev, Juramurodov 5052020084* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 08.04.1911, *Dimo, Sprygin, Shulga 94* (TASH); Pistalitau, 07.04.1915, *Kultiasow 36, 52* (TASH); southern slope of Pistalitau, about 400 m a.s.l., 18.03.2013, *Beshko, Batashov* (TASH).

641. *Lepidium lacerum* Ledeb., Fl. Altaic. 3: 191 (1831). Perennial, hemicryptophyte. Altay, Middle Asian. Shrubland, Rocky areas. Foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Tamerlane's Gate (reported in «Conspectus Florae Asiae Mediae», vol. 4, 1974, p. 196–197).

642. *Lepidium latifolium* L., Sp. Pl.: 644 (1753). Perennial, hemicryptophyte. Euro-Siberian, Irano-Turanian. Forest, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, the village Osmansay, 25.05.1931, *Kobranova* (TASH); Gatchasay, 02.06.1957, *Zaprometova* (TASH); 2 km east of Kyzylcha State Farm, 03.06.1957, *Zaprometova* (TASH); Hayatsay, Khotunon, 23.05.2006, *Beshko 06034, 06035* (herbarium of the Nuratau Nature Reserve); Jizzakh Region, Farish District, Hayatsay, village Upper Hayat, field station of nature reserve, 40.527122° N 66.774985° E, 28.05.2023, *Beshko* (www.plantarium.ru, www.inaturalist.org).

643. *Lepidium lipskyi* (N.Busch) Al-Shehbaz & Mummenhoff (*Stubendorffia lipskyi* N. Busch), Edinburgh J. Bot. 68: 169 (2011). Perennial, hemicryptophyte. Western Tien Shan, Nuratau (subendemic). Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Mt. Mirishkar, 05.05.1913, *Popov 313, 324, 343* (TASH).

644. *Lepidium olgae* (R.M.Vinogr.) Al-Shehbaz & Mumm. (*Stubendorffia olgae* R.Vinogradova), Edinburgh J. Bot. 68: 169 (2011). Perennial, hemicryptophyte. Nuratau (endemic). Shrubland, Rocky areas. Montane zone. UzbRDB 2. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Karysay, Chashmi Mullo, 29.04.1994, *Beshko 94018, 94019* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 13.05.2009, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, Novi Khushk, 06.05.2012, *Beshko* (TASH; www.plantarium.ru); Nuratau Nature Reserve,

Karysay, Chashmi Mullo, 12.04.2013, *Beshko* (TASH); Nuratau Nature Reserve, Hayatsay, 14.04.2013, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 03.04.2022, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, Novi Khushk, 14.05.2024, *Beshko* (TASH).

645. *Lepidium orientale* (Schrenk) Al-Shehbaz & Mummenhoff (*Stubendorffia orientalis* Schrenk), Edinburgh J. Bot. 68: 169 (2011). Perennial, hemicryptophyte. Middle Asian. Shrubland, Grassland, Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Koytash, southern slope, 28.06.1971, *Botschantzev, Kamelin* (LE); Yongoklisay, 27.04.2006, *Beshko 06057* (herbarium of the Nuratau Nature Reserve; www.plantarium.ru); Yongoklisay, 06.06.2009, *Beshko* (www.inaturalist.org, www.plantarium.ru); Talabaysay (left tributary of Kulbasay), 8 km south-west of the town Yangikishlak, 27.05.2012, *Beshko* (TASH; www.inaturalist.org, www.plantarium.ru).

Leptaleum DC.

646. *Leptaleum filifolium* (Willd.) DC., Syst. Nat. 2: 511 (1821). Annual, therophyte. European, Tethyan. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Kyzylchali, sagebrush steppe, 28.04.1913, *Korovin* (TASH); piedmont plain north of Nuratau Range, 20 km of Kyzylcha State Farm, 23.04.1954, *Zaprometova* (TASH); Gatchasay, 08.04.1958, *Zaprometova 391* (TASH); southern slope, 1 km east from the pass through Pistalisay, 08.05.1958, *Li, Zakirov 413* (TASH). **I-4-b Aktau Range:** sagebrush steppe near the well Pashat, 24.04.1913, *Korovin 41* (TASH); Dzhus – Koshrabad, *Iris* steppe, 01.05.1913, *Korovin* (TASH). **I-4-b Karatau Range:** mountains Karakarga near the pass Jizlan, 22.04.1913, *Korovin 15* (TASH); Gizhduvan District, southern foothills of Karatau Range, 40.40575° N, 65.13° E, 21.04.2024, *Beshko* (www.inaturalist.org). **I-4-c North-Nuratau insular low mountains:** Pistaltau, 07.04.1911, *Dimo, Sprygin, Shulga 158* (TASH); Pistaltau, 08.04.1911, *Dimo, Sprygin, Shulga 89* (TASH); Pistaltau, 08.04.1915, *Kultiasow 25* (TASH); Farish District, southern slope of Pistaltau, 31.03.2002, *Beshko* (TASH).

Litwinowia Woron.

647. *Litwinowia tenuissima* (Pall.) Woronow ex Pavlov, Fl. Centr. Kazakh. 2: 302 (1935). Annual, therophyte. Irano-Turanian. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Koblatysay, 07.04.1952, *Zaprometova* (TASH); [same locality], 08.04.1952, *Zaprometova* (TASH); Jingildysay, 12.04.1952, *Zaprometova* (TASH); Gatchasay, 02.05.1956, *Zaprometova 36* (TASH); Alaysay, 25.03.1958, *Zaprometova 91* (TASH); Gatchasay, 27.03.1958, *Zaprometova 151* (TASH); Alaysay, 30.03.1958, *Zaprometova 26* (TASH); Nuratau Range, northern slopes, 06.04.1958, *Zaprometova 335* (TASH); near the pass through Pistalisay, 07.05.1958, *Li, Zakirov 399* (TASH); Tykchasay, 25.04.1994, *Beshko 94087, 94093* (herbarium of the Nuratau Nature Reserve); Yangikishlak, 13.04.1995, *Beshko 95007–008* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 22.04.2010, *Beshko* (www.inaturalist.org, www.plantarium.ru). **I-4-b Aktau Range:** mountain slopes between Nurata and well Pashat, 24.04.1913, *Popov 82* (TASH); 1.5 km south of village Sarygul, 12.05.1957, *Momotov, Li 334* (TASH). **I-4-b Karatau Range:** foothills near Sarmysh, 26.04.1965, *Pryakhin* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistaltau, 07.04.1911, *Dimo, Sprygin, Shulga 182* (TASH); [same locality], 08.04.1911, *Dimo, Sprygin, Shulga 91* (TASH).

Matthiola R.Br.

648. *Matthiola bucharica* Czerniak., V.L.Komarov (ed.), Fl. URSS 8: 648 (1939). Annual, therophyte. Middle Asian. Desert. Plain, foothills. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Reported by Zakirov in «Vegetation cover of Nuratau Mountains» (1969, p. 28) and «Botanical

geography of low mountains of Kyzylkum and Nuratau Range» (1971, p. 62). **I-4-b Aktau Range:** Nurata – Kyzyl-tepe Station, sagebrush-gravelly steppe, 21.04.1913, *Korovin* (TASH).

649. *Matthiola integrifolia* Kom., Trudy Imp. S.-Peterburgsk. Obshch. Estestvoisp., Vyp. 3, Otd. Bot. 26: 85 (1896). Perennial, hemicryptophyte. Western Tien Shan, Pamir-Alay. Shrubland, Rocky areas. Montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** Karysay, 17.04.1992, *Beshko 92017* (herbarium of the Nuratau Nature Reserve); Tykchasay, 14.04.1994, *Beshko 94010–011* (herbarium of the Nuratau Nature Reserve); Mt. Dushokh, 08.06.1994, *Beshko 94103* (herbarium of the Nuratau Nature Reserve); Mt. Dushokh, 17.05.1995, *Beshko 95045–046, 95083* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, Zamezhak, 22.05.2007, *Beshko* (herbarium of the Nuratau Nature Reserve, www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 25.06.2012, *Beshko* (TASH). **I-4-b Aktau Range:** Mts. Aktau, on the top of mountains, 01.05.1985, *Shermatov 210* (TASH). **I-4-b Karatau Range:** 1 km north of the ruins of the village Sarmysh, 05.05.1955, *Momotov, Li 149, 150* (TASH); 2.5 km south-west of the ruins of the village Sarmysh, 06.05.1955, *Momotov, Li 187* (TASH); in Sarmyshsay, 26.04.1965, *Pryakhin* (TASH); rocks south of the pass Jizlan, 01.05.1964, *Pryakhin* (TASH); Ambarsay, 18.05.2024, *Beshko, Volis et al.* (TASH).

Megacarpaea DC.

650. *Megacarpaea gigantea* Regel, Bull. Soc. Imp. Naturalistes Moscou 42(I): 263 (1870). Perennial, hemicryptophyte. Western Tien Shan, Pamir-Alay. Shrubland, Rocky areas. Montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** Mts. Koytash, above the village Shurkundi, 25.05.1938, *Botschantzev 3* (TASH); valley 2.5 km south-east of Kyzylcha State Farm, 02.05.1954, *Zaprometova* (TASH); Ustuksay, 12.07.1956, *Vvedensky 99* (TASH); Bolosay, 26.04.1992, *Beshko 92091* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, western slope of rocky massif Parrandoz, 03.05.2011, *Beshko* (herbarium of the Nuratau Nature Reserve; www.plantarium.ru); Nuratau Nature Reserve, Gurdara, 17.03.2019, *Beshko* (www.plantarium.ru, www.inaturalist.org); www.plantarium.ru, www.inaturalist.org); surroundings of Saurbel Pass, 06.04.2019, *Beshko* (www.plantarium.ru, www.inaturalist.org); Nuratau Nature Reserve, Hayatsay, 03.04.2022, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** Navoi Region, northern slope of Aktau Range, Charkhansay, about 800 m a.s.l., 40.45969° N, 65.79758° E, 17.05.2024, *Beshko* (www.plantarium.ru, www.inaturalist.org). **I-4-b Khobduntau Range:** near the village Almaly, 20.04.1927, *Androssov* (TASH).

Meniocus Desv.

651. *Meniocus linifolius* (Steph.) DC. (*Alyssum linifolium* Stephan ex Willd.), Syst. Nat. 2: 325 (1821). Annual, therophyte. Euro-Siberian, Tethyan. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** north slopes of Nuratau Mts., 23.04.1913, *Korovin 30* (TASH); Urganchi, 01.05.1913, *Korovin 10* (TASH); Nuratau Range, Farish District, 25.04.1941, *Momotov* (TASH); 5 km from Kyzylcha State Farm, 06.04.1952, *Novikova* (TASH); Karasay, southern slopes, 12.04.1955, *Zaprometova* (TASH); Gatchasay, 23.04.1956, *Zaprometova 6* (TASH); Alaysay, 28.02.1958, *Zaprometova* (TASH). **I-4-b Aktau Range:** fallow land near the town Nurata, 14.03.1963, *Markova* (TASH); piedmont plain near the town Nurata, 02.04.1963, *Markova* (TASH). **I-4-b Karatau Range:** hills 6 km north of Kanimekh, 10.07.1934, *Anfilov, Ivanova 36* (TASH); [Bukhara Region, Gizhduvan District, western piedmonts of Karatau Range](http://www.plantarium.ru), 40.47287° N, 65.09823° E, 21.04.2024, *Beshko* (www.inaturalist.org). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 08.04.1911, *Dimo, Sprygin, Shulga 93* (TASH); Pistalitau, 08.04.1915, *Kultiasow 99* (TASH); southern slope of Pistalitau, 31.03.2002, *Beshko* (TASH).

Mutarda Bernh.

652. *Mutarda arvensis* (L.) D.A.German (*Sinapis arvensis* L.), Turczaninowia 25(2): 56 (2022). Annual, therophyte. Pluriregional. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial

terrestrial. Plain, foothills, montane zone. Occasional. Alien (introduced). **Occurrence records: I-4-a Nuratau Range:** Reported by Zakirov in «Vegetation cover of Nuratau Mountains» (1969, p. 28) and «Botanical geography of low mountains of Kyzylkum and Nuratau Range» (1971, p. 62).

Nasturtium R.Br.

653. *Nasturtium officinale* W.T.Aiton (*Nasturtium fontanum* (Lam.) Aschers.), Hortus Kew. 4: 110 (1812). Perennial, hemicryptophyte. European, Tethyan. Wetlands (inland), Artificial aquatic. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, Andebaraut, 12.06.1984, *Petrochenko 84082* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 27.05.2006, *Beshko* (www.plantarium.ru); Hayatsay, field station of nature reserve, 21.06.2006, *Beshko 06173–174* (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** Kattakurgan District, mountains Aktau, near the village Shamaly, 24.05.1925, *Popov 385, 386* (TASH)³.

Neslia Desv.

654. *Neslia paniculata* subsp. *thracica* (Velen.) Bornm. (*N. apiculata* Fisch. & C.A.Mey.), Oesterr. Bot. Z. 44: 125 (1894). Annual, therophyte. European, Tethyan. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** 3 km north of Saurbel Pass, 27.04.1958, *Li, Zakirov 169* (TASH); valley Uchma, 01.06.1964, *Zuckerwanik 450* (TASH); Tykchasay, 21.04.1992, *Beshko 92103, 92104* (herbarium of the Nuratau Nature Reserve); upper reaches of Osmansay, above Zangori Olov summer camp, 05.04.2019, 28.04.2020, *Beshko, Shomurodov, Adilov* (plant community description); upper reaches of Osmansay, upstream of the village Baland Osman, 05.04.2019, 28.04.2020, *Beshko, Shomurodov, Adilov* (plant community description). **I-4-b Aktau Range:** Khatyrchi District, 05.05.1928, *Lepeschkin* (TASH).

Noccaea Moench

655. *Noccaea perfoliata* (L.) Al-Shehbaz (*Thlaspi perfoliatum* L.), Harvard Pap. Bot. 19: 44 (2014). Annual, therophyte. Euro-Siberian, Tethyan. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** mountain slopes near Jizzakh, 29.03.1913, *Androssov* (TASH); Koblatysay, 17.03.1952, *Zaprometova* (TASH); Karasay, 11.04.1954, *Zaprometova* (TASH); valley 2.5 km south-east of Kyzylcha State Farm, 21.04.1954, *Zaprometova* (TASH); Hayatsay, Andebaraut, 28.04.1983, *Fominykh 83068* (herbarium of the Nuratau Nature Reserve); Hayatsay, field station of nature reserve, 07.04.2005, *Beshko 05001, 05016* (herbarium of the Nuratau Nature Reserve); Hayatsay, Andebaraut, 07.04.2005, *Beshko 05002* (herbarium of the Nuratau Nature Reserve); Farish district, Uzbekistan, 40.319075° N, 67.254895° E, 20.04.2013, *lougarou* (www.inaturalist.org); foothills of Nuratau, between the villages Egiz-Bulak and Amandara, 28.03.2019, 27.04.2020, *Beshko, Shomurodov, Adilov* (plant community description); upper reaches of right tributary of Uchmasay, upstream of the village Jakak, 28.03.2019, *Beshko, Shomurodov, Adilov* (plant community description); piedmonts of Mt. Karatash, 05.04.2019, 28.04.2020, *Beshko, Shomurodov, Adilov* (plant community description); upper reaches of Osmansay, above the Zangori Olov summer camp, 05.04.2019, 28.04.2020, *Beshko, Shomurodov, Adilov* (plant community description); watershed crest of Nuratau Range, about 2 km east of Saurbel Pass, 06.04.2019, 28.04.2020, *Beshko, Shomurodov, Adilov* (plant community description); upper reaches of Osmansay, upstream of the village Baland Osman, 05.04.2019, 28.04.2020, *Beshko, Shomurodov, Adilov* (plant community description); Nurata District, Kurgansay, above the village

³ D.A. German noted that the identification of the specimens collected by Popov and occurrence record by Beshko from Plantarium is not that certain, because habitually they also fit *N. microphyllum* (Boenn.) Reichenb. rather than *N. officinale*. Both species occur in Uzbekistan.

Balaybokho, 40.665138°N, 66.572174°E, 27.02.2020, *denicsh* (www.inaturalist.org); Nuratau Nature Reserve, Madjrumsay, 23.03.2020, *Beshko* (www.plantarium.ru). **I-4-c North-Nuratau insular low mountains:** Egarbelistag, 1.5 km west of the Carbonat JSC quarry, 25.03.2019, 27.04.2020, *Beshko*, *Shomurodov*, *Adilov* (plant community description).

656. *Noccaea trinervia* (DC.) Steud. (*Iberidella trinervia* (DC.) Boiss.), Nomencl. Bot., ed. 2, 2: 197 (1841). Perennial, hemicryptophyte. Caucasian, Irano-Turanian. Shrubland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** southern slope of Mt. Zargar, 27.04.1979, *Pimenov*, *Boryaev*, *Kljuykov*, *Baranova*, *Vassiljeva* 91 (MW); Andygensay, Sukhta, 10.05.1981, *Mukhina* 81106 (herbarium of the Nuratau Nature Reserve); Hayatsay, Khotunon, 21.04.1983, *Fominykh* 83070 (herbarium of the Nuratau Nature Reserve); Hayatsay, Alichak, 03.06.1990, *Beshko*, *Yakovenko* 90034, 90035, 90119 (herbarium of the Nuratau Nature Reserve); Hayatsay, Khotunon, 23.05.2006, *Beshko* 06057, 06058 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 06.05.2012, *Beshko* (TASH, www.plantarium.ru); watershed crest of Nuratau Range, about 2 km east of Saurbel Pass, 06.04.2019, 28.04.2020, *Beshko*, *Shomurodov*, *Adilov* (plant community description); Nuratau Nature Reserve, near the pass Hayat, 2135 m a.s.l., 19.05.2021, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 05.05.2020, *Akbarov*, *Turdiyev*, *Juramurodov* 5052020054 (TASH); Mt. Kichik Fazilman, near Fazilman Lake, 06.05.2020, *Akbarov*, *Turdiyev*, *Juramurodov* 6052020136 (TASH). **I-4-b Aktau Range:** Mt. Takhkuta, 07.05.1913, *Korovin* (TASH); surroundings of Langar, gorge Yangokly, 21.05.1941, *Zakirov*, *Niyazov* (TASH).

Olimarabidopsis Al-Shehbaz, O'Kane & Price

657. *Olimarabidopsis pumila* (Stephan) Al-Shehbaz, O'Kane & R.A.Price (*Arabidopsis pumila* (Steph.) N.Busch), Novon 9: 303 (1999). Annual, therophyte. Pontic, Caucasian, Irano-Turanian. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Koblatysay, 17.03.1952, *Zaprometova* (TASH); Hayat, 18.04.1981, *Mukhina* (TASH); Nuratau Nature Reserve, Hayatsay, 08.05.2014, *Tojibaev*, *Sun Hang et al.* 17179 (TASH, KUN). **I-4-b Aktau Range:** Khatyrchi District, 05.05.1928, *Lepeschkin* (TASH). **I-4-c North-Nuratau insular low mountains:** between Pistalita and lake Tuzkan, 08.04.1911, *Dimo*, *Sprygin*, *Shulga* 107 (TASH).

Parrya R.Br.

658. *Parrya fruticulosa* Regel & Schmalh. (*Neuroloma fruticulosum* (Regel & Schmalh.) Botsch., *Parrya nuratensis* Botsch. & Vved.)⁴, Trudy Imp. S.-Peterburgsk. Bot. Sada 5: 237 (1877). Subshrub, chamaephyte. Pamir-Alay. Shrubland, Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Range, Darvazatau, 08.05.1912, *Peltz* (LE); northern slope in upper reaches of Garashasay, 20.07.1937, *Demurina* 630; Sob Pass, top of mountains, 04.08.1940, *Gomolitsky*, *Dolgikh*, *Arkhireev* 275 (TASH); Mt. Hayatbashi, 08.06.1992, *Beshko* 92113–114 (herbarium of the Nuratau Nature Reserve); watershed between Hayatsay and Andygensay, 03.05.1993, *Beshko* 93010 (herbarium of the Nuratau Nature Reserve); Madjrumsay, Shokhchinon, 13.05.1994, *Beshko* 94025 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 06.05.2012, *Beshko* (TASH); upper reaches of Hayatsay, Alichak, 23.07.2014, *Beshko* (TASH); Nuratau Nature Reserve, watershed of Hayatsay and Madjrumsay, 19.05.2021, *Beshko*, *Madaminov* (TASH); Mt. Hayatbashi, 19.05.2021, *Beshko*, *Madaminov* (TASH). **I-4-b Aktau Range:** Mt.

⁴ The taxonomic identity of *Parrya nuratensis* Botsch. & Vved. (Brassicaceae) and its status as an independent species endemic to the Nuratau Mountains was critically revised, and this species was found to be identical with *P. fruticulosa* (German et al. 2025).

Takhkutaу, 07.05.1913, *Korovin* (TASH); upper reaches of Tutaksay, 4 km upstream of waterfall, 07.06.1951, *Neustrueva, Cvetkova 173* (LE).

659. *Parrya hispida* (Regel) D.A.German & Al-Shehbaz (*Pseudoclausia hispida* (Regel) Popov ex A.V. Vassil.), Kew Bull. 68: 463 (2013). Biennial, therophyte. Western Tien Shan, Pamir-Alay. Shrubland, Rocky areas. Foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** southern slope of Mt. Zargar, 27.04.1979, *Pimenov, Boryaev, Kljuykov, Baranova, Vassiljeva 77* (MW). **I-4-b Aktau Range:** east of town Nurata, valley Ingichka, 12.07.1970, *Botschantzev* (LE).

660. *Parrya khorasanica* (Rech.f. & Aellen) D.A.German & Al-Shehbaz (*Pseudoclausia turkestanica* (Lipsky) A.V.Vassil.), Phytotaxa 173: 36 (2014). Biennial, therophyte. Hyrcanian, Mountain Middle Asian. Shrubland, Rocky areas. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Reported by Zakirov in «Vegetation cover of Nuratau Mountains» (1969, p. 27) and «Botanical geography of low mountains of Kyzylkum and Nuratau Range» (1971, p. 61).

661. *Parrya olgae* (Regel & Schmalh) D.A.German & Al-Shehbaz (*Pseudoclausia olgae* (Regel & Schmalh.) Botsch.), Kew Bull. 68: 465 (2013). Biennial, therophyte. Nuratau, Kuhistan (subendemic). Shrubland, Grassland, Rocky areas. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** near the village Ustakhan, 23.08.1937, *Titov* (TASH); Mts. Koytash, the crest, 28.05.1941, *Lepeschkin* (TASH); Alaysay, 11.04.1958, *Zaprometova 408* (TASH); 2 km north of Saurbel Pass, 27.04.1958, *Momotov, Zakirov 145* (TASH); 1.5 km south-west of Saurbel Pass, 27.04.1958, *Li, Zakirov 108* (TASH); upper reaches of Tykchasay, 02.05.1958, *Li, Zakirov 293* (TASH); Tykchasay, 3–7 km south of the village Yukary Ukhum, 02.05.1958, *Li, Zakirov 288* (TASH); upper reaches of Ustuksay, surroundings of Fazilman Lake, 28.05.1964, *Zuckerwanik 349* (TASH); upper reaches of Parrandozsay, on the way to the pass Ukhum, 31.05.1964, *Zuckerwanik 417* (TASH); road from Nakrutsay to Farish, the pass, 01.06.1964, *Zuckerwanik 442* (TASH); Sentob, SE slopes above the mine, 29.06.1983, *Bulgakova* (TASH); Nuratau Nature Reserve, Gurdara, 03.05.2012, *Beshko* (TASH); rocky massif Parrandoz, 03.05.2011, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, upper reaches of Novi Khushk, 31.05.2012, *Beshko* (TASH); upper reaches of Sobsay, 31.03.2018, *Beshko* (TASH); watershed of Hayatsay and Madjrumsay, 19.05.2021, *Beshko, Madaminov* (TASH). **I-4-b Karatau Range:** between Beshrabot and Dekhibaland, Karakarga Pass, 21.04.1986, *Pimenov, Kljuykov, Vassiljeva, Melibaev 94* (MW).

662. *Parrya sarawschanica* (Regel & Schmalh.) D.A.German & Al-Shehbaz (*Pseudoclausia sarawschanica* (Regel & Schmalh.) Botsch.), Kew Bull. 68: 467 (2013). Biennial, therophyte. Nuratau, Aktau, Zirabulak-Ziadin Mts. (subendemic). Shrubland, Rocky areas. Montane zone. Rare. Native. UzbRDB 2. **Occurrence records: I-4-a Nuratau Range:** southern slope 5–6 km west of the village Guzhum, 23.07.1937, *Demurina 715* (TASH); Hayatsay, 09.06.2020, *Ortikov, Pulatov, Turdiev, Juramurodov, Makhmudjanov 9062020631* (TASH). **I-4-b Aktau Range:** Mt. Takhkutaу, 07.05.1913, *Korovin 432, 463* (TASH); mountains Aktau, near the village Andak, 01.05.1925, *Popov 40* (TASH); near the village Shamaly, 24.05.1925, *Popov 369* (TASH); mountains Bakhiltau, 10.05.2013, *Beshko* (TASH); northern slope of Aktau Range, Ambarsay, about 860 m a.s.l., 18.05.2024, *Beshko* (www.plantarium.ru); [same locality], 18.05.2024, *Beshko, Volis et al.* (TASH).

Sinapis L.

663. *Sinapis alba* L., Sp. Pl.: 668 (1753). Annual, therophyte. Pluriregional. Artificial terrestrial. Plain, foothills, montane zone. Rare. Alien. **Occurrence records: I-4-a Nuratau Range:** Reported by Zakirov in «Botanical geography of low mountains of Kyzylkum and Nuratau Range» (1971, p. 62).

Sisymbrium L.

664. *Sisymbrium altissimum* L., Sp. Pl.: 659 (1753). Annual, biennial, therophyte. Euro-Siberian, Tethyan. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** north slopes of Nuratau Range, Ambulatory valley, 20.05.1960, *Zaprometova 181* (TASH); Jizzakh Region, Farish District, Yangikishlak, 40.405621° N, 67.17162° E, 25.06.2006, *Beshko* (www.inaturalist.org); Hayatsay, Andebaraut, 09.06.2006, *Beshko 06196* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Andebaraut, 26.04.2008, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** Khatyrchi District, 15.05.1928, *Lepeschkin* (TASH). **I-4-c North-Nuratau insular low mountains:** northern piedmonts of remnant mountains Uchkulach, N 40°32'29" E 67°13'25", 26.04.2020, *Beshko, Shomurodov, Adilov* (plant community description); southern piedmonts of remnant mountains Pistalitau, about 7 km east of the villages Yangiabad and Uchkulach, N 40°29'15" E 67°26'34", 26.04.2020, *Beshko, Shomurodov, Adilov* (plant community description).

665. *Sisymbrium brassiciforme* C.A.Mey., Fl. Altaic. 3: 129 (1831). Biennial, therophyte. Irano-Turanian. Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Nature Reserve, watershed between Hayatsay and Madjrumsay, 27.05.2008, *Beshko* (herbarium of the Nuratau Nature Reserve, TASH); Nuratau Nature Reserve, watershed between Hayatsay and Madjrumsay, near Mt. Hayatbashi, 02.06.2013, *Beshko* (TASH); Nuratau Nature Reserve, watershed between Hayatsay and Madjrumsay, 16.06.2019, *Beshko* (TASH, www.plantarium.ru).

666. *Sisymbrium loeselii* L., Cent. Pl. I: 18 (1755). Annual, therophyte. Pluriregional. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Yangikishlak, surroundings of nature reserve's office, 23.06.1992, *Beshko 92462* (herbarium of the Nuratau Nature Reserve); Hayatsay, field station of nature reserve, 23.05.2006, *Beshko 06286* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 08.05.2014, *Tojibaev, Sun Hang et al. 17192* (TASH, KUN). **I-4-b Aktau Range:** Khatyrchi District, 15.05.1928, *Lepeschkin* (TASH).

667. *Sisymbrium orientale* L., Cent. Pl. II: 24 (1756). Annual, therophyte. Mediterranean, Western Irano-Turanian. Rocky areas, Artificial terrestrial. Plain. Rare. Alien. **Occurrence records: I-4-c North-Nuratau insular low mountains:** shore of Tuzkan Lake, northern piedmonts of Pistalitau, 40.54696°N 67.391091°E, 09.05.2024, *Beshko* (TASH).

668. *Sisymbrium septulatum* DC., Syst. Nat. 2: 471 (1821). Annual, biennial, therophyte. Caucasus, Irano-Turanian. Artificial terrestrial. Plain, foothills. Rare. Native. **Occurrence records: I-4-b Aktau Range:** Nurata, irrigated field, piedmont plain, 04.04.1963, *Markova* (TASH).

Streptoloma Bunge

669. *Streptoloma desertorum* Bunge, Arbeiten Naturf. Vereins Riga 1: 156 (1847). Annual, therophyte. Irano-Turanian. Desert. Plain, foothills. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** plain between Kyzylcha State Farm and district center Nurata, 06.06.1952, *Burygin* (TASH); Gatchasay, 25.04.1958, *Zaprometova* (TASH).

Strigosella Boiss.

670. *Strigosella africana* (L.) Botsch., Bot. Zhurn. 57: 1038 (1972). Annual, therophyte. European, Tethyan. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Urganchi – Ak-Chap, 01.05.1913, *Korovin* (TASH); Nurata District, Nuratau Range, north slopes, 04.04.1952, *Zaprometova* (TASH). **I-4-b Aktau Range:** mountain slopes between the town Nurata and well Pashat, 21.04.1913, *Korovin 82* (TASH); northern slope of Mt. Takhkutau, 07.05.1913, *Korovin* (TASH); Khatyrchi District, 05.05.1928, *Lepeschkin* (TASH); Navoi Region, town Nurata, 40.57407° N, 65.69234° E, 17.05.2024, *Beshko* (www.inaturalist.org). **I-4-b Karatau Range:** Nurata – Kyzyl-tepe Station,

sagebrush-gravelly steppe, 21.04.1913, *Korovin* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 07.04.1911, *Dimo, Sprygin, Shulga 167* (TASH); Jizzakh Region, Farish District, Pistalitau, 40.54363° N, 67.38448° E, 25.04.2020, *Beshko* (www.plantarium.ru, www.inaturalist.org).

671. *Strigosella grandiflora* (Bunge) Botsch., Bot. Zhurn. 57: 1044 (1972). Annual, therophyte. Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills. Occasional. Native. **Occurrence records: I-4-b Karatau Range:** Nurata – Kyzyl-tepe Station, sagebrush-gravelly steppe, 21.04.1913, *Korovin* (TASH). **I-4-b Mt. Kokcha: central part of Kokchatau,** 11.04.2015, *Shomurodov et al.* (plant community description, published in “Coenopopulation of rare and endangered plant species of remnant low mountains of Kyzylkum”, 2018, p. 30–31).

672. *Strigosella intermedia* (C.A.Mey.) Botsch., Bot. Zhurn. (Moscow & Leningrad) 57: 1040 (1972). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Rocky areas, Artificial terrestrial. Plain, foothills. Occasional. Native. **Occurrence records: I-4-b Aktau Range:** Khatyrchi District, top of the hill, 05.05.1928, *Lepeschkin* (TASH). **I-4-c North-Nuratau insular low mountains:** between Pistalitau and the village Kok-tyube, 09.04.1911, *Dimo, Sprygin, Shulga 54* (TASH).

673. *Strigosella scorpioides* (Bunge) Botsch., Bot. Zhurn. 57: 1041 (1972). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-b Karatau Range:** surroundings of town Kanimekh, 7 km north of the town, 15.07.1934, *Tyshchenko 187* (TASH).

674. *Strigosella stenopetala* (Bernh. ex Ledeb.) Botsch., Bot. Zhurn. 57: 1040 (1972). Annual, therophyte. Caucasian, Middle Asian. Desert, Artificial terrestrial. Plain, foothills. Occasional. Native. **Occurrence records: I-4-b Khobduntau Range:** surroundings of Milyutinskaya Station, 01.05.1930, *Tarasevich 45* (TASH).

675. *Strigosella trichocarpa* (Boiss. & Buhse) Botsch., Bot. Zhurn. 57: 1038 (1972). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Urganchi, 01.05.1913, *Korovin* (TASH); the village Ukhum, 10.05.1982, *Mukhina 82040, 82041* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, lower reaches of Madjrumsay, 13.04.2016, *Beshko* (www.plantarium.ru). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 07.04.1911, *Dimo, Sprygin, Shulga 175* (TASH); Pistalitau, 08.04.1911, *Dimo, Sprygin, Shulga 88* (TASH); Pistalitau, 07.04.1915, *Kultiasow 65* (TASH); Pistalitau, 08.04.1915, *Kultiasow 102* (TASH).

676. *Strigosella turkestanica* (Litv.) Botsch., Bot. Zhurn. 57: 1045 (1972). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Urganchi, 01.05.1913, *Korovin 10* (TASH); Jizzakh District, sagebrush desert steppe, 12.05.1928, *Sovetkina 103* (TASH); Mts. Koytash, 3 km north-east of the village Kuvakiya, piedmonts of Mt. Piyazli, 24.04.1941, *Momotov 22* (TASH); northern piedmont piedmont plain of Nuratau Range, 25.05.1993, *Beshko 93077* (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** Dzhus – Koshrabad, *Iris* steppe, 03.05.1913, *Korovin* (TASH); Koshrabad, 03.05.1913, *Korovin* (TASH); Nurata District, surroundings of the village Chashma, Bakhiltau, 06.06.1964, *Pryakhin* (TASH); Khatyrchi District, 15.05.1928, *Lepeschkin* (TASH); surroundings of Koshrabad, 26.04.1979, *Pimenov, Kljuykov, Boryaev, Baranova, Vassiljeva 64* (MW). **I-4-b Karatau Range:** 2.5 km south-west of the ruins of the village Sarmysh, 06.05.1955, *Momotov 194* (TASH); south of the well Uch-tepe, 31.05.1964, *Pryakhin* (TASH). **I-4-b Khobduntau Range:** Gallaaral District, surroundings of Milyutinskaya Station, experimental station of cereal crops, 13.05.1934, *Toporova* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 08.04.1911, *Popov 88* (TASH); Pistalitau, 07.04.1915, *Kultiasow 46* (TASH); piedmonts of remnant range

Uchkulach, between old dumps of the Uchkulach open pit, 40.53796° N, 67.28031° E, 26.04.2020, *Beshko* (www.plantarium.ru, www.inaturalist.org).

Thlaspi L.

677. *Thlaspi arvense* L., Sp. Pl.: 641 (1753). Annual, therophyte. Palearctic. Shrubland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Range, Farish District, 15.05.1941, *Momotov* (TASH).

Tamaricaceae Link.

Reaumuria L.

678. *Reaumuria reflexa* Lipsky, Exc. Bot. au Deld Mer Casp: 7 (1889). Subshrub, chamaephyte. Eastern Irano-Turanian. Desert, Shrubland, Rocky areas. Plain, foothills. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Range (reported in «Conspectus Florae Asiae Mediae», vol. 7, 1983, p. 114).

679. *Reaumuria turkestanica* Gorschk., Bot. Mater. Gerb. Glavn. Bot. Sada R.S.F.S.R. 4: 118 (1923). Subshrub, chamaephyte. Eastern Irano-Turanian, Oriental. Desert, Shrubland, Rocky areas. Plain, foothills. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Tamerlane's Gate, 11.05.1978, *Nabiev, Li, Zuckerwanik 11* (TASH). **I-4-b Aktau Range:** 6 km south-east of the well Mindukush, 05.06.1936, *Kharchenko 1243, 1244, 1245, 1247, 1248* (TASH).

Tamarix L.

680. *Tamarix androssowii* Litv., Spisok Rast. Gerb. Russk. Fl. Bot. Muz. Imp. Akad. Nauk 5: 41 (1905). Shrub, phanerophyte. Eastern Irano-Turanian, Oriental. Wetlands (inland), Artificial aquatic. Plain, foothills. Rare. Native. **Occurrence records: I-4-b Karatau Range:** Sarmyshsay, 27.04.1965, *Pryakhin* (TASH).

681. *Tamarix arceuthoides* Bunge, Beitr. Fl. Russl.: 119 (1852). Shrub, phanerophyte. Eastern Irano-Turanian, Oriental. Wetlands (inland). Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Jingilsay, 23.06.2002, *Dieterich 02114, 02115* (herbarium of the Nuratau Nature Reserve); floodplain of Madjrumsay, 18.07.2010, *Beshko 10018* (herbarium of the Nuratau Nature Reserve, TASH). **I-4-b Aktau Range:** village Angudan, 10.06.1928, *Lepeschkin* (TASH); near the village Chashma, 06.06.1964, *Pryakhin* (TASH). **I-4-b Karatau Range:** stream south of the pass Jizlan, 26.05.1964, *Pryakhin* (TASH).

682. *Tamarix elongata* Ledeb., Fl. Altaic. 1: 421 (1829). Shrub, phanerophyte. Eastern Irano-Turanian, Oriental. Wetlands (inland), Artificial aquatic. Plain. Occasional. Native. **Occurrence records: I-4-c North-Nuratau insular low mountains:** northern piedmonts of Pistalitau, 24.04.2020, 30.06.2020, *Beshko, Shomurodov, Adilov* (plant community description); northern piedmonts of Pistalitau near the shore of Tuzkan Lake, 40.5424° N, 67.403589° E, 09.05.2024, *Beshko* (plant community description).

683. *Tamarix hispida* Willd., Abh. Königl. Akad. Wiss. Berlin 1812-1813: 77 (1816). Shrub, phanerophyte. Eastern Irano-Turanian, Oriental. Wetlands (inland), Artificial aquatic. Plain, foothills. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Range (reported in «Conspectus Florae Asiae Mediae», vol. 7, 1983, p. 114). **I-4-c North-Nuratau insular low mountains:** northern piedmonts of Pistalitau, 24.04.2020, 30.06.2020, *Beshko, Shomurodov, Adilov* (plant community description).

684. *Tamarix hohenackeri* Bunge, Tent. Gen. Tamar.: 44 (1852). Shrub, phanerophyte. Caucasian, Eastern Irano-Turanian, Oriental. Wetlands (inland), Artificial aquatic. Plain. Occasional. Native.

Occurrence records: I-4-a Nuratau Range: piedmont plain of Nuratau Range (Farish Steppe), saline depression about 3 km north-west of the village Ok-Tom, 19.05.2010, *Beshko* (www.plantarium.ru). **I-4-c North-Nuratau insular low mountains:** northern piedmonts of Pistalitau, 24.04.2020, 30.06.2020, *Beshko*, *Shomurodov*, *Adilov* (plant community description); northern piedmonts of Pistalitau near the shore of Tuzkan Lake, 40.5424° N, 67.403589° E, 09.05.2024, *Beshko* (plant community description).

685. *Tamarix laxa* Willd., Abh. Königl. Akad. Wiss. Berlin 1812-1813: 82 (1816). Shrub, phanerophyte. Euro-Siberian, Irano-Turanian. Wetlands (inland), Artificial aquatic. Plain, foothills. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Kyzylcha, 17.06.1962, *Khaydarov 140* (TASH). **I-4-b Karatau Range:** 1 km north of the ruins of the village Sarmysh, 05.05.1955, *Momotov, Li 181* (TASH).

686. *Tamarix meyeri* Boiss. Shrub, phanerophyte. Caucasian, Eastern Irano-Turanian. Wetlands (inland), Artificial aquatic. Plain. Occasional. Native. **Occurrence records: I-4-b Karatau Range:** 3 km north of the well Chettyk, near the spring, 22.05.1936, *Tarasevich 397* (TASH). **I-4-c North-Nuratau insular low mountains:** northern piedmonts of Pistalitau, 24.04.2020, 30.06.2020, *Beshko*, *Shomurodov*, *Adilov* (plant community description).

687. *Tamarix ramosissima* Ledeb., Fl. Altaic. 1: 424 (1829). Shrub, phanerophyte. Euro-Siberian, Irano-Turanian. Wetlands (inland), Artificial aquatic. Plain, foothills. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Nakrutsay, near the village Chalakarga, 23.07.1940, *Gomolitsky, Dolgikh 210a* (TASH). **I-4-b Aktau Range:** village Angudan, 10.06.1928, *Lepeschkin* (TASH). **I-4-c North-Nuratau insular low mountains:** northern piedmonts of Pistalitau, 24.04.2020, 30.06.2020, *Beshko*, *Shomurodov*, *Adilov* (plant community description); northern piedmonts of Pistalitau near the shore of Tuzkan Lake, 40.5424° N, 67.403589° E, 09.05.2024, *Beshko* (plant community description).

Plumbaginaceae Juss.

Acantholimon Boiss.

688. *Acantholimon erythraeum* Bunge, Acta Horti Petropolit. 3(1): 99 (1875). Subshrub, chamaephyte. Pamir-Alay. Shrubland, Grassland, Rocky areas. Montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** the pass from Madjrumsay to the village Sentob, 05.09.1932, *Knorring, Emme 166* (MW); 5–6 km west of the village Guzhum, 23.07.1937, *Demurina 714* (TASH); Hayatsay, 20.08.1977, *Levichev* (TASH); watershed of Hayat and Kachaksay, 20.08.1977, *Levichev* (TASH); Mt. Parrandoz, 24.07.1992, *Beshko 92468* (herbarium of the Nuratau Nature Reserve); Hayatsay, 24.06.2006, *Beshko* (www.plantarium.ru); Hayatsay, Alichak, 25.06.2006, *Beshko 06347* (herbarium of the Nuratau Nature Reserve); Hayatsay, 23.07.2014, *Beshko* (www.plantarium.ru); Hayatsay, 30.05.2016, *Beshko* (www.plantarium.ru); upper reaches of Ustuksay, 08.06.2018, *Beshko* (www.plantarium.ru); crest of Mt. Kichik Fazilman, 09.06.2018, *Beshko* (www.plantarium.ru); Mt. Kichik Fazilman, near Fazilman Lake, 06.05.2020, *Akbarov, Turdiev, Juramurodov 6052020142* (TASH); Nuratau Nature Reserve, Hayatsay, 09.06.2020, *Ortikov, Pulatov, Turdiev, Juramurodov, Makhmudjanov 9062020685* (TASH); surroundings of Fazilman Lake, slope of Mt. Kichik Fazilman, 1760 m a.s.l., 05.07.2024, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** 5 km west the village Chuya, 14.08.1932, *Knorring, Emme 80* (MW).

689. *Acantholimon nuratavicum* Zakirov, Fl. URSS 18: 736 (1952). Nuratau (endemic). Subshrub, chamaephyte. Shrubland, Grassland, Rocky areas. Montane zone. UzbRDB 2. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Sentob plateau, 31.07.1928, *Yakimova, Moskvina 1352* (TASH); Hayatsay, 20.08.1977, *Levichev* (TASH); Hayatsay, 25.07.1982, *Shermatov et al. 24* (TASH); Hayatsay, Alichak, 25.06.2006, *Beshko 06245* (herbarium of the Nuratau Nature Reserve); Hayatsay,

Andebaraut, 21.07.2007, *Beshko* 07056–058 (herbarium of the Nuratau Nature Reserve); Hayatsay, 26.07.2012, *Beshko*; Hayatsay, 27.07.2012, *Beshko* (www.plantarium.ru); main watershed between Tykchasay and Aktashsay, 14.08.2012, *Beshko* (TASH); Hayatsay, 23.07.2014, *Beshko* (www.plantarium.ru); upper reaches of Hayatsay, 25.07.2014, *Beshko* (TASH); upper reaches of Sentobsay, 08.06.2018, *Beshko et al.* (TASH); Nuratau Nature Reserve, Hayatsay, Novi Khushk, 16.06.2019, *Beshko* (TASH); plateau in surroundings of Fazilman Lake, 11.07.2019, *Beshko* (www.plantarium.ru); Mt. Kichik Fazilman, near Fazilman Lake, 06.05.2020, *Akbarov, Turdiev, Juramurodov* 6052020121 (TASH).

690. *Acantholimon setiferum* Bunge (*Chaetolimon setiferum* (Bunge) Lincz.), Mém. Acad. Imp. Sci. Saint Pétersbourg, Sér. 7, 18(2): 68 (1872). Perennial, hemicryptophyte. Western Tien Shan, Pamir-Alay. Desert, Shrubland, Grassland, Rocky areas. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** mountains near town Jizzakh on the left bank of river Sanzar, 02.05.1921, *Kultiasow* 21 (TASH); foothills of Nuratau Range on the latitude of town Jizzakh, 16.05.1928, *Sovetkina* 224 (TASH); the village Karakuduk, 09.06.1934, *Rybakov* (TASH); south-west of the village Jizzakly, 28.05.1940, *Gomolitsky, Dolgikh* 53 (TASH); Mts. Koytash, Bereshek, 28.05.1940, *Gomolitsky et al.* 44 (TASH); Koblatysay, 20.05.1957, *Zaprometova* 392 (TASH); Jizzakh Region, Farish District, foothills of Nuratau between the village Karatash and Egiz-Bulak, 10.05.2010, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, lower reaches of Gurdara, 10.04.2013, *Beshko* (TASH, www.plantarium.ru). **I-4-b Aktau Range:** Dzhush – Koshrabad, 03.05.1913, *Korovin* 242, 244 (TASH); 2–3 km south-east of the village Jangak, 30.06.1937, *Demurina* 345 (TASH); the spring Bitav, 18.04.1963, *Khaydarov* 867 (TASH); 10 km south-east of the town Nurata, northern foothills of Bakhiltai Mts., 23.05.1964, *Pryakhin* (TASH); Charkhansay, foothills, 10.05.2013, *Beshko* (www.plantarium.ru); Navoi Region, Nurata District, Charkhansay, 40.46218° N, 65.79899° E, 17.05.2024, *Beshko* (www.plantarium.ru, www.inaturalist.org), [same locality], 17.05.2024, *Beshko, Volis et al.* (TASH). **I-4-b Karatau Range:** 800 m north of the ruins of the village Sarmysh, 05.05.1955, *Momotov, Li* 147 (TASH); surroundings of the village Kuray, 06.04.1964, *Pryakhin* (TASH). **I-4-b Karachatau Range:** 2.5–3 km north-east of the village Yukary-Kariya, 06.07.1937, *Demurina* 537 (TASH). **I-4-b Khobduntai Range:** surroundings of Kuropatkino railway station, 08.06.1929, *Kudrjashev* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 07.04.1915, *Kultiasow* 1 (TASH); mountains Balyklitau south of the village Chimbukurgan, 30.05.1958, *Vvedensky, Nabiev* (TASH).

691. *Acantholimon subavenaceum* Lincz., Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk S.S.S.R. 21: 489 (1961). Subshrub, chamaephyte. Nuratau (endemic). Shrubland, Grassland, Rocky areas. Montane zone. UzbRDB 2. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Ustuksay, 12.07.1956, *Vvedensky* 105 (TASH); upper reaches of Sentobsay, main watershed near Mt. Zargar, 24.06.1996, *Beshko* 96068–069 (TASH, herbarium of the Nuratau Nature Reserve); Mt. Kichik Fazilman near Fazilman Lake, 08.06.2013, *Beshko* (TASH); upper reaches of Ustuksay, 08.06.2013, *Beshko* (TASH, www.plantarium.ru); watershed between Sentobsay and Ustuksay, 08.06.2018, *Beshko* (www.plantarium.ru); upper reaches of Ustuksay, 09.06.2018, *Beshko* (TASH, www.plantarium.ru); Ukhumsay, 06.05.2020, *Akbarov, Turdiev, Juramurodov* 6052020062 (TASH); surroundings of Fazilman Lake, slope of Mt. Kichik Fazilman, 1740 m a.s.l., 05.07.2024, *Beshko* (TASH, www.plantarium.ru).

692. *Acantholimon tataricum* Boiss., DC., Prodr. 12: 623 (1848). Subshrub, chamaephyte. Pamir-Alay. Shrubland, Grassland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Mt. Mirishkar, 05.05.1913, *Korovin* 325 (TASH); Mts. Koytash, 23.07.1931, *Kobranova* 56 (TASH); 2 km south of the village Karatash, 05.08.1932, *Knorring, Emme* 121 (MW); Mts. Koytash, 02.08.1934, *Botschantzev* (TASH); 2–3 km north-west of village Kokbulak, 18.07.1937,

Demurina 594 (TASH); 5–6 km west of the village Guzhum, 23.07.1937, *Demurina 713* (TASH); near the village Ustakhan, 22.08.1937, *Titov* (TASH); valley of Mikhinsay south of the village Yangikishlak, 22.07.1940, *Gomolitsky 196* (TASH); Ustuksay, 12.07.1956, *Vvedensky 107* (TASH); top of Mt. Hayatbashi, 20.08.1977, *Levichev* (TASH); watershed between Hayat and Tykchasay, 20.08.1977, *Levichev* (TASH); Mt. Hayatbashi, 03.08.1980, *Pjatina 80024* (herbarium of the Nuratau Nature Reserve); Tykchasay, 26.06.1982, *Shermatov et al. 40* (TASH); Hayatsay, 25.07.1982, *Shermatov et al. 25* (TASH); Asrafsay, 23.08.1984, *Saenko 84055* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 03.07.2006, *Beshko* (www.plantarium.ru); Hayatsay, Andebaraut, 14.07.2006, *Beshko 06273* (herbarium of the Nuratau Nature Reserve); Farish District, upper reaches of Amandara, 1660 m a.s.l., 40.2657° N, 67.39657° E, *Beshko* (www.inaturalist.org, www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 27.03.2011, *Davkaev* (www.plantarium.ru); Farish district, Mts. Koytash, pass between Osmansay and Ilonchisay, between the villages Baland Osman and Chuprak, 40.31955° N, 67.25528° E, 20.04.2013, *lougrou* (www.inaturalist.org); Hayatsay, 09.05.2014, *Tojibaev et al. 17269* (TASH); Nuratau Nature Reserve, Hayatsay, 24.07.2015, *Beshko* (www.plantarium.ru); about 2 km east of Saurbel Pass, 06.04.2019, *Beshko* (www.plantarium.ru); [same locality], 40.34674° N, 67.12605° E, 02.07.2020, *Beshko* (www.inaturalist.org, www.plantarium.ru). **I-4-b Khobduntau Range:** 3 km from the village Gumsay, 12.06.1929, *Kudrjashev* (TASH); Gallaaral District, northern slope of Khobduntau Range, upper reaches of Gumsay, 39.92094° N, 67.29304° E, 20.06.2015, *Beshko* (www.inaturalist.org, www.plantarium.ru).

693. *Acantholimon zakirovii* Beshko, *Turczaninowia* 18(1): 19 (2015). Subshrub, chamaephyte. Nuratau (endemic). Shrubland, Grassland, Rocky areas. Montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** main watershed between Tykchasay and Aktashsay, 14.08.2012, *Beshko* (TASH); Nuratau Nature Reserve, Hayatsay, 1500 m (*locus classicus*), 25.06.2012, *Beshko* (TASH, LE, B, www.plantarium.ru); upper reaches of Ustuksay, 08.06.2013, *Beshko* (TASH); upper reaches of Andygensay, Sukhta, 16.06.2013, *Beshko* (TASH); Nuratau Nature Reserve, Hayatsay, Novi Khushk, 1566 m a.s.l., 16.06.2019, *Beshko* (TASH).

Limonium Mill.

694. *Limonium otolepis* (Schrenk) Kuntze, *Revis. Gen. Pl.* 2: 396 (1891). Perennial, hemicryptophyte. Turanian. Wetlands (inland), Artificial aquatic, Artificial terrestrial Plain, foothills. Rare. Native. **Occurrence records:** **I-4-b Aktau Range:** Khatyrchi District, loess outcrops, 05.05.1928, *Lepeschkin* (TASH); Khatyrchi District, hilltop, 09.06.1928, *Lepeschkin* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, on the way to Tuzkan Lake, 09.04.1911, *Dimo, Sprygin, Shulga 1002* (TASH); Pistalitau Range, near Biresik, 01.08.1937, *Demurina 1334* (TASH); northern piedmonts of Pistalitau near the shore of Tuzkan Lake, 40.5424° N, 67.403589° E, 09.05.2024, *Beshko* (plant community description).

Psylliostachys (Jaub. & Spach) Nevski

695. *Psylliostachys leptostachyus* (Boiss.) Roshkova, *Fl. URSS* 18: 468 (1952). Annual, therophyte. Irano-Turanian. Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** Gatchasay, 25.04.1958, *Zaprometova* (TASH).

696. *Psylliostachys suworowii* (Regel) Roshkova, V.L.Komarov (ed.), *Fl. URSS* 18: 469 (1952). Annual, therophyte. Irano-Turanian. Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills. Rare. Native. **Occurrence records:** **I-4-c North-Nuratau insular low mountains:** Farish District, northern piedmonts of Pistalitau, 26.04.2020, *Beshko* (www.inaturalist.org).

Polygonaceae Juss.

Atraphaxis L.

697. *Atraphaxis compacta* Ledeb., Fl. Altaic. 2: 55 (1830). Shrub, phanerophyte. Altay, Middle Asian. Rare. Native. Shrubland, Grassland, Rocky areas. Foothills, montane zone. **Occurrence records: I-4-a Nuratau Range:** Nuratau Nature Reserve, upper reaches of Hayatsay, 24.06.2006, *Beshko* (www.plantarium.ru).

698. *Atraphaxis karataviensis* Lipsch. & Pavlov, Izv. Bot. Sada Akad. Nauk S.S.S.R. 30: 733 (1931 publ. 1932). Shrub, phanerophyte. Middle Asian. Shrubland, Grassland, Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Sentob, opposite ruins Kurgan, 29.06.1983, *Bulgakova 168* (TASH); top of Mt. Kichik Fazilman, 09.06.2018, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, watershed crest between Madjrum Pass and Mt. Hayatbashi, about 1975 m a.s.l., 25.05.2025, *Beshko* (TASH).

699. *Atraphaxis pyrifolia* Bunge, Beitr. Fl. Russl.: 307 (1852). Shrub, phanerophyte. Mountain Middle Asian, Dzungarian. Forest, Shrubland, Grassland, Rocky areas. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** mountains near Tamerlane's Gate gorge, left bank of river Sanzar, 03.05.1921, *Kultiasow 103* (TASH); Mt. Piyazli, 2 km south-south-east of the village Kuvakiya, 24.04.1941, *Bukasov* (TASH); north slopes near Kyzylcha State Farm, 20.05.1951, *Zaprometova* (TASH); near the village Kyzylcha, 25.05.1951, *Novikova* (TASH); Koblatysay, 07.04.1952, *Zaprometova* (TASH); surroundings of Kyzylcha State Farm, Koblatysay, 08.04.1952, *Zaprometova* (TASH); Jingildysay, 13.04.1952, *Zaprometova* (TASH); Gatchasay, 25.01.1955, *Zaprometova* (TASH); Sharaussay, 28.05.1956, *Zaprometova* (TASH); 6 km north of the well Ernazar on rocky southern slope, 13.05.1957, *Momotov, Li 380* (TASH); Gatchasay, 14.04.1958, *Zaprometova 449* (TASH); valley near Kyzylcha State Farm, 15.04.1958, *Galkina* (TASH); 3 km north of Saurbel Pass, 27.04.1958, *Li, Zakirov 192* (TASH); 1 km east of the pass through Pistalisay, 08.05.1958, *Li, Zakirov 433* (TASH); 2 km south of the village Ustakhan, 25.05.1958, *Li, Zakirov 798* (TASH); Alaysay, 15.05.1960, *Zaprometova, Nikerov 70* (TASH); Hayatsay, 06.06.1990, *Beshko, Yakovenko 90025* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Gurdara, 03.05.2012, *Beshko* (TASH); Hayatsay, 40.506098°N, 66.750603°E, 05.05.2020, *Akbarov, Turdiev, Juramurodov 5052020085* (TASH); Nuratau Nature Reserve, Hayatsay, 19.05.2021, *Beshko* (www.plantarium.ru); Jizzakh Region, Farish District, Nuratau Nature Reserve, Hayatsay, 40.52101° N, 66.73871° E, 15.05.2024, *Beshko* (www.inaturalist.org). **I-4-b Aktau Range:** mountain slopes between Nurata and well Pashat, 24.04.1913, *Korovin 82* (TASH); 3 km south of village Sarygul, 12.05.1957, *Momotov, Li 319* (TASH). **I-4-b Mt. Kokcha:** mountains Kokchatau, 23.04.1955, *Momotov, Li 20* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 07.04.1911, *Dimo, Sprygin, Shulga 428* (TASH); Pistalitau, 08.04.1915, *Kultiasow* (TASH); mountains Balyklitau south of the village Chimkurgan, 30.05.1958, *Vvedensky, Nabiev* (TASH); mountains Pistalitau, 22.04.1986, *Pimenov, Kljuykov, Vassiljeva, Melibaev* (MW).

700. *Atraphaxis replicata* Lam., Encycl. 1: 329 (1783). Shrub, phanerophyte. Euro-Siberian, Irano-Turanian. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Reported by Zakirov in «Botanical geography of low mountains of Kyzylkum and Nuratau Range» (1971, p. 56).

701. *Atraphaxis seravschanica* Pavlov, Sist. Zametki Mater. Gerb. Krylova Tomsk. Gosud. Univ. Kuybysheva 1933(5-6): 3. Shrub, phanerophyte. Hyrcanian, Mountain Middle Asian. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Mt. Zargar 2 km NE of the village Urtasay, 11.05.1957, *Momotov, Li 230* (TASH); Alaysay, 3 km east of Kyzylcha State Farm, 15.05.1960, *Zaprometova 83* (TASH); upper reaches of Ustuksay, 29.05.1964, *Zuckerwanik 367* (TASH); Hayatsay, slope, 1300 m a.s.l., 09.08.1978, *Korshunov* (TASH); Hayatsay, 15.08.1980, *Mukhina 80006* (herbarium of the Nuratau Nature Reserve);

Bolosay, 25.05.1982, *Mukhina* 82001, 82002, 82003 (herbarium of the Nuratau Nature Reserve); watershed between Hayatsay and Andygensay, 12.06.1992, *Beshko* 92175 (herbarium of the Nuratau Nature Reserve); Hayatsay, 20.05.2006, *Beshko* 06103 (herbarium of the Nuratau Nature Reserve, www.plantarium.ru); Hayatsay, Andebaraut, 21.05.2011, *Beshko* 2011/037 (TASH); Nuratau Nature Reserve, Hayatsay, 30.05.2020, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** 10 km south-east of the town Nurata, northern piedmonts of Bakhiltai Mts., 23.05.1964, *Pryakhin* (TASH). **I-4-b Karatau Range:** 800 m north of the ruins of the village Sarmysh, 05.05.1955, *Momotov*, *Li* 171 (TASH).

702. *Atraphaxis spinosa* L., Sp. Pl.: 745 (1753). Shrub, phanerophyte. Euro-Siberian, Tethyan. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** near the village Ustakhan, 23.08.1937, *Titov* (TASH); Ukhum Pass, 28.07.1937, *Demurina* 764 (TASH); Kyzylcha State Farm, on granite slopes, 29.05.1951, *Novikova* (TASH); Koblatysay, 07.04.1952, *Zaprometova* (TASH); Alaysay, rocks, 15.04.1957, *Zaprometova* (TASH); valley near Kyzylcha, 14.04.1958, *Galkina* (TASH); upper reaches of Hayatsay, 20.08.1977, *Levichev* (TASH); slopes of Mt. Hayatbashi, 20.08.1977, *Levichev* (TASH); Hayatsay, 08.08.1980, *Mukhina* 80005 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Karysay, slopes, 20.08.1980, *Mukhina*, *Pjatina* (TASH); Karysay, 20.08.1980, *Mukhina* 80004 (herbarium of the Nuratau Nature Reserve); Andygensay, Kachak, 21.05.1981, *Mukhina* 81013 (herbarium of the Nuratau Nature Reserve); Madjumsay, 08.08.1983, *Petrochenko* 83003, 83004, 83005 (herbarium of the Nuratau Nature Reserve); watershed between Hayatsay and Andygensay, 12.06.1992, *Beshko* 92164 (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** mountain slopes between Nurata and well Pashat, 24.04.1913, *Korovin* 66 (TASH). **I-4-b Karatau Range:** 3 km north of the well Karim-kuduk 25.10.1956, *Momotov*, *Li* 527 (TASH). **I-4-b Mt. Kokcha:** mountains Kokchatau, 23.04.1955, *Momotov*, *Li* 21 (TASH).

703. *Atraphaxis virgata* (Regel) Krasn., Scripta Soc. Geogr. Ross. 19: 295 (1888). Shrub, phanerophyte. Mountain Middle Asian, Dzungarian. Forest, Shrubland, Grassland, Rocky areas. Foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** the village Deristan, 09.09.1932, *Knorring* 175 (MW); Nurata District, Nuratau Range, 1951, *unknown collector* (TASH); Jingildysay, 18.09.1952, *Zaprometova* (TASH); Jingildysay, 21.09.1952, *Zaprometova* 404 (TASH); Gurdara, 23.06.1971, *Botschantzev*, *Kamelin* (LE); Sentob, 24.06.1971, *Botschantzev*, *Kamelin* (LE); Hayatsay, 20.08.1977, *Levichev* (TASH); Hayatsay, lower part of slope, 1200 m a.s.l., 04.08.1978, *Korshunov* (TASH); Hayatsay, slope, 1200 m a.s.l., 10.08.1978, *Korshunov* (TASH); Hayatsay, 15.08.1980, *Pjatina*, *Mukhina* 80007 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, upper reaches of Hayatsay, 11.09.2009, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, lower reaches of Madjumsay, valley of mountain river, about 800 m a.s.l., 16.09.2023, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** near the village Langar, valley Yangokly, 21.05.1941, *Zakirov*, *Niyazov* (TASH). **I-4-b Karatau Range:** road to Sarmysh, 05.09.1931, *Tyshchenko* 729 (TASH). **I-4-b Khobduntau Range:** valley Bodbod, 20.06.1929, *Kudrjashev* (TASH); near the village Gumsay, 24.09.1940, *Gomolitsky* 347 (TASH).

Fallopia Adans.

704. *Fallopia convolvulus* (L.) A. Löve (*Polygonum convolvulus* L.), Taxon 19: 200 (1970). Annual, therophyte. Palearctic. Forest, Shrubland, Grassland, Rocky areas. Plain, foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** Hayatsay, field station of nature reserve, 07.07.2006, *Beshko* 06229 (herbarium of the Nuratau Nature Reserve).

Persicaria Hill

705. *Persicaria lapathifolia* (L.) Delarbre (*Polygonum lapathifolium* L., *P. nodosum* Pers.), Fl. Auvergne, ed. 2: 519 (1800). Annual, therophyte. Pluriregional. Wetlands (inland), Artificial aquatic. Plain, foothills, montane zone. Rare. Native. **Occurrence records: I-4-b Aktau Range:** Khatyrchi District, 03.04.1928, *Lepeschkin 31392* (TASH).

706. *Persicaria maculosa* Gray (*Polygonum persicaria* L.), Nat. Arr. Brit. Pl. 2: 269 (1821 publ. 1822). Annual, therophyte. Pluriregional. Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, field station of nature reserve, 07.07.2006, *Beshko 06232, 06233* (herbarium of the Nuratau Nature Reserve).

Polygonum L.

707. *Polygonum argyrocoleon* Steud. ex Kunze, Linnaea 20: 17 (1847). Annual, therophyte. Euro-Siberian, Tethyan. Desert, Forest, Shrubland, Grassland, Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-b Khobduntau Range:** Gallaaral District, experimental station of cereal crops, 03.08.1934, *Toporova* (TASH).

708. *Polygonum aviculare* L., Sp. Pl.: 362 (1753). Perennial, hemicryptophyte. Pluriregional. Desert, Forest, Shrubland, Grassland, Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, 1200 m a.s.l., 11.07.1978, *Korshunov* (TASH); Hayatsay, 23.08.1980, *Pjatina 80008* (herbarium of the Nuratau Nature Reserve); Hayatsay, field station of nature reserve, 07.07.2006, *Beshko 06230, 06231* (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** Khatyrchi District, 18.08.1928, *Lepeschkin 31399* (TASH). **I-4-b Khobduntau Range:** Gallaaral District, experimental station of cereal crops, 08.06.1934, *Toporova* (TASH).

709. *Polygonum biaristatum* Aitch. & Hemsl., J. Linn. Soc. Bot. 18: 90 (1880). Subshrub, chamaephyte. Irano-Turanian, Himalayan. Shrubland, Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Nature Reserve, upper reaches of Madjrumsay, Fargun, 08.09.2010, *Beshko* (TASH); Nuratau Nature Reserve, top of Mt. Hayatbashi, 02.06.2013, *Beshko* (TASH, www.plantarium.ru); Nuratau Nature Reserve, near top of Mt. Hayatbashi, 19.05.2021, *Beshko, Madaminov NB2021232* (TASH); [same locality], 05.06.2022, *Beshko* (TASH, www.plantarium.ru).

710. *Polygonum fibrilliferum* Kom., Fl. URSS 5: 718 (1936). Perennial, hemicryptophyte. Mountain Middle Asian. Shrubland, Rocky areas, Artificial terrestrial. Montane zone. Occasional. Native. **Occurrence records: I-4-b Aktau Range:** gorge Sangijuman, 25.05.1869, *Fedtschenko* (LE).

711. *Polygonum inflexum* Kom., Fl. URSS 5: 721 (1936). Annual, therophyte. Middle Asian. Desert, Shrubland, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Jizzakh District, Karakuduk, 15.05.1928, *Sovetkina 208* (TASH). **I-4-b Khobduntau Range:** Gallaaral District, experimental station of cereal crops, 08.06.1934, *Toporova* (TASH).

712. *Polygonum paronychioides* C.A.Mey. (*Polygonum pulvinatum* Kom.), Bull. Soc. Imp. Naturalistes Moscou 11: 356 (1838). Subshrub, chamaephyte. Caucasian, Irano-Turanian. Rocky areas. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Karysay, 07.06.1981, *Mukhina 81014, 81015* (herbarium of the Nuratau Nature Reserve); watershed between Hayatsay and Andygensay, 12.06.1990, *Beshko, Yakovenko 90026* (herbarium of the Nuratau Nature Reserve); watershed, 1 km west of Saurbel Pass and 8 km south-west of Yangikishlak, 27.05.2012, *Beshko* (TASH). **I-4-b Khobduntau Range:** reported by Kudrjashev in "Vegetation of the Khobduntau and Karachatau Mountains" (1929, p. 60).

713. *Polygonum polycnemoides* Jaub. & Spach., Ill. Pl. Orient. 2: 30 (1844). Annual, therophyte. Tethyan. Desert, Shrubland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Nature Reserve, Hayatsay, lower reaches, 1300 m a.s.l., 26.08.1980, *Mukhina, Pjatina* (TASH).

714. *Polygonum rottboellioides* Jaub. & Spach., Ill. Pl. Orient. 2: 32 (1844). Annual, therophyte. Irano-Turanian. Shrubland, Rocky areas. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, dry riverbed, about 1600 m a.s.l., 20.08.1977, *Levichev* (TASH).

715. *Polygonum subaphyllum* Sumnev., Bot. Mater. Gerb. Bot. Inst. Uzbekistansk. Fil. Akad. Nauk S.S.S.R. 2: 15 (1940). Annual, therophyte. Hyrcanian, Mountain Middle Asian. Shrubland, Grassland, Artificial terrestrial. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-b Khobduntau Range:** Gallaaral District, experimental station of cereal crops, 28.08.1934, *Toporova* (TASH).

716. *Polygonum vvedenskyi* Sumnev., Bot. Mater. Gerb. Bot. Inst. Uzbekistansk. Fil. Akad. Nauk S.S.S.R. 2: 9 (1940). Subshrub, chamaephyte. Western Tien Shan, Western Pamir-Alay. Shrubland, Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** main watershed of Nuratau Range in upper reaches of Sentobsay, 24.06.1996, *Beshko 96046* (herbarium of the Nuratau Nature Reserve).

Rheum L.

717. *Rheum cordatum* Losinsk., Izv. Bot. Sada Akad. Nauk S.S.S.R. 30: 381 (1931 publ. 1932). Perennial, hemicryptophyte. Mountain Middle Asian. Shrubland, Grassland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** near the village Ustakhan, valley Amandara, 08.04.1938, *Titov 1* (TASH); near the village Nurak, surroundings of Karatah, 08.04.1938, *Titov 5* (TASH); 1 km south of the village Ustakhan, 25.05.1958, *Zakirov, Li 783* (TASH); Koytash, northern slope, stony low mountains, 28.06.1971, *Botschantzev, Kamelin* (LE); Mt. Parrandoz, 29.04.1982, *Mukhina 82004, 82005, 82006* (herbarium of the Nuratau Nature Reserve); Karysay, Kazhum, 30.04.1982, *Mukhina 82007, 82008* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 05.05.2007, *Beshko* (www.plantarium.ru); surroundings of Farish, mountain slope, 20.05.2019, *Yusupov* (www.plantarium.ru); Hayatsay, 05.05.2020, *Akbarov, Turdiev, Juramurodov 5052020036* (TASH).

718. *Rheum macrocarpum* Losinsk., Izv. Bot. Sada Akad. Nauk S.S.S.R. 30: 379 (1931 publ. 1932). Perennial, hemicryptophyte. Western Tien Shan, Pamir-Alay. Foothills, montane zone. Abundant. Native. **Occurrence records: I-4-a Nuratau Range:** near the village Ustakhan, 21.08.1937, *Titov* (TASH); Nuratau Range, Farish District, 14.05.1941, *Momotov* (TASH); Farish District, piedmont plain north of Nuratau Range, 11.05.1956, *Zaprometova 108* (TASH); nameless valley 4 km east of Kyzylcha State Farm, 09.05.1957, *Zaprometova 346* (TASH); Karasay, 13.05.1957, *Zaprometova* (TASH); 1 km south of the village Ustakhan, 25.05.1958, *Zakirov, Li 791* (TASH); 2 km south of the village Ustakhan, 25.05.1958, *Zakirov, Li 820* (TASH); gorge Madjrum, 18.06.1969, *Mambetjumaev 210* (TASH); Madjrum, 19.06.1969, *Mambetjumaev 221* (TASH); Hayatsay, 12.05.1981, *Mukhina 81016, 81017* (herbarium of the Nuratau Nature Reserve); near the village Uchma, foothills, 28.03.2019, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** near the village Langar, Yangokly, 19.05.1941, *Zakirov, Niyazov* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 07.04.1911, *Dimo, Sprygin, Shulga 1046* (TASH); remnant mountains north of Nuratau Range, 60 km west of Jizzakh, 26.05.1956, *Zaprometova 201* (TASH).

719. *Rheum maximowiczii* Losinsk., Izv. Bot. Sada Akad. Nauk S.S.S.R. 30: 382 (1931 publ. 1932). Perennial, hemicryptophyte. Mountain Middle Asian. Foothills, montane zone. Frequent. **Occurrence records: I-4-a Nuratau Range:** 3 km north of Saurbel Pass, 27.04.1958, *Zakirov, Li 182* (TASH); 5

km north-east of the village Narvan, 21.05.1958, *Zakirov, Li 690* (TASH); Asrafsay, 28.03.1981, *Mukhina 81018, 81019* (herbarium of the Nuratau Nature Reserve); about 2 km west of Saurbel Pass, 27.05.2012, *Beshko* (www.plantarium.ru).

Rumex L.

720. *Rumex acetosa* L., Sp. Pl.: 337 (1753). Perennial, hemicryptophyte. Palearctic. Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, field station of nature reserve, 22.04.2006, *Beshko 06354* (herbarium of the Nuratau Nature Reserve); [same locality], 23.05.2006, *Beshko 06290, 06291* (herbarium of the Nuratau Nature Reserve).

721. *Rumex chalepensis* Mill. (*Rumex drobovii* Korovin, *Rumex syriacus* Meissn.), Gard. Dict. ed. 8.: n.° 11 (1768). Perennial, hemicryptophyte. Irano-Turanian. Forest, Shrubland, Grassland, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Asrafsay, 14.08.1956, *Zaprometova* (TASH); Nuratau Nature Reserve, Hayatsay, August 1978, *Korshunov* (TASH); Hayatsay, Andebaraut, 22.05.2006, *Beshko 06306, 06307* (herbarium of the Nuratau Nature Reserve); Hayatsay, field station of nature reserve, 26.06.2007, *Beshko 07039, 07040* (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** Khatyrchi District, 15.05.1928, *Lepeschkin 31395* (TASH).

722. *Rumex conglomeratus* Murray, Prod. Stirp. Gott.: 52 (1770). Perennial, hemicryptophyte. Euro-Siberian, Tethyan. Forest, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, 20.08.1978, *Korshunov 78002* (herbarium of the Nuratau Nature Reserve).

723. *Rumex crispus* L., Sp. Pl.: 335 (1753). Perennial, hemicryptophyte. Pluriregional. Forest, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Sentob, valley of stream, 24.06.1971, *Botschantzev, Kamelin* (LE); Karysay, 23.06.1984, *Petrochenko 84048* (herbarium of the Nuratau Nature Reserve); Hayatsay, Khotunon, 23.05.2006, *Beshko 06043* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, upper reaches of Tykchasay, bank of stream, 21.06.2011, *Beshko* (www.plantarium.ru).

724. *Rumex patientia* L. (*Rumex pamiricus* Rech.f.), Sp. Pl. 1: 333 (1753). Perennial, hemicryptophyte. Euro-Siberian, Tethyan. Forest, Shrubland, Grassland, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Koytash, northern slope, 28.06.1971, *Botschantzev, Kamelin* (LE); Hayatsay, 15.07.1978, *Korshunov 78001* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 1100 m a.s.l., August 1978, *Korshunov* (TASH); Karysay, 23.06.1984, *Petrochenko 84047* (herbarium of the Nuratau Nature Reserve); Hayatsay, Alichak, 25.06.2006, *Beshko 06350* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, upper reaches of Hayatsay, 27.05.2023, *Beshko* (www.inaturalist.org). **I-4-b Aktau Range:** Khatyrchi District, 15.05.1928, *Lepeschkin 31394* (TASH).

725. *Rumex rectinervius* Rech.f., Repert. Spec. Nov. Regni Veg. 33: 355 (1934). Perennial, hemicryptophyte. Middle Asian. Wetlands (inland), Artificial aquatic. Plain, foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** surroundings of town Jizzakh, 09.06.1927, *Merkulovich 173095* (TASH). **I-4-b Aktau Range:** near the village Fedorovskoye, 21.05.1925, *Popov 306* (TASH); outskirts of Koshrabad, 11.07.1956, *Vvedensky 69* (TASH).

726. *Rumex tianschanicus* Losinsk., Trudy Sredne-Aziatsk. Gosud. Univ., Ser. 8b, Bot. 19: 11 (1935) and Fl. URSS, 5: 466, 716 (1936). Perennial, hemicryptophyte. Hyrcanian, Mountain Middle Asian, Dzungarian. Shrubland, Grassland, Wetlands (inland). Montane zone. Occasional. Native. **Occurrence**

records: I-4-a Nuratau Range: near the village Ustakhan, 23.08.1937, *Titov* (TASH); Nuratau Range, Farish District, 05.05.1941, *Momotov 110* (TASH).

Caryophyllaceae Juss.

Acanthophyllum C.A.Mey.

727. *Acanthophyllum aculeatum* Schischk., Fl. URSS 6: 895 (1936). Subshrub, chamaephyte. Western Pamir-Alay. Desert, Shrubland, Grassland, Rocky areas. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Mt. Hayatbashi, southern slope, 20.08.1977, *Levichev* (TASH); Hayatsay, southern slope and top of Mt. Hayatbashi, 20.08.1977, *Levichev* (TASH); slopes of Mt. Hayatbashi, 20.08.1977, *Levichev* (TASH); Jizzakh-Farish, Karatepa, 27.06.1984, *Zakirov, Musaeva* (TASH). **I-4-b Karatau Range:** south of the pass Jizlan, 26.05.1964, *Pryakhin* (TASH). **I-4-b Mt. Kokcha:** 6 km south of mountains Kokcha, 27.05.1964, *Pryakhin* (TASH).

728. *Acanthophyllum cyrtostegium* Vved., Bot. Mater. Gerb. Bot. Inst. Uzbekistansk. Fil. Akad. Nauk S.S.S.R. 3: 7 (1941). Subshrub, chamaephyte. Kyzylkum Relic Mountains, Western Pamir-Alay. Desert. Plain. Rare. Native. UzbRDB 2. **Occurrence records: I-4-b Mt. Kokcha:** near Mt. Kokcha (TEU), 04.06.1976, *Musaeva* (TASH).

729. *Acanthophyllum elatius* Bunge (*Acanthophyllum borsczowii* Litv.), Fl. Orient. 1: 561 (1867). Subshrub, chamaephyte. Irano-Turanian. Desert. Plain. Rare. Native. **Occurrence records: I-4-b Aktau Range:** piedmont plain, 5–6 km north-west of the village Khodzha-Akhmeti-Kabir, 21.06.1937, *Demurina 279, 280* (TASH).

730. *Acanthophyllum gypsophiloides* Regel (*Allochrusa gypsophiloides* (Regel) Schischk.), Izv. Imp. Obshch. Lyubit. Estestv. Moskovsk. Univ. 34(2): 15 (1882). Subshrub, chamaephyte. Western Tien Shan, Western Pamir-Alay. Shrubland, Grassland. Montane zone. Rare. Native. UzbRDB 3. **Occurrence records: I-4-a Nuratau Range:** near the village Tutli, 28.05.1940, *Gomolitsky, Dolgikh, Arkhireev 69* (TASH); Mikhinsay, 22.07.1940, *Gomolitsky, Dolgikh, Arkhireev 195* (TASH); Farish District, Narvan, 2.07.1988, *Musaeva* (TASH); near the village Mikhin, 02.07.1988, *Musaeva* (TASH); near Saurbel Pass, 01.05.2002, *Beshko* (herbarium of the Nuratau Nature Reserve); upper reaches of Osmansay, above the summer camp «Zangori Olov», 28.06.2019, *Beshko, Abduraimov* (plant community description); upper reaches of the river Savryuksay, upstream of the village Koytash, 28.06.2019, *Beshko, Abduraimov* (plant community description). **I-4-b Karachatau Range:** western part of Karachatau, 28.06.1929, *Kudrjashev* (TASH).

731. *Acanthophyllum knorringianum* Schischk. (*Kuhitangia knorringiana* Bondarenko), Trudy Bot. Inst. Akad. Nauk S.S.S.R., Ser. 1, Fl. Sist. Vyssh. Rast. 3: 183 (1937). Subshrub, chamaephyte. Western Pamir-Alay. Shrubland, Grassland, Rocky areas. Montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Ukhum Pass, 28.07.1937, *Demurina 758* (TASH); Hayatsay, Alichak, 16.07.1983, *Petrochenko 83054* (herbarium of the Nuratau Nature Reserve); Mt. Parrandoz, 22.07.1992, *Beshko 92348* (herbarium of the Nuratau Nature Reserve); Hayatsay, Alichak, 24.06.2006, *Beshko 06345* (herbarium of the Nuratau Nature Reserve, www.plantarium.ru); Mt. Kichik Fazilman, 11.07.2019, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** 5 km west of the village Chuya, between mountains Aktau and Bakhiltai, 14.07.1935, *Knorring, Emme 70* (MW); Mt. Takhku, 29.06.1937, *Demurina 325* (TASH).

732. *Acanthophyllum krascheninnikovii* Schischk., V.L.Komarov (ed.), Fl. URSS 6: 894 (1936). Subshrub, chamaephyte. Turanian. Desert, Shrubland, Rocky areas. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Reported by Zakirov in «Vegetation cover of Nuratau Mountains» (1969, p. 25) and «Botanical geography of low mountains of Kyzylkum and Nuratau Range» (1971, p. 58). **I-4-c**

North-Nuratau insular low mountains: Reported by Zakirov in «Vegetation cover of Nuratau Mountains» (1969, p. 25) and «Botanical geography of low mountains of Kyzylkum and Nuratau Range» (1971, p. 58).

733. *Acanthophyllum pungens* (Bunge) Boiss., Fl. Orient. 1: 561 (1867). Subshrub, chamaephyte. Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas. Plain, foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** foothills of Nuratau Range on the latitude of town Jizzakh, 16.05.1928, *Sovetkina* 220 (TASH); Jizzakh-Farish, Karatepa, 27.06.1984, *Zakirov, Musaeva* (TASH); between Farish and the village Ilonchi, 16.06.1986, *Musaeva* (TASH); Sentobsay, Kargesay, 12.07.1992, *Beshko* 92332 (herbarium of the Nuratau Nature Reserve); Hayatsay, Novi Daroz, 20.06.2006, *Beshko* 06091 (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** surroundings of Nurata, *Iris* steppe, west of the town, 23.04.1913, *Korovin* 34 (TASH); foot of the hill Uch-bash, 27.04.1913, *Korovin* 122 (TASH); Dzhush – Koshabad, *Iris* steppe, 03.05.1913, *Korovin* 238 (TASH); piedmont plain near district center Nurata, 22.05.1963, *Markova* (TASH); near the village Upper Bubak, south of Bakhiltai Mts., 07.06.1964, *Pryakhin* (TASH). **I-4-b Karatau Range:** mountains Karakarga, 11.05.1913, *Korovin* 452, 486, 488 (TASH); mountains Karakarga near the pass Jizlan, 22.04.1913, *Korovin* 15 (TASH). **I-4-b Khobduntai Range:** Gallaaral District, experimental station of cereal crops, 15.06.1934, *Toporova* (TASH). **I-4-c North-Nuratau insular low mountains:** Balyklitai, 25.05.1931, *Kobranova* 447 (TASH).

Arenaria L.

734. *Arenaria leptoclados* (Rchb.) Guss., Fl. Sicul. Syn. 2: 284 (1844). Annual, therophyte. Euro-Siberian, Tethyan. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** Hayatsay, Novi Khushk, 24.05.2006, *Beshko* 06355 (herbarium of the Nuratau Nature Reserve).

735. *Arenaria serpyllifolia* L.. Annual, therophyte. Circumtemperate. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** Hayatsay, 03.05.2000, *Beshko* 00006 (herbarium of the Nuratau Nature Reserve); Hayatsay, 06.05.2010, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** Khatyrchi District, the village Yargak, May 1928, *Lepeschkin* (TASH); Nurata, 1941, *Zakirov* (SAM). **I-4-b Khobduntai Range:** reported by Kudrjashev in “Vegetation of the Khobduntai and Karachatau Mountains” (1929, p. 61).

Bufonia L.

736. *Bufonia oliveriana* Ser., Prodr. 1: 388 (1824). Annual, therophyte. Hyrcanian, Mountain Middle Asian. Shrubland, Rocky areas. Foothills, montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** near the village Kariz, 11.07.1932, *Knorring, Emme* 55 (MW); valley Mikhinsay, middle reaches, south of Yangikishlak, 22.07.1940, *Gomolitsky, Dolgikh, Arkhireev* 195 (TASH); Hayatsay, 05.05.2012, *Beshko* (TASH). **I-4-b Aktau Range:** Nurata, 1941, *Zakirov* (SAM).

Cerastium L.

737. *Cerastium dichotomum* L., Sp. Pl.: 438 (1753). Annual, therophyte. Tethyan. Foothills, montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** valley 2.5 km south-east of the village Kyzylcha, 21.05.1954, *Sedov* (TASH).

738. *Cerastium glomeratum* Thuill., Fl. Env. Paris, ed. 2: 226 (1799). Annual, therophyte. Euro-Siberian, Irano-Turanian. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** Nuratau Nature Reserve, Madjrumsay, 13.04.2016, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** near the village Andak, 01.05.1926, *Popov* (TASH).

739. *Cerastium inflatum* Gren., Mém. Compt. Rend. Soc. Émul. Doubs 1: 6, 45 (1841). Annual, therophyte. Irano-Turanian. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** 2–3 km north-west of the village Kokbulak, 18.07.1937, *Demurina* 599 (TASH); 2–3 km east-north-east of Ukhum Pass, 29.07.1937, *Demurina* 801 (TASH); west of the village Jizzakly, near Bereshek, 28.05.1940, *Gomolitsky, Dolgikh* 37 (TASH); Farish District, 29.04.1941, *Momotov* (TASH); Farish District, 10.05.1941, *Momotov* 196 (TASH); Farish District, 15.05.1941, *Momotov* (TASH); Farish District, 18.05.1941, *Momotov* (TASH); 2.5 km south-east of Kyzylcha State Farm, 02.05.1954, *Sedov* (TASH); 1 km south of the village Kokbulak, 22.04.1956, *Zakirov* 35 (TASH); Ustuksay, 29.05.1964, *Zuckerwanik* 361 (TASH); upper reaches of Ukhumsay, 02.06.1964, *Zuckerwanik* 466 (TASH); Hayatsay, 03.05.1981, *Mukhina* (TASH); Kachaksay, 09.04.1981, *Mukhina* (TASH); Bolosay, 26.04.1992, *Beshko* 92083 (herbarium of the Nuratau Nature Reserve); Hayatsay, 08.05.1992, *Beshko* 92512 (herbarium of the Nuratau Nature Reserve); surroundings of district center Farish, 13.04.1995, *Beshko* 95016 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 25.04.2007, *Beshko* (www.plantarium.ru); 05.05.2012, *Beshko* (TASH). **I-4-b Aktau Range:** 4–6 km south of village Chuya, 29.06.1937, *Demurina* 351 (TASH). **I-4-b Karachatau Range:** 1–2 km west of the village Balgali, 08.07.1937, *Demurina* 577 (TASH). **I-4-b Khobduntau Range:** reported by Kudrjashev in “Vegetation of the Khobduntau and Karachatau Mountains” (1929, p. 61).

740. *Cerastium semidecandrum* L. (*C. pentandrum* L., *C. dentatum* Möeschl.), Sp. Pl.: 438 (1753). Annual, therophyte. Tethyan. Desert, Shrubland, Grassland, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** reported in «Conspectus Florae Asiae Mediae», vol. 2, 1971, p. 238. **I-4-b Aktau Range:** Khatyrchi District, 05.05.1928, *Lepeschkin* (TASH).

Dianthus L.

741. *Dianthus crinitus* subsp. *tetralepis* (Nevski) Rech.f. (*Dianthus tetralepis* Nevski), Pl. Syst. Evol. 151: 286 (1986). Perennial, hemicryptophyte. Western Tien Shan, Western Pamir-Alay. Desert, Shrubland, Grassland, Rocky areas. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** mountains near Tamerlane’s Gate gorge, on the left bank of the river, 03.05.1921, *Kultiasow* 88 (TASH); Gallaaral State Farm, farmstead Karizkuduk, 08.06.1934, *Rybakov* (TASH); Nuratau Range, Farish District, 01.04.1941, *Momotov* 17 (TASH); Sanguzarsay, 07.05.1992, *Beshko* 92439 (herbarium of the Nuratau Nature Reserve); piedmont plain lower reaches of Ukhumsay, 31.05.2003, *Beshko* 03051 (herbarium of the Nuratau Nature Reserve); Hayatsay, 02.06.2006, *Beshko* 06168 (herbarium of the Nuratau Nature Reserve); foothills of Nuratau, surroundings of Bogdon (Farish), hilltop, 15.05.2009, *Beshko* (www.plantarium.ru); foothills near the villages Hujur and Osmansay, 12.05.2012, *Beshko* (TASH); foothills of Nuratau, surroundings of district center Yangikishlak, 13.05.2012, *Beshko* (TASH). **I-4-b Aktau Range:** Ak-Chap – Khanbandy – Chuya, 02.05.1913, *Korovin* (TASH); Nuratau mountains, 20.07.1931, *Tyshchenko* (TASH). **I-4-b Karatau Range:** Karakarga, 11.05.1913, *Korovin* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 08.04.1915, *Kultiasow* 57 (TASH); mountains Balyklitau, 23.05.1931, *Kobranova* 434 (TASH); foothills of Pistalitau, 24.04.2020, *Beshko* (www.plantarium.ru).

742. *Dianthus darvazicus* Lincz., Trudy Tadjzhikistansk. Bazy 8: 632 (1940). Perennial, hemicryptophyte. Western Tien Shan, Western Pamir-Alay. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Jizzakh Region, 7 km north-east of the village Sasyk, 16.04.1962, *Karimov* (TASH); upper reaches of Ustuksay, 29.05.1964, *Zuckerwanik* 361 (TASH); upper reaches of Parrandozsay, on the way to Ukhum Pass, 31.05.1964, *Zuckerwanik* 433 (TASH); Hayatsay, Khotunon, 23.05.2006, *Beshko* 06050 (herbarium of the Nuratau Nature Reserve).

743. *Dianthus helenae* Vved., Bot. Mater. Gerb. Bot. Inst. Uzbekistansk. Fil. Akad. Nauk S.S.S.R. 3: 10 (1941). Perennial, hemicryptophyte. Nuratau, Aktau (endemic). Montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** 2 km south of Karabay Pass, 05.08.1932, *Knorring, Emme 126a* (MW); pass near the sources of Guzhumsay, 23.07.1937, *Demurina 312* (TASH); Nuratau Range, Farish District, 20.05.1941, *Momotov* (TASH); northern slope, Gatchasay, 19.06.1956, *Zaprometova 278* (TASH); Koblatysay, 01.05.1957, *Zaprometova* (TASH); Karysay, 15.05.1983, *Mukhina 83048* (herbarium of the Nuratau Nature Reserve); Nakrutsay, 19.06.1992, *Beshko 92486* (herbarium of the Nuratau Nature Reserve); Andygensay, Sukhta, 05.06.2006, *Beshko 06124* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 01.06.2008, *Beshko* (www.plantarium.ru); upper reaches of Osmansay above the Zangori Olov summer camp, 02.07.2020, *Beshko, Shomurodov, Adilov, Abduraimov* (plant community description); watershed of Nuratau Range, about 2 km east of Saurbel Pass, 02.07.2020, *Beshko, Shomurodov, Adilov, Abduraimov* (plant community description); Ustuksay, about 1400 m a.s.l., 04.07.2024, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** 2–3 km south of village Kokbulak, 01.07.1937, *Demurina 365* (TASH); 7–8 km south-east of the village Maulyan, 03.07.1937, *Demurina 408* (TASH); 8 km south-west of village Chuya, 29.07.1937, *Demurina 304* (TASH); mountains Aktau, Samarkand Region, 29.05.1963, *Khaydarov 1638* (TASH); upper reaches of Bitausay near the village, 26.05.1964, *Zuckerwanik 244* (TASH); Shamalysay, 23.06.1974, *Baranova 282* (MW); between Chuya and Langar, 19.07.1975, *Pimenov, Kljuykov, Baranova, Vassiljeva 752* (MW). **I-4-b Karachatau Range:** Karachatau, northern slope, 08.06.1926, *Kudrjashev* (TASH); 4–5 km south-west of the village Kursafar, watershed, 07.07.1937, *Demurina* (TASH). **I-4-b Khobduntau Range:** near the village Khodzha-Kabud, 15.06.1929, *Kudrjashev* (TASH). **I-4-c North-Nuratau insular low mountains:** remnant mountains north of Nuratau, 60 km west of Jizzakh, 26.05.1956, *Zaprometova* (TASH).

744. *Dianthus nudiflorus* Griff. (*Velezia rigida* L.), Not. Pl. Asiat. 4: 466 (1854). Annual, therophyte. Tethyan. Shrubland, Grassland, Rocky areas, Artificial terrestrial. Foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** Hayatsay, Novi Daroz, 17.06.1997, *Beshko 97024* (herbarium of the Nuratau Nature Reserve); surroundings of village Hayat, ruins of the old village, 17.06.1997, *Beshko 97024* (TASH); Hayatsay, Novi Daroz, 20.06.2006, *Beshko 06092* (herbarium of the Nuratau Nature Reserve); Hayatsay, Novi Daroz, 7.06.2007, *Beshko 07009* (herbarium of the Nuratau Nature Reserve); Hayatsay, Novi Daroz, 14.05.2008, *Beshko 08021* (herbarium of the Nuratau Nature Reserve). **I-4-b Karatau Range:** Aksakalata, 1941, *Popov* (SAM). **I-4-b Khobduntau Range:** reported by Kudrjashev in “Vegetation of the Khobduntau and Karachatau Mountains” (1929, p. 61).

Eremogone Fenzl

745. *Eremogone griffithii* (Boiss.) Ikonn. (*Arenaria griffithii* Boiss.), Novosti Sist. Vyssh. Rast. 10: 140 (1973). Perennial, hemicryptophyte. Hyrcanian, Mountain Middle Asian. Grassland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** Mt. Parrandoz, 05.06.1982, *Mukhina 82035* (herbarium of the Nuratau Nature Reserve); Hayatsay, 01.06.1990, *Beshko, Yakovenko 90116* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 30.05.2016, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, watershed crest between Hayatsay and Madjrumsay, 19.05.2021, *Beshko* (www.inaturalist.org, www.plantarium.ru).

Gypsophila L.

746. *Gypsophila cephalotes* (Schrenk) F.N.Williams, J. Bot. 27: 323 (1889). Perennial, hemicryptophyte. Mountain Middle Asian, Dzungarian. Shrubland, Grassland, Rocky areas. Montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** left side of the river Ustuksay, 17.05.1956, *Korotkova 5766* (TASH).

747. *Gypsophila paniculata* L., Sp. Pl.: 407 (1753). Perennial, hemicryptophyte. Euro-Siberian. Grassland, Artificial terrestrial. Foothills, montane zone. Rare. Alien. **Occurrence records: I-4-a Nuratau Range:** Gallaaral District, upper reaches of the river Savryuksay, upstream of the village Koytash, 40.259868° N, 67.342113° E, 28.06.2019, Beshko (www.inaturalist.org).

748. *Gypsophila vaccaria* (L.) Sm. (*Vaccaria hispanica* (Mill.) Rauschert), J.Sibthorp & J.E.Smith, Fl. Graec. Prodr. 1: 279 (1809). Annual, therophyte. Pluriregional. Artificial terrestrial. Plain, foothills, montane zone. Occasional. Alien. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, the village Osmansay, June 1931, *Kobranova* 492, 493 (TASH); Karakuduk, fallow land, 03.06.1934, *Rybakov, Shitov* (TASH); Kyzylcha State Farm, 02.06.1951, *Zaprometova* (TASH); southern surroundings of the village Dzhush, 28.05.1964, *Zuckerwanik* 333 (TASH); **I-4-b Aktau Range:** Dzhush – Koshrabad, *Iris* steppe, 03.05.1913, *Korovin* 206 (TASH); Koshrabad – Chuya, 03-06.05.1913, *Korovin* (TASH); mountains Aktau, Khatyrchi District, 15.05.1928, *Lepeschkin* (TASH); northern outskirts of the town Nurata, 25.05.1964, *Zuckerwanik* 220 (TASH); near the village Chashma (south of Bakhiltau Mts.), 06.06.1964, *Pryakhin* (TASH). **I-4-b Karatau Range:** mountains Karakarga, 11.05.1913, *Korovin* 398 (TASH). **I-4-b Khobduntau Range:** Gallaaral District, experimental station of cereal crops, 05.06.1934, *Toporova* (TASH); [same locality], 10.06.1934, *Toporova* (TASH).

Herniaria L.

749. *Herniaria cinerea* DC., J.B.A.M.de Lamarck & A.P.de Candolle, Fl. Franç., éd. 3, 6: 375 (1815). Annual, therophyte. Tethyan. Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Nature Reserve, Hayatsay, 05.06.2022, Beshko (www.plantarium.ru).

750. *Herniaria glabra* L., Sp. Pl.: 218 (1753). Annual, therophyte. Euro-Siberian, Tethyan. Rocky areas, Artificial terrestrial. Plain, foothills. Rare. Native. **Occurrence records: I-4-b Karatau Range:** Bukhara Region, Gizhduvan District, Nuratau mountains, western part of Karatau Range, dry bed of temporary stream, 40.4291° N, 65.20869° E, 25.05.2024, Beshko (field observation).

751. *Herniaria hirsuta* L., Sp. Pl.: 218 (1753). Annual, therophyte. Euro-Siberian, Tethyan. Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, Novi Daroz, 24.06.2012, Beshko (TASH).

Holosteum L.

752. *Holosteum umbellatum* L., Sp. Pl.: 88 (1753). Annual, therophyte. Euro-Siberian, Tethyan. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Reported by Zakirov in «Vegetation cover of Nuratau Mountains» (1969, p. 25) and «Botanical geography of low mountains of Kyzylkum and Nuratau Range» (1971, p. 58). **I-4-b Aktau Range:** Khatyrchi District, slopes of hills, 05.05.1928, *Lepeschkin* (TASH).

752a. *Holosteum umbellatum* subsp. *glutinosum* (M.Bieb.) Nyman (*H. glutinosum* (M.Bieb.) Fisch. & C.A.Mey. *H. polygamum* C.Koch.), Consp. Fl. Eur.: 112 (1878). Annual, therophyte. Pontic, Caucasian, Irano-Turanian. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Abundant. Native. **Occurrence records: I-4-a Nuratau Range:** piedmont plain of Nuratau Range, 14.04.1994, Beshko 94004 (herbarium of the Nuratau Nature Reserve); district center Yangikishlak, surroundings of nature reserve's office, 13.04.1995, Beshko 95015 (herbarium of the Nuratau Nature Reserve); Hayatsay, 29.04.2008, Hayatsay, Beshko (www.plantarium.ru); Novi Daroz, 24.03.2009, Beshko 09004 (herbarium of the Nuratau Nature Reserve, www.plantarium.ru); Hayatsay, field station of nature reserve, 23.04.2009, Beshko 09011, 09012 (TASH, herbarium of the Nuratau Nature Reserve); Koshrabad District, surroundings of Fazilman lake, 40.54527° N, 66.59611° E,

24.04.2024, *Selyutina* (www.inaturalist.org). **I-4-b Aktau Range:** Mt. Takhku, 29.06.1937, *Demurina* 325 (TASH). **I-4-b Karatau Range:** the pass Jizlan, 22.04.1913, *Korovin* (TASH); Navoi Region, Nurata District, on the way from Navoi to Karakarga Pass, 40.2944° N, 65.41305° E, 17.04.2012, *Beshko* (www.inaturalist.org).

Lepyrodiclis Fenzl.

753. *Lepyrodiclis holosteoides* (C.A.Mey.) Fenzl ex Fisch. & C.A.Mey., Enum. Pl. Nov. 1: 93 (1841). Annual, therophyte. Irano-Turanian, Oriental. Forest, Shrubland, Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Urganchi – Ak-Chap, 01.05.1913, *Korovin 10* (TASH); Hayatsay, Khotunon, 11.06.1992, *Beshko 92151* (herbarium of the Nuratau Nature Reserve); Karysay, Pubsay, 16.05.1993, *Beshko 93028* (herbarium of the Nuratau Nature Reserve); Hayatsay, 11.05.1994, *Beshko 94023* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 27.04.2011, *Beshko* (www.plantarium.ru).

754. *Lepyrodiclis stellarioides* Fisch. & C.A.Mey., Enum. Pl. Nov. 1: 93 (1841). Annual, therophyte. Irano-Turanian. Forest, Shrubland, Rocky areas, Wetlands (inland). Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Karysay, Pubsay, 16.05.1993, *Beshko 93095* (herbarium of the Nuratau Nature Reserve); Asrafsay, 04.06.1996, *Beshko 96117* (herbarium of the Nuratau Nature Reserve); Bolosay, 10.06.1996, *Beshko 96085* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 16.05.2008, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 31.05.2012, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** gorge Sangijuman, 25.05.1869, *O.Fedtschenko* (LE); Khatyrchi District, 20.05.1928, *Lepeschkin* (TASH).

Mesostemma Vved.

755. *Mesostemma karatavicum* (Schischk.) Vved. (*Stellaria karatavica* Schischk.), Bot. Mater. Gerb. Bot. Inst. Uzbekistansk. Fil. Akad. Nauk S.S.S.R. 3: 4 (1941). Perennial, hemicryptophyte. Western Tien Shan, Western Pamir-Alay. Shrubland, Rocky areas. Montane zone. **Occurrence records: I-4-a Nuratau Range:** Mt. Parrandoz, 19.05.1983, *Fominykh 83078* (herbarium of the Nuratau Nature Reserve); Karysay, Pubsay, 11.05.1993, *Beshko 93090* (herbarium of the Nuratau Nature Reserve); Andygensay, 11.05.1996, *Beshko 96023* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 20.05.2009, *Beshko* (www.plantarium.ru); Hayatsay, 05.05.2020, *Akbarov, Turdiev, Juramurodov 5052020065* (TASH); Mt. Kichik Fazilman, near Fazilman Lake, 06.05.2020, *Akbarov, Turdiev, Juramurodov 6052020117* (TASH); Nuratau Nature Reserve, Hayatsay, 40.51918° N, 66.74245° E, 15.05.2024, *Beshko* (www.plantarium.ru, www.inaturalist.org). **I-4-b Aktau Range:** near the village Andak, 01.05.1925, *Popov* (TASH); upper reaches of Bitausay, 26.05.1964, *Zuckerwanik 262* (TASH); Charkhansay, 10.05.2013, *Beshko* (TASH, www.plantarium.ru).

Minuartia L.

756. *Minuartia hamata* (Hausskn.) Mattf. (*Queria hispanica* L.), Beibl. Bot. Jahrb. Syst. 126: 29 (1921). Annual, therophyte. Tethyan. Shrubland, Rocky areas. Foothills. Rare. Native. **Occurrence records: I-4-b Aktau Range:** mountains Aktau, Samarkand Region, 29.05.1963, *Khaydarov 1555* (TASH). **I-4-b Khobduntau Range:** near the village Langar, 22.06.1929, *Kudrjashev 33930* (TASH).

757. *Minuartia meyeri* (Boiss.) Bornm., Beih. Bot. Centralbl. 27(2): 318 (1910). Annual, therophyte. Irano-Turanian. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, Zamezhak, 03.05.2000, *Beshko 00005* (herbarium of the Nuratau Nature Reserve); Hayatsay, Novi Daroz, 29.04.2009, *Beshko 09021* (herbarium of the Nuratau Nature Reserve, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve,

Hayatsay, 15.05.2024, *Beshko* (www.plantarium.ru, www.inaturalist.org). **I-4-b Aktau Range:** upper reaches of Bitausay, 26.05.1964, *Zuckerwanik* 232 (TASH). **I-4-b Khobduntau Range:** reported by Kudrjashev in “Vegetation of the Khobduntau and Karachatau Mountains” (1929, p. 61).

Silene L.

758. *Silene brahuica* Boiss., Fl. Orient. 1: 615 (1867). Perennial, hemicryptophyte. Irano-Turanian. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** Farish District, 20.05.1941, *Momotov* (TASH); Ustusay, 17.05.1956, *Korotkova* 5766 (TASH); granite rocks near the crest of Mts. Koytash, 20.06.1971, *Botschantzev*, *Kamelin* 170 (LE); Kulbasay, 27.05.2012, *Beshko* (TASH). **I-4-b Aktau Range:** Sangijuman, 25.05.1869, *O. Fedtschenko* (LE).

759. *Silene claviformis* Litv., Trudy Bot. Muz. Imp. Akad. Nauk 3: 99 (1907). Perennial, hemicryptophyte. Middle Asian. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** Ambulatory valley, 20.05.1960, *Zaprometova* 177 (TASH); surroundings of the well Uruskuduk, 25.04.1963, *Khaydarov* 1128 (TASH). **I-4-b Aktau Range:** between town Nurata and well Pashat, 24.04.1913, *Popov* 82 (TASH); Koshrabad, 06.05.1913, *Korovin* (TASH); upper reaches of river Bitau, 26.05.1964, *Zuckerwanik* 229 (TASH).

760. *Silene conica* L., Sp. Pl.: 418 (1753). Annual, therophyte. European, Tethyan. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** surroundings of Kyzylcha, 27.04.1954, *Zaprometova* (TASH); Gatchasay, 15.06.1956, *Zaprometova* (TASH); northern slope of Nuratau Range south-west of town Jizzakh, Sanzar river gorge, 26.04.1979, *Pimenov*, *Kljuykov*, *Boryaev*, *Baranova*, *Vassiljeva* 26 (MW); village Hayat, 06.05.1992, *Beshko* 92145 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 09.05.2009, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** Khatyrchi District, 03.05.1928, *Lepeschkin* (TASH); sources of Bitausay, 27.05.1964, *Zuckerwanik* 323 (TASH). **I-4-b Khobduntau Range:** reported by Kudrjashev in “Vegetation of the Khobduntau and Karachatau Mountains” (1929, p. 61). **I-4-c North-Nuratau insular low mountains:** between mountains Balykly and Piyazli, 22.06.1936, *Momotov* 34 (TASH).

761. *Silene coniflora* Nees ex Otth., Prodr. 1: 371 (1824). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** Farish District, 01.05.1941, *Momotov* (TASH); Farish District, piedmont plain, 17.04.1952, *Novikova* (TASH); Gatchasay, 08.04.1958, *Zaprometova* 376 (TASH). **I-4-b Karatau Range:** Bukhara Region, Gizhduvan District, Nuratau mountains, western part of Karatau Range, 13.04.2025, *Beshko* (TASH).

762. *Silene conoidea* L., Sp. Pl.: 418 (1753). Annual, therophyte. Tethyan. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** near the village Hayat, 01.05.1892, *Glazunov* (LE); piedmont plain, 15.04.1952, *Zaprometova* (TASH); upper reaches of Ustusay, 29.05.1964, *Zuckerwanik* 385 (TASH); Hayatsay, 27.04.1992, *Beshko* 92092; Hayatsay, 24.04.2009, *Beshko* 09014 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 24.04.2009, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 28.04.2009, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** Koshrabad, 06.05.1913, *Popov* 406 (TASH); Khatyrchi District, 05.05.1928, *Lepeschkin* (TASH); Kattasay, 07.05.2020, *Akbarov*, *Turdiyev*, *Juramurodov* 7052020179 (TASH).

763. *Silene guntensis* (B. Fedtsch.) B. Fedtsch. ex Schischk., Fl. URSS 6: 672 (1936). Perennial, hemicryptophyte. Western Tien Shan, Pamir-Alay. Shrubland, Rocky areas. Montane zone. Common, Native. **Occurrence records:** **I-4-a Nuratau Range:** upper reaches of Parrandozsay, on the way to Ukhum Pass, 30.05.1964, *Zuckerwanik* 429 (TASH); Koytash, near the crest, 28.06.1971, *Botschantzev*,

Kamelin (LE); Hayatsay, 07.07.1990, *Beshko, Yakovenko 90027* (herbarium of the Nuratau Nature Reserve); Bolosay, 23.05.1995, *Beshko 95094* (herbarium of the Nuratau Nature Reserve); Hayatsay, Andebaraut, 31.05.1996, *Beshko 96119* (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** Ingichka, rocks, 12.07.1970, *Botschantzev* (LE); northern slope of Aktau Range, west of the village Chuya, gorge Ashbarana, 28.04.1979, *Pimenov, Kljuykov, Boryaev, Baranova, Vassiljeva 113* (MW). **I-4-b Khobduntau Range:** one of the peaks of the eastern part of the mountains near the village Baz-Niyaz, 17.06.1929, *Kudrjashev* (TASH type collection, sub nom. *Silene incanescens*).

764. *Silene kuschakewiczii* Regel & Schmalh., Trudy Imp. S.-Peterburgsk. Bot. Sada 5: 246 (1877). Perennial, hemicryptophyte. Western Tien Shan, Western Pamir-Alay. Shrubland, Rocky areas. Montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** Farish District, 15.05.1941, *Momotov* (TASH); surroundings of Kyzylcha, 29.05.1951, *Zaprometova* (TASH); near Kyzylcha State Farm, 29.05.1951, *Novikova* (TASH); Sharaussay, 28.05.1956, *Zaprometova* (TASH); Koytash, northern slope, rocks, 28.06.1971, *Botschantzev, Kamelin* (LE); Nuratau Range, 27.06.1974, *Baranova 367* (MW); Nurata District, Sobsay, about 900 m a.s.l., 09.05.2013, *Beshko* (www.plantarium.ru); upper reaches of Sobsay, 09.05.2013, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 30.05.2020, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** surroundings of Shamaly, 24.05.1925, *Popov 366* (TASH); Shamalysay, 23.06.1974, *Baranova 313* (MW).

765. *Silene longicalycina* Kom., Trudy Imp. S.-Peterburgsk. Obshch. Estestvoisp., Vyp. 3, Otd. Bot. 26: 129 (1896). Perennial, hemicryptophyte. Mountain Middle Asian. Shrubland, Grassland, Rocky areas. Montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** Hayatsay, Alichak, 27.06.2012, *Beshko* (TASH, www.plantarium.ru).

766. *Silene nevskii* Schischk., Trudy Bot. Inst. Akad. Nauk S.S.S.R., Ser. 1, Fl. Sist. Vyssh. Rast. 2: 146 (1936). Perennial, hemicryptophyte. Western Tien Shan, Pamir-Alay. Shrubland, Grassland, Rocky areas. Montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** Mt. Mirishkar, 05.05.1913, *Korovin 329* (TASH). **I-4-b Aktau Range:** valley Yangokly, near the village Langar, 19.05.1941, *Zakirov, Niyazov* (TASH).

767. *Silene nuratavica* Kamelin, Bot. Zhurn. (Moscow & Leningrad) 58: 628 (1973). Perennial, hemicryptophyte. Nuratau (endemic). Shrubland, Rocky areas. Montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** gorge Gurdara near the village Sarymsak, 23.06.1971, *Botschantzev, Kamelin 314* (LE); surroundings of village Sentob, 24.06.1971, *Botschantzev, Kamelin 436* (LE).

768. *Silene obtusidentata* B. Fedtsch. & Popov, Descr. Pl. Nov. Turkestan.: 44 (1916). Perennial, hemicryptophyte. Western Tien Shan, Western Pamir-Alay. Shrubland, Grassland, Rocky areas. Montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** Hayatsay, Yellow Stone, 12.06.1992, *Beshko 92177* (herbarium of the Nuratau Nature Reserve); Bolosay, rocks above the waterfall, 23.05.1994, *Beshko 94095* (TASH, herbarium of the Nuratau Nature Reserve); Hayatsay, 30.05.2003, *Beshko 03003* (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** surroundings of Shamaly, 24.05.1925, *Popov* (TASH, MW).

769. *Silene paranadena* Bondarenko & Vved., Oprod. Rast. Sred. Azii 2: 325 (1971). Perennial, hemicryptophyte. Nuratau, Kuhistan (subendemic). Shrubland, Grassland, Rocky areas. Montane zone. Rare. Native. UzbrDB 2. **Occurrence records:** **I-4-a Nuratau Range:** Koytash, slopes, 28.05.1941, *Lepeschkin* (TASH); Ukansay, 12.05.1951, *Zaprometova 89* (TASH); Alaysay, 17.06.1956, *Zaprometova 197* (TASH); valley 2 km from Kyzylcha State Farm, 01.04.1958, *Zaprometova 278* (TASH); the pass near Kyzylcha State Farm, 11.04.1958, *Zaprometova 407* (TASH); Koblatysay, 26.04.1958, *Zaprometova* (TASH); Sharaussay, 28.05.1958, *Zaprometova* (TASH); 2 km west of

Kyzylcha State Farm, the pass, 700 m a.s.l., 20.05.1960, *Zaprometova, Nikerov 205, 207* (TASH); [same locality], 24.05.1960, *Zaprometova, Nikerov 229* (TASH); [same locality], 26.05.1960, *Zaprometova, Nikerov 221* (TASH); Madjrumsay, Fargun, 02.06.2000, Beshko (TASH, herbarium of the Nuratau Nature Reserve); Hayatsay, Khotunon, 23.05.2006, *Beshko 06063* (herbarium of the Nuratau Nature Reserve); surroundings of Saurbel Pass, watershed crest 8 km south-west of Yangikishlak, 40°21'58" N 67°05'20" E, 27.05.2012, *Beshko* (TASH); Hayatsay, Andebaraut, 25.06.2012, Beshko (TASH). **I-4-b Aktau Range:** surroundings of Shamaly, 27.05.1925, *Popov 395, 400* (TASH); near the village Langar, valley Yangokly, 19–21.05.1941, *Zakirov, Niyazov* (TASH); near the well Charkhana, 28.05.1963, *Khaydarov 1470* (TASH); mountains Aktau, Samarkand Region, 29.05.1963, *Khaydarov 1595* (TASH).

770. *Silene plurifolia* Schischk., Trudy Bot. Inst. Akad. Nauk S.S.S.R., Ser. 1, Fl. Sist. Vyssh. Rast. 2: 140 (1936). Perennial, hemicryptophyte. Hyrcanian, Mountain Middle Asian. Shrubland, Grassland, Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** upper reaches of Garishsay [Garashasay], 20.07.1937, *Demurina 631* (TASH).

771. *Silene praelonga* Ovcz., Fl. Tadzhiksk. S.S.R. 3: 552 (1968). Perennial, hemicryptophyte. Western Tien Shan, Pamir-Alay. Shrubland, Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Sentob, left side, near ruins Kurgan, 23.06.1983, *Bulgakova 15* (TASH).

772. *Silene praemixta* Popov, Byull. Sredne-Aziatsk. Gosud. Univ. 9(Suppl.): 37 (1924). Perennial, hemicryptophyte. Middle Asian. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** southern slope 1 km east from the pass through Pistalisay, 08.05.1958, *Li, Zakirov 414* (TASH). **I-4-b Khobduntau Range:** reported by Kudrjashev in "Vegetation of the Khobduntau and Karachatau Mountains" (1929, p. 61).

773. *Silene pugionifolia* Popov, Descr. Pl. Nov. Turkestan.: 46 (1916). Perennial, hemicryptophyte. Western Tien Shan, Nuratau (subendemic). Shrubland, Grassland, Rocky areas. Foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Gurdara, 23.06.1971, *Botschantzev, Kamelin* (LE); surroundings of village Sentob, 24.06.1971, *Botschantzev, Kamelin* (LE); Koytash, southern slope, 28.06.1971, *Botschantzev, Kamelin* (LE).

774. *Silene ruinarum* Popov (*Melandrium ruinarium* Popov), Byull. Sredne-Aziatsk. Gosud. Univ. 12(Suppl.): 8 (1926). Perennial, hemicryptophyte. Western Pamir-Alay. Shrubland, Grassland, Rocky areas, Wetlands (inland). Foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Sanguzarsay, 07.05.1992, *Beshko 92441* (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** surroundings of the village Shamaly, 24.05.1925, *Popov 374* (TASH).

775. *Silene tachtensis* Franch., Ann. Sci. Nat., Bot., sér. 6, 15: 239 (1883). Perennial, hemicryptophyte. Mountain Middle Asian. Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-b Aktau Range:** Ingichka, 12.07.1970, *Botschantzev* (LE).

776. *Silene turkestanica* Regel (*Melandrium turkestanicum* Vved.), Trudy Imp. S.-Peterburgsk. Bot. Sada 2: 436 (1873). Perennial, hemicryptophyte. Western Tien Shan, Pamir-Alay. Shrubland, Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Mt. Parrandoz, 27.07.2016, *Beshko* (TASH).

777. *Silene vulgaris* (Moench) Garcke, Fl. N. Mitt.-Deutschland, ed. 9: 64 (1869). Perennial, hemicryptophyte. Palearctic. Shrubland, Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, shrublands on granites above village Koytash, 13.07.1972, *Kamelin* (LE).

Spergularia L.

778. *Spergularia marina* (L.) Besser, Enum. Pl. Volh., Defin. ed.: 97 (1822). Annual, biennial, therophyte. Pluriregional. Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills. Rare. Native. **I-4-b Aktau Range:** Navoi Region, Nurata District, foothills of Aktau, outskirts of the town Nurata, 24.04.2022, *Beshko* (www.plantarium.ru).

Stellaria L.

779. *Stellaria apetala* Ucria (*Stellaria pallida* (Dumort.) Crep.), Nuova Racc. Opusc. Aut. Sicil. 6: 251 (1793). Annual, therophyte. Euro-Siberian, Tethyan. Wetlands (inland), Artificial aquatic, Artificial terrestrial. Foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Tamerlane's Gate (reported in «Conspectus Florae Asiae Mediae», vol. 2, 1971, p. 228).

780. *Stellaria neglecta* Weihe, Comp. Fl. German. 1: 560 (1825). Annual, therophyte. Palearctic. Forest, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, 10.06.1993, *Beshko* 93007 (herbarium of the Nuratau Nature Reserve); Hayatsay, 05.05.2006, *Beshko* 06336 (herbarium of the Nuratau Nature Reserve).

Tytthostemma Nevski

781. *Tytthostemma alsinoides* (Boiss. & Buhse) Nevski (*Stellaria alsinoides* Boiss. & Buhse), Trudy Bot. Inst. Akad. Nauk S.S.S.R., Ser. 1, Fl. Sist. Vyssh. Rast. 4: 305 (1937). Annual, therophyte. Irano-Turanian. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Bolosay, 10.06.1996, *Beshko* 96078 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 15.05.2024, *Beshko* (TASH).

Amaranthaceae Juss.

Akhanian Sukhor

782. *Akhanian canescens* (Moq.) Sukhor. (*Caroxylon canescens* (Moq.) Akhani & Roalson, *Salsola titovii* Botsch.), Int. J. Pl. Sci. 168: 947 (2007). Subshrub, chamaephyte. Irano-Turanian. Shrubland, Rocky areas. Montane zone. Rare. Native. UzbRDB 3. **Occurrence records: I-4-a Nuratau Range:** near the village Guran of Chokur village council, 25.07.1940, *Gomolitsky, Dolgikh* 217 (TASH); Koytash, watershed crest, 20.06.1971, *Botschantzev, Kamelin* (LE). **I-4-b Aktau Range:** 7–9 km south of the village Chuya, 01.07.1937, *Demurina* 404 (TASH). **I-4-b Khobduntau Range:** valley Langar, 3 km from the village Langar, 23.06.1929, *Kudrjashev* (TASH).

Amaranthus L.

783. *Amaranthus albus* L., Syst. Nat. ed. 10. 2: 1268 (1759). Annual, therophyte. Pluriregional. Artificial terrestrial. Plain, foothills, montane zone. Occasional. Alien. **Occurrence records: I-4-a Nuratau Range:** mountains Nuratau, 00.10.1963, *Khaydarov* 2009 (TASH); Nuratau Nature Reserve, valley Hayat, 1250 m a.s.l., 16.08.1978, *Korshunov* (TASH); Hayatsay, 00.06.1979, *Korshunov* 79003 (herbarium of the Nuratau Nature Reserve). **I-4-b Khobduntau Range:** Gallaaral District, surroundings of Milyutinskaya Station, experimental station of cereal crops, 24–30.1934, *Ioffe* (TASH); Gallaaral District, experimental station of cereal crops, 14.06.1951, *unknown collector* (TASH).

784. *Amaranthus blitoides* S.Watson, Proc. Amer. Acad. Arts 12: 273 (1877). Annual, therophyte. Pluriregional. Artificial terrestrial. Plain, foothills, montane zone. Occasional. Alien. **Occurrence records: I-4-a Nuratau Range:** Kyzylcha State Farm, 06.06.1951, *Zaprometova* (TASH).

785. *Amaranthus retroflexus* L., Sp. Pl.: 991 (1753). Annual, therophyte. Pluriregional. Artificial terrestrial. Plain, foothills, montane zone. Occasional. Alien. **Occurrence records: I-4-a Nuratau**

Range: Nuratau Nature Reserve, valley Hayat, 1250 m a.s.l., 16.08.1978, *Korshunov* (TASH); Hayatsay, 16.07.1978, *Korshunov* 78009 (herbarium of the Nuratau Nature Reserve); Hayatsay, 30.06.2006, *Beshko* 06293 (herbarium of the Nuratau Nature Reserve); Hayatsay, field station of nature reserve, 40.52726° N, 66.77468° E, 25.08.2008, *Beshko* (www.inaturalist.org). **I-4-b Khobduntau Range:** Gallaaral District, experimental station of cereal crops, 28.07.1934, *Toporova* (TASH).

Anabasis (Schrenk) Benth.

786. *Anabasis turkestanica* Korovin ex Iljin, Fl. URSS 6: 878 (1936). Subshrub, chamaephyte. Middle Asian. Plain, foothills. Desert, Shrubland, Rocky areas. Occasional. Native. **Occurrence records: I-4-b Aktau Range:** 12–14 km north-west of Mayda-saray, 02.10.1936, *Arkhireev* 711 (TASH); surroundings of Khatyrchi, 01.08.1975, *Pratov* (TASH); Aktau, saline gravelly slope, 21.10.1976, *Pratov*, *Makhmedov* 101 (TASH). **I-4-b Karatau Range:** surroundings of town Kanimekh, 7 km to the north, remnant hills, 15.07.1934, *Tyshchenko* 169, 171 (TASH); hills 6 km north of Kanimekh, 10.08.1934, *Anfilov*, *Ivanova* 33 (TASH).

Atriplex L.

787. *Atriplex flabellum* Bunge, Fl. Orient. 4: 912 (1879). Annual, therophyte. Irano-Turanian. Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Rare. Native. **Occurrence records: I-4-b Aktau Range:** valley Chashma, 10.05.1962, *Khaydarov* 133 (TASH).

788. *Atriplex tatarica* L., Sp. Pl.: 1053 (1753). Annual, therophyte. Euro-Siberian, Irano-Turanian. Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, 13.08.1980, *Mukhina* 80027 (herbarium of the Nuratau Nature Reserve).

Bassia All.

789. *Bassia prostrata* (L.) Beck (*Kochia prostrata* (L.) Schrad.), H.G.L.Reichenbach, Icon. Fl. Germ. Helv. 24: 155 (1909). Subshrub, chamaephyte. Euro-Siberian, Tethyan. Desert, Shrubland, Rocky areas. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Jizzakh District, steppe on the bank of river Sanzar, 14.05.1928, *Sovetkina* 195 (TASH); main waterched crest, between Tykchasay and Aktashsay (Khujaravutsay), the border of Nuratau Nature Reserve, 1900 m a.s.l., 14.08.2012, *Beshko* (TASH). **I-4-b Aktau Range:** Nurata, 40.5633°N, 65.6952°E, 30.10.1996, *s.leg.* (AMU, GBIF). **I-4-b Khobduntau Range:** near the village Khodzha-Kabud, 15.06.1929, *Kudrjashev* (TASH); one of the peaks near the village Baz-Niyaz, 16.06.1929, *Kudrjashev* (TASH); one of the peaks near the village Baz-tau, 16.06.1929, *Kudrjashev* (TASH); a peak opposite the village Kazanly, 27.06.1929, *Kudrjashev* (TASH).

790. *Bassia scoparia* (L.) A.J.Scott (*Kochia scoparia* (L.) Schrad.), Feddes Repert. 89: 108 (1978). Annual, therophyte. Euro-Siberian, Irano-Turanian, Oriental. Artificial terrestrial. Plain, foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Reported by Zakirov in «Vegetation cover of Nuratau Mountains» (1969, p. 25) and «Botanical geography of low mountains of Kyzylkum and Nuratau Range» (1971, p. 58).

Blitum L.

791. *Blitum virgatum* L. (*Chenopodium foliosum* (Moench) Aschers), Sp. Pl.: 4 (1753). Annual, therophyte. Tethyan. Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Ustuksay, 03.06.1954, *Burygin* 332 (TASH); Mt. Beshbarmak, 20.06.1992, *Beshko* 92465 (herbarium of the Nuratau Nature Reserve); Bolosay, 30.06.1992, *Beshko* 92405 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, upper reaches, about 1700 m a.s.l., 15.07.2017, *Beshko*

(www.plantarium.ru); Samarkand Region, Koshrabad District, Ustuksay, 40.55564° N, 66.56729° E, 05.07.2024, *Beshko* (www.inaturalist.org).

Caroxylon Thunb.

792. *Caroxylon incanescens* (C.A.Mey.) Akhani & Roalson (*Salsola incanescens* C.A.Mey.), Int. J. Pl. Sci. 168: 947 (2007). Annual, therophyte. Irano-Turanian. Desert, Artificial terrestrial. Plain, foothills. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** valley Yambash, 05.10.1941, *Korovin 15*, 78 (TASH).

793. *Caroxylon orientale* (S.G.Gmel.) Tzvelev (*Salsola orientalis* S.G. Gmel.), Ukrayins'k. Bot. Zhurn. 50: 80 (1993). Subshrub, chamaephyte. Caucasian, Irano-Turanian. Desert, Shrubland, Rocky areas. Plain, foothills. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Reported by Zakirov in «Botanical geography of low mountains of Kyzylkum and Nuratau Range» (1971, p. 58). **I-4-b Aktau Range:** Nurata, 1941, *Zakirov* (SAM). **I-4-b Mt. Kokcha:** mountains Kokcha, 08.10.1934, *Sakhabutdinov, Neumina 1474* (TASH); mountains Kokchatau, 24.05.1955, *Vernik, Nabiev 30* (TASH).

794. *Caroxylon scleranthum* (C.A.Mey.) Akhani & Roalson (*Salsola sclerantha* C.A.Mey.). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Rocky areas, Artificial terrestrial. Plain, foothills. Rare. Native. **Occurrence records: I-4-b Karatau Range:** surroundings of town Kanimekh, 5 km to the north, plain, 15.07.1934, *Tyshchenko 91* (TASH); surroundings of town Kanimekh, 16.07.1934, *Tyshchenko 261* (TASH). **I-4-b Mt. Kokcha:** surroundings of the well Kokcha, 17.08.1934, *Sakhabutdinov, Neumina 866* (TASH).

795. *Caroxylon turkestanicum* (Litv.) Akhani & Roalson (*Salsola turkestanica* Litv., *Salsola leptoclada* Gand.), Int. J. Pl. Sci. 168: 948 (2007). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Rocky areas, Artificial terrestrial. Plain, foothills. Rare. Native. **Occurrence records: I-4-b Karatau Range:** Bukhara Region, Gizhduvan District, Nuratau mountains, western part of Karatau Range, about 400 m a.s.l., 28.09.2024, *Beshko* (www.plantarium.ru). **I-4-b Mt. Kokcha:** mountains Kokcha, 17.08.1934, *Tyshchenko 963* (TASH).

Ceratocarpus L.

796. *Ceratocarpus arenarius* L. (*Ceratocarpus utriculosus* Bluket ex Krylov), Sp. Pl.: 969 (1753). Annual, therophyte. Euro-Siberian, Tethyan. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** foothills of Nuratau Range on the latitude of town Jizzakh, 16.05.1928, *Sovetkina 226* (TASH); Gallaaral District, Karakuduk, 04.06.1934, *Rybakov* (TASH); 3 department of Gallaaral State Farm, 13.06.1951, *Klyueva 3* (TASH). **I-4-b Aktau Range:** Koshrabad – Shurcha, 16.04.1913, *Teplov* (TASH); Nurata, north slopes of Nuratau Mts., 23.04.1913, *Korovin 22* (TASH); Nurata, 29.04.1913, *Korovin 9* (TASH); near the village Papanay and Nurata experimental station of Research Institute of Astrakhan Sheep Breeding and Ecology of Deserts, 20.07.2012, *Beshko* (TASH). **I-4-b Karatau Range:** Gizhduvan District, 40.45927° N, 65.13084° E, 28.09.2024, *Beshko* (www.inaturalist.org). **I-4-b Khobduntau Range:** near Kuropatkino railway station, 08.06.1929, *Kudrjashev* (TASH); southern piedmonts of Khobduntau, 5 km of Rostovtsevo station, 18.06.1929, *Kudrjashev* (TASH); near the village Gumsay, 12.06.1929, *Kudrjashev* (TASH); surroundings of Kuropatkino railway station, 08.06.1929, *Kudrjashev* (TASH); Gallaaral District, experimental station of cereal crops, 04.06.1934, *Toporova* (TASH); [same locality], 29.08.1934, *Toporova* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 07.04.1911, *Dimo, Sprygin, Shulga 1049* (TASH); southern piedmonts of remnant mountains Pistalitau, 12.07.2010, *Beshko* (www.plantarium.ru); Pistalitau, 04.04.2012, *Batashov* (TASH).

Chenopodiastrium (L.) S.Fuentes, Uotila & Borsch

797. *Chenopodiastrum murale* (L.) S.Fuentes, Uotila & Borsch (*Chenopodium murale* L.), Willdenowia 42: 14 (2012). Annual, therophyte. Pluriregional. Artificial terrestrial. Foothills, montane zone. Occasional. Probably alien. **Occurrence records: I-4-a Nuratau Range:** reported in «Conspectus Florae Asiae Mediae», vol. 3, 1972, p. 39-40.

Chenopodium L.

798. *Chenopodium album* L., Sp. Pl.: 219 (1753). Annual, therophyte. Pluriregional. Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Samarkand Region, Koshrabad District, Ustusay, 40.55554° N, 66.56725° E, 05.07.2024, Beshko (www.inaturalist.org). **I-4-b Khobduntau Range:** Gallaaral District, experimental station of cereal crops, 28.07.1934, Toporova, Titov (TASH).

799. *Chenopodium vulvaria* L., Sp. Pl.: 220 (1753). Annual, therophyte. European, Tethyan. Artificial terrestrial. Plain, foothills, montane zone. Occasional. Probably alien. **Occurrence records: I-4-a Nuratau Range:** Jizzakh Region, Gallaaral District, southern foothills of Nuratau, surroundings of the village Karakchi, 40.10698° N, 67.54775° E, 17.10.2024, astrapia (www.inaturalist.org).

Climacoptera Botsch.

800. *Climacoptera intricata* (Iljin) Botsch., Akad. Sukachevu, Sborn. Rabot: 112 (1956). Annual, therophyte. Turanian. Wetlands (inland). Plain. Rare. Native. **Occurrence records: I-4-c North-Nuratau insular low mountains:** saline land at the piedmonts of Balyklitau, near the village Ok-Tom, 30.09.2012, Beshko (TASH).

801. *Climacoptera lanata* (Pall.) Botsch., Akad. Sukachevu Sborn. Rabot: 112 (1956). Annual, therophyte. Turanian. Desert, Shrubland, Artificial terrestrial. Plain, foothills. Rare. Native. **Occurrence records: I-4-b Aktau Range:** Kattasay, 40.342163° N, 66.009462° E, 07.05.2020, Akbarov, Turdiev, Juramurodov 7052020175 (TASH). **I-4-b Karatau Range:** hills 6 km north of Kanimekh, 12.08.1934, Anfilov, Ivanova 55 (TASH); Bukhara Region, Gizhduvan District, western part of Karatau Range, about 400 m a.s.l., 40.4391° N, 65.10193° E, 28.09.2024, Beshko (TASH, www.inaturalist.org, www.plantarium.ru). **I-4-c North-Nuratau insular low mountains:** between Pistalitau and the village Kok-tyube, 09.04.1911, Dimo, Sprygin, Shulga 997 (TASH); between Pistalitau and lake Tuzkan, 09.04.1911, Dimo, Sprygin, Shulga 1018 (TASH).

802. *Climacoptera longistylota* (Iljin) Botsch., Akad. Sukachevu Sborn. Rabot: 112 (1956). Annual, therophyte. Middle Asian. Desert, Shrubland, Artificial terrestrial. Plain, foothills. Rare. Native. **Occurrence records: I-4-b Aktau Range:** surroundings of Khatyrchi, 01.08.1975, Prатов (TASH). **I-4-c North-Nuratau insular low mountains:** between Pistalitau and lake Tuzkan, 08.10.1920, Vvedensky 423 (TASH); Pistalitau, near Biresik, 01.08.1937, Demurina 1329 (TASH); piedmonts of Pistalitau, 30.09.1941, Korovin 25 (TASH).

803. *Climacoptera minkvitzi* (Korovin) Botsch., Akad. Sukachevu Sborn. Rabot 112 (1956). Annual, therophyte. Turanian. Plain. Desert, Shrubland, Artificial terrestrial. Rare. Native. **Occurrence records: I-4-b Aktau Range:** the village Bakhrin, May 1929, Lepeschkin (TASH); foothills, near 3rd farmstead of Narpay State Farm, 29.09.1931, Gomolitsky 751, 757 (TASH).

Dysphania R.Br.

804. *Dysphania botrys* (L.) Mosyakin & Clemants (*Chenopodium botrys* L.), Ukrayins'k. Bot. Zhurn. 59: 383 (2002). Annual, therophyte. European, Tethyan. Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Jizzakh, railway embankment, 05.08.1921, Vvedensky 1724, 1725 (TASH); Ukansay, 26.08.1953, Zaprometova (TASH); Kichiksay, 15.06.1956, Zaprometova 228 (TASH); lower

reaches of Sentobsay, 01.10.1958, *Li, Zakirov 968* (TASH); Hayatsay, 01.08.1980, *Mukhina 80014* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, upper reaches of Tykchasay, 14.08.2012, *Beshko* (TASH); Nuratau Nature Reserve, Hayatsay, upper reaches, about 1600 m a.s.l., 14.08.2012, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** surroundings of Koshrabad, mountains, 05.03.1913, *Korovin 219* (TASH). **I-4-b Khobduntau Range:** Gallaaral District, experimental station of cereal crops, 18.06.1934, *Toporova* (TASH); [same locality], 24.07.1934, *Toporova, Titov* (TASH).

Girgensohnia Bunge

805. *Girgensohnia diptera* Bunge, Beitr. Fl. Russl.: 303 (1852). Annual, therophyte. Turanian. Desert, Shrubland, Rocky areas, Artificial terrestrial. Plain, foothills. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** 8–9 km west of the village Temirqovuq, 26.07.1937, *Demurina 781* (TASH). **I-4-b Aktau Range:** Nurata, 1913, *Korovin 97* (TASH); Khodzha-Akhmeti-Kabir, 21.06.1937, *Demurina 241* (TASH). **I-4-c North-Nuratau insular low mountains:** southern piedmonts of the remnant range Pistalitu, near railway, 30.09.2012, *Beshko* (TASH).

806. *Girgensohnia oppositiflora* (Pall.) Fenzl., Fl. Ross. 3: 835 (1851). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Rocky areas, Artificial terrestrial. Plain, foothills. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** Kyzylcha State Farm, clayey plain, 12.05.1951, *Zaprometova* (TASH); mountains Nuratau, Jizzakh Region, 06.07.1963, *Khaydarov 1784* (TASH). **I-4-b Aktau Range:** piedmont plain near the village Khodzha-Akhmeti-Kabir, 21.06.1937, *Demurina 240, 242* (TASH); near the village Papanay and Nurata experimental station of Research Institute of Astrakhan Sheep Breeding and Ecology of Deserts, 20.07.2012, *Beshko* (TASH). **I-4-b Karatau Range:** surroundings of town Kanimekh, 6–7 km to the north, remnant hills, 15.07.1934, *Tyshchenko 161, 162, 163* (TASH). **I-4-b Khobduntau Range:** reported by Kudrjashev in “Vegetation of the Khobduntau and Karachatau Mountains” (1929, p. 61).

Halimocnemis C.A.Mey.

807. *Halimocnemis gamocarpa* Moq. (*Gamanthus gamocarpus* (Moq.) Bunge), Hist. & Mém. Acad. Roy. Sci. Toulouse, sér. 2, 5: 183 (1839). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Grassland, Artificial terrestrial. Plain, foothills. Occasional. Native. **Occurrence records:** **I-4-b Aktau Range:** near the village Katta-kishlak, 17.05.1941, *Popov, Zakirov* (TASH). **I-4-b Karatau Range:** 5 km north of the village Teripaya, 05.06.1937, *Evstafiev 404* (TASH); Bukhara Region, Gizhduvan District, Nuratau mountains, western part of Karatau Range, about 400 m a.s.l., 28.09.2024, *Beshko* (www.plantarium.ru).

808. *Halimocnemis macrantha* Bunge (*Halimocnemis macranthera* Bunge), Fl. Ross. 3: 848 (1851). Annual, therophyte. Turanian. Desert, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills. Rare. Native. **Occurrence records:** **I-4-b Karatau Range:** surroundings of town Kanimekh, 7 km to the north, remnant hills, 15.07.1934, *Tyshchenko 134, 135* (TASH).

809. *Halimocnemis mollissima* Bunge, Mém. Acad. Imp. Sci. Saint Pétersbourg, Sér. 7, 4(11): 71 (1862). Annual, therophyte. Turanian. Desert, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills. Rare. Native. **Occurrence records:** **I-4-b Aktau Range:** surroundings of Khatyrchi, gravelly slope, 01.08.1975, *Pratov* (TASH). **I-4-b Karatau Range:** surroundings of town Kanimekh, 7 km to the north, remnant hills, 15.07.1934, *Tyshchenko 120, 126* (TASH); hills 6 km north of Kanimekh, 12.08.1934, *Anfilov, Ivanova 59* (TASH).

Halocharis Moq.

810. *Halocharis hispida* (Schrenk) Bunge, Mém. Acad. Imp. Sci. Saint Pétersbourg, Sér. 7, 4(11): 62 (1862). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** 3 km south-

east of the village Karatepa, plain between Karatepa and Koytash, 29.05.1958, *Zakirov* 853 (TASH); near the village Ok-tom, 03.09.2010, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** from the village Sadyr to Koshrabad, 15.04.1913, *Teplov* (TASH); between well Pashat and Kara-Yuzgan, 25.04.1913, *Korovin* (TASH). **I-4-c North-Nuratau insular low mountains:** between lake Tuzkan and the village Kok-tyube, 09.04.1911, *Dimo, Sprygin, Shulga* 958 (TASH); between Pistalitau and the village Kok-tyube, 09.04.1911, *Dimo, Sprygin, Shulga* 996 (TASH); inter lacum Tuz-kane et montes Pistali-tau, 08.10.1924, *Vvedensky* (MW).

Halostachys C.A.Mey.

811. *Halostachys caspica* (M.Bieb.) C.A.Mey. (*H. belangeriana* (Moq.) Botsch.), Bull. Soc. Imp. Naturalistes Moscou 11: 361 (1838). Shrub, phanerophyte. Pontic, Caucasian, Irano-Turanian. Wetlands (inland), Artificial aquatic. Plain. Rare. Native. **Occurrence records: I-4-c North-Nuratau insular low mountains:** Pistalitau, saline land near Biresik, 01.08.1937, *Demurina* 1325, 1326 (TASH).

Haloethamnus Jaub. et Spach

812. *Haloethamnus subaphyllus* (C.A.Mey.) Botsch. (*Aellenia subaphylla* (C.A.Mey.) Aellen), Novosti Sist. Vyssh. Rast. 18: 171 (1981). Subshrub, chamaephyte. Irano-Turanian. Desert, Shrubland, Rocky areas. Plain, foothills. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** valley Yanbash 8 km east of Nurata, 05.10.1941, *Korovin* 89 (TASH). **I-4-b Karatau Range:** hills 6 km north of Kanimekh, 12.08.1937, *Anfilov, Ivanova* (TASH). **I-4-b Mt. Kokcha:** mountains Kokcha, 17.08.1934, *Sakhabutdinov, Neumina* 845, 847 (TASH).

Haloxylon Bunge

813. *Haloxylon ammodendron* (C.A.Mey.) Bunge ex Fenzl (*Haloxylon aphyllum* (Minkw.) Iljin), Fl. Ross. 3: 820 (1851). Tree, phanerophyte. Irano-Turanian. Desert, Artificial terrestrial. Plain, foothills. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** 16 km west of Kyzylcha, 29.09.1958, *Li, Zakirov* 994 (TASH). **I-4-b Aktau Range:** Nurata, 40.5615°N, 65.7013°E, 31.10.1996, *Latowski* (AMU, GBIF); Nurata valley, experimental station of Research Institute of Astrakhan Sheep Breeding and Ecology of Deserts, 20.07.2012, *Beshko* (www.plantarium.ru).

Kaviria Akhani & Roalson

814. *Kaviria vvedenskyi* (Iljin & Popov) Akhani (*Salsola vvedenskyi* Iljin & Popov), Int. J. Pl. Sci. 168: 948 (2007). Annual, therophyte. Middle Asian. Desert, Shrubland, Rocky areas. Plain, foothills. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** variegated beds near the village Uch-tut, 17.05.1941, *Zakirov* (TASH). **I-4-b Aktau Range:** surroundings of Khatyrchi, 01.08.1975, *Pratov* (TASH). **I-4-b Karatau Range:** surroundings of town Kanimekh, 7 km to the north, remnant hills, 15.07.1934, *Tyshchenko* 138, 139, 144, 147, 149, 150 (TASH); Bukhara Region, Gizhduvan District, Nuratau mountains, western part of Karatau Range, about 400 m a.s.l., variegated outcrops, 28.09.2024, *Beshko* (TASH, www.inaturalist.org, www.plantarium.ru).

Krascheninnikovia Gueldenst.

815. *Krascheninnikovia ceratoides* (L.) Gueldenst. (*Ceratoides latens* Reveal & Holmgren, *Eurotia ceratoides* (L.) C.A.Mey.), Novi Comment. Acad. Sci. Imp. Petrop. 16: 555 (1772). Subshrub, chamaephyte. Euro-Siberian, Tethyan. Desert, Shrubland, Grassland, Rocky areas. Plain, foothills, montane zone. Rare. Native. **Occurrence records: I-4-b Aktau Range:** Nurata, 40.5615°N, 65.7013°E, 30.10.1996, *Latowski* (AMU, GBIF).

Nanophyton Botsch.

816. *Nanophyton erinaceum* (Pall.) Bunge, Mém. Acad. Imp. Sci. Saint Pétersbourg, Sér. 7, 4(11): 51 (1862). Subshrub, chamaephyte. Irano-Turanian. Desert, Shrubland, Rocky areas. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** pass near the sources of Guzhumsay, 23.07.1937, *Demurina* 682 (TASH); near the village Kokbulak, 18.07.1937, *Demurina* 587 (TASH); Farish District, 07.05.1941, *Momotov* 181 (TASH). **I-4-b Karachatau Range:** Karachatau, 3–5 km south-east of the village Kursafar, 07.07.1937, *Makarchuk* 572 (TASH).

817. *Nanophyton saxatile* Botsch., Bot. Zhurn. (Moscow & Leningrad) 60: 1158 (1975). Subshrub, chamaephyte. Nuratau, Aktau, Zirabulak-Ziadin Mts. (subendemic). Shrubland, Rocky areas. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** surroundings of Kirov State Farm, 20.08.1937, *Titov* (TASH); 1 km south of the village Ustakhan, 25.05.1958, *Li, Zakirov* 788 (TASH); left bank of river Sanzar, near Tamerlane's Gate, 24.07.1975, *Pratov* (TASH); Tamerlane's Gate, 10.05.1976, *Pratov, Zuckerwanik, Makhmedov* 6 (TASH); Sentobsay, 29.06.1983, *Bulgakova* (TASH); Nuratau Nature Reserve, Hayatsay, 29.04.2008, *Beshko* (www.plantarium.ru); Mt. Kichik Fazilman, 10.06.2018, *Beshko* (www.plantarium.ru). **I-4-b Karatau Range:** 3 km north of the village Bakachinak, 05.05.1955, *Momotov, Li* 139 (TASH); between Beshrabot and Dekhibaland, Karakarga Pass, 21.04.1986, *Pimenov, Kljuykov, Vassiljev, Melibaev* 102 (MW); surroundings of Karakarga Pass, 11.05.2014, *Tojibaev, Beshko et al.* 17316 (TASH).

Oreosalsola Akhani

818. *Oreosalsola arbusculiformis* (Drobow) Sennikov (*Salsola arbusculiformis* Drobow), Checkl. Vasc. Pl. Tian-Shan: 286 (2021). Shrub, phanerophyte. Irano-Turanian. Desert, Shrubland, Rocky areas. Plain, foothills. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Reported by Zakirov in «Botanical geography of low mountains of Kyzylkum and Nuratau Range» (1971, p. 58). **I-4-b Karatau Range:** surroundings of town Kanimekh, 7 km to the north, remnant hills, 15.07.1934, *Tyshchenko* 164 (TASH); western part of Karatau Range, about 370 m a.s.l., 21.04.2024, *Beshko* (www.plantarium.ru). **I-4-b Mt. Kokcha:** mountains Kokcha, 17.08.1934, *Sakhabutdinov, Neumina* 848, 857 (TASH); mountains Kokchatau, 23.04.1955, *Momotov, Li* 15 (TASH).

Oxybasis Kar. & Kir.

819. *Oxybasis glauca* (L.) S.Fuentes, Uotila & Borsch (*Chenopodium glaucum* L.), Willdenowia 42: 15 (2012). Annual, therophyte. Pluriregional. Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** reported in «Conspectus Florae Asiae Mediae», vol. 3, 1972, c. 39.

820. *Oxybasis rubra* (L.) S.Fuentes, Uotila & Borsch (*Chenopodium rubrum* L.), Willdenowia 42: 15 (2012). Annual, therophyte. Circumtemperate. Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Reported by Zakirov in «Vegetation cover of Nuratau Mountains» (1969, p. 24) and «Botanical geography of low mountains of Kyzylkum and Nuratau Range» (1971, p. 57).

Salsola L.

821. *Salsola paulsenii* Litv., Bull. Turkestan Sect. Russ. Geogr. Soc. 4(5): 28 (1905). Annual, therophyte. Caucasian, Irano-Turanian. Desert, Artificial terrestrial. Plain. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Yambash, 25.07.1937, *Mironov* 29 (TASH). **I-4-b Aktau Range:** Nurata, 29.04.1913, *Korovin* 143 (TASH); near the village Ak-kulak, 03.08.1937, *Mironov* 109 (TASH). **I-4-c North-Nuratau insular low mountains:** northern piedmonts of Pistaltau, 23.09.2020, *Beshko, Shomurodov, Adilov* (plant community description).

822. *Salsola praecox* (Litv.) Litv., Sched. Herb. Fl. Ross. 8: 16 (1922). Annual, therophyte. Irano-Turanian. Desert, Artificial terrestrial. Plain. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** near Kyzylcha State Farm, 01.06.1951, *Zaprometova* (TASH).

Spinacia L.

823. *Spinacia oleracea* subsp. *turkestanica* (Iljin) Del Guacchio & P.Caputo (*Spinacia turkestanica* Iljin), Phytotaxa 558: 299 (2022). Annual, therophyte. Irano-Turanian. Grassland, Rocky Areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** near the village Karatash, 26.04.1941, *Bukasov* (TASH); Koblatysay, 07.04.1952, *Zaprometova* (TASH); Gatchasay, 16.05.1960, *Zaprometova*, *Ashirov 111* (TASH); Hayatsay, 14.05.2008, *Beshko 08025* (herbarium of the Nuratau Nature Reserve); Jizzakh Region, south west of the Kireb Nuratau mountain range, Karabulok, 40.264117°N, 67.049°E, 22.06.2008, *Centre for Genetic Resources, the Netherlands, PGR passport data KK027* (GBIF); Jizzakh Region, south west of the Kireb Nuratau mountain range, Karabulok, 40.226317°N, 67.068483°E, 22.06.2008, *Centre for Genetic Resources, the Netherlands, PGR passport data KK029* (GBIF); Jizzakh Region, south west of the Kireb Nuratau mountain range, Ishbuldy, 40.186083°N, 67.143833°E, 22.06.2008, *Centre for Genetic Resources, the Netherlands, PGR passport data KK032* (GBIF); Jizzakh Region, south west of the Kireb Nuratau mountain range, Ishbuldy, 40.179983°N, 67.201567°E, 22.06.2008, *Centre for Genetic Resources, the Netherlands, PGR passport data KK033* (GBIF); Jizzakh Region, south west of the Kireb Nuratau mountain range, Gallaaral, 40.0819°N, 67.586633°E, 22.06.2008, *Centre for Genetic Resources, the Netherlands, PGR passport data KK034* (GBIF). **I-4-b Aktau Range:** Koshabad, *Iris* formation, 03.05.1913, *Korovin* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistaltau, 07.04.1915, *Kultiasow 8* (TASH); **I-4-c North-Nuratau insular low mountains:** northern piedmonts of Pistaltau, 24.04.2020, *Beshko, Shomurodov, Adilov* (plant community description).

Suaeda Forsk.

824. *Suaeda arcuata* Bunge, Beitr. Fl. Russl.: 285 (1852). Annual, therophyte. Irano-Turanian. Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills. Rare. Native. **Occurrence records: I-4-b Aktau Range:** Khatyrchi District, 09.06.1928, *Lepeschkin 315* (TASH); Khatyrchi District, 18.08.1928, *Lepeschkin 368* (TASH).

825. *Suaeda heterophylla* (Kar. & Kir.) Bunge ex Boiss., Fl. Orient. 4: 943 (1879). Annual, therophyte. Pontic, Caucasian, Irano-Turanian. Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills. Rare. Native. **Occurrence records: I-4-b Aktau Range:** Khatyrchi District, 18.08.1928, *Lepeschkin 444* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistaltau, near Biresik, 01.08.1937, *Demurina 1331* (TASH).

Xylosalsola Tzvelev

826. *Xylosalsola arbuscula* (Pall.) Tzvelev (*Salsola arbuscula* Pall.), Ukrayins'k. Bot. Zhurn. 50: 81 (1993). Shrub, phanerophyte. Irano-Turanian. Desert, Shrubland, Rocky areas. Plain, foothills. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Reported by Zakirov in «Botanical geography of low mountains of Kyzylkum and Nuratau Range» (1971, p. 58). **I-4-b Mt. Kokcha:** mountains Kokchatau, southern slopes, 24.05.1955, *Vernik, Nabiev 29* (TASH); **central part of Kokchatau, southern slope, 40.52625° N, 65.042361° E, 22.03.2013, Beshko** (field observation); **central part of Kokchatau, 11.04.2015, Shomurodov et al.** (plant community description, published in “Coenopopulation of rare and endangered plant species of remnant low mountains of Kyzylkum”, 2018, p. 30–31).

Portulacaceae Juss.*Portulaca* L.

827. *Portulaca oleracea* L., Sp. Pl.: 445 (1753). Annual, therophyte. Pluriregional (native to Europe, Mediterranean, Africa). Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Alien. **Occurrence records: I-4-a Nuratau Range:** village Hayat, 21.06.1993, *Beshko 93316* (herbarium of the Nuratau Nature Reserve); village Hayat, 30.07.2006, *Beshko 06296* (herbarium of the Nuratau Nature Reserve); Jizzakh Region, Farish District, Madjrumsay, 40.581034° N 66.723043° E, 16.09.2023, *Beshko* (www.inaturalist.org).

Balsaminaceae A.Rich.*Impatiens* L.

828. *Impatiens parviflora* DC., Prodr. 1: 687 (1824). Annual, therophyte. Altay, Middle Asian. Forest, Rocky areas, Wetlands (inland). Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Gurdara, 23.06.1971, *Botschantzev, Kamelin* (LE); Bolosay, 30.06.1992, *Beshko 92404* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Madjrumsay, 16.08.2010, *Beshko* (TASH, GBIF, www.inaturalist.org, www.plantarium.ru); Nuratau Nature Reserve, Gurdara, 03.05.2012, *Beshko* (TASH, GBIF, www.inaturalist.org, www.plantarium.ru).

Primulaceae Batsch ex Borkh.*Lysimachia* L.

829. *Lysimachia arvensis* (L.) U.Manns & Anderb. (*Anagallis arvensis* L.), Willdenowia 39: 51 (2009). Annual, therophyte. European, Tethyan. Forest, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Probably alien. **Occurrence records: I-4-a Nuratau Range:** the village Osmansay, 25.05.1931, *Kobranova* (TASH); Jingildysay, 18.09.1952, *Zaprometova* (TASH); Kichiksay, 14.07.1956, *Vvedensky 120* (TASH); Koblatysay, 17.05.1957, *Zaprometova 183* (TASH); Hayatsay, 28.05.1969, *Mambetjumaev 102* (TASH); Hayatsay, 13.07.1978, *Korshunov 78027* (herbarium of the Nuratau Nature Reserve); Sanguzarsay, 07.05.1992, *Beshko 92278* (herbarium of the Nuratau Nature Reserve); Hayatsay, field station of nature reserve, 24.06.2007, *Beshko 07029, 07038* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 18.06.2013, *Beshko* (www.plantarium.ru, www.inaturalist.org); Hayatsay, 09.06.2020, *Ortikov, Pulatov, Turdiev, Juramurodov, Makhmudjanov 9062020598* (TASH); Nuratau Nature Reserve, Hayatsay, 40.52083° N, 66.75305° E, 02.06.2022, *Selyutina* (www.inaturalist.org); Jizzakh Region, Farish District, surroundings of village Ukhum, 40.5157° N, 66.78761° E, 12.05.2024, *langli* (www.inaturalist.org). **I-4-b Aktau Range:** Khatyrchi District, 23.05.1928, *Lepeschkin* (TASH). **I-4-b Karatau Range:** Sarmysh, 05.06.1967, *students* (TASH). **I-4-b Khobduntau Range:** Gallaaral District, experimental station of cereal crops, 07.06.1934, *Toporova* (TASH).

830. *Lysimachia foemina* (Mill.) U.Manns & Anderb. (*Anagallis foemina* Mill.), Willdenowia 39: 52 (2009). Annual, therophyte. European, Tethyan. Forest, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Rare. Probably alien. **Occurrence records: I-4-a Nuratau Range:** Nuratau Nature Reserve, Hayatsay, 18.06.2013, *Beshko* (www.plantarium.ru, www.inaturalist.org).

831. *Lysimachia maritima* (L.) Galasso, Banfi & Soldano (*Glaux maritima* L.), Atti Soc. Ital. Sci. Nat. Mus. Civico Storia Nat. Milano 146: 229 (2005). Perennial, hemicryptophyte. Circumtemperate.

Wetlands (inland). Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Ukansay, 28.05.1951, *Zaprometova* (TASH); upper reaches of Ustusay, 40.51509° N, 66.59171° E, 08.06.2013, *Beshko* (TASH, www.inaturalist.org).

Primula L.

832. *Primula fedtschenkoi* Regel, Trudy Imp. S.-Peterburgsk. Bot. Sada 3(1): 133 (1874). Perennial, hemicryptophyte. Irano-Turanian. Shrubland, Grassland, Rocky areas, Wetlands (inland). Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Jizzakh, 26.03–07.04.1882, *Regel* (MW); mountains south-west of Jizzakh, 04.05.1921, *Kultiasow 146, 148* (TASH). **I-4-c North-Nuratau insular low mountains:** mountains Pistalitau, 22.04.1986, *Pimenov, Kljuykov, Vassiljeva, Melibaev 112* (MW); Pistalitau, 16.04.2012, *Batashov 161* (TASH); the crest of Egarbelistag, 1.5 km west of the Carbonat JSC quarry, 25.03.2019, 27.04.2020, *Beshko, Shomurodov, Adilov* (plant community description).

833. *Primula olgae* Regel, Trudy Imp. S.-Peterburgsk. Bot. Sada 3(1): 151 (1874). Perennial, hemicryptophyte. Mountain Middle Asian. Wetlands (inland). Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** upper reaches of Madjrumsay, 12.05.1984, *Petrochenko 84076–84077* (herbarium of the Nuratau Nature Reserve).

Rubiaceae Juss.

Asperula L.

834. *Asperula glabrata* Tschern., Bot. Mater. Gerb. Inst. Bot. Zool. Akad. Nauk Uzbeksk. S.S.R. 16: 72 (1961). Subshrub, chamaephyte. Mountain Middle Asian. Shrubland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Sentob, 24.06.1971, *Botschantzev, Kamelin* (LE).

835. *Asperula nuratensis* Pachomova, Opred. Rast. Sred. Azii 9: 366 (1987). Subshrub, chamaephyte. Nuratau, Kuhistan (subendemic). Shrubland, Rocky areas. Montane zone. **I-4-b Aktau Range:** 4 km south-east of the village Tutak and 7–8 km west of village Chuya, 27.05.1951, *Neustrueva, Cvetkova 11* (LE); above of the village Langar, 1900 m a.s.l., 30.07.1982, *Shermatov, Kazakbaev, Levichev, Tagaev 126* (TASH).

836. *Asperula setosa* Jaub. & Spach, Ill. Pl. Orient. 1: 152 (1843). Annual, therophyte. Irano-Turanian. Shrubland, Grassland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Range, Farish District, 06.05.1941, *Momotov 139* (TASH); Sentob, 0.5 km south of the village Yukary-Kurgan, 11.05.1958, *Li, Zakirov 513* (TASH); Karysay, Chashmi Mullo, 30.06.1992, *Beshko 92390, 92391* (herbarium of the Nuratau Nature Reserve); Nakrutsay, 20.06.1992, *Beshko 92490* (herbarium of the Nuratau Nature Reserve); Karysay, Pubsay, 16.05.1993, *Beshko 93026, 93027* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, Novi Khushk, 31.05.2012, *Beshko* (TASH); surroundings of Saurbel Pass, 28.04.2020 *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** mountains Aktau near the village Shamaly, 27.05.1925, *Popov 333* (TASH).

Callipeltis Stev.

837. *Callipeltis cucullaris* (L.) DC., Prodr. 4: 613 (1830). Annual, therophyte. Tethyan. Shrubland, Grassland, Rocky areas. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Dzhusk – Koshrabad, *Iris* steppe, 03.05.1913, *Korovin 2732* (TASH); Mt. Piyazli, 24.04.1941, *Bukasov* (TASH); Sentobsay, 26.05.1954, *Zaprometova* (TASH); Ukansay, 02.04.1958, *Zaprometova 296* (TASH); southern slope, 1 km east from the pass through Pistalisay, 08.05.1958, *Li, Zakirov 422* (TASH); Sentob, 0.5 km south of the village Yukary-Kurgan, 11.05.1958, *Li, Zakirov 491* (TASH); 3 km south-east of the village Karysay, 19.05.1958, *Li, Zakirov 663* (TASH); Karysay,

19.05.1983, *Fominykh* 83079 (herbarium of the Nuratau Nature Reserve); Hayatsay, Khotunon, 11.06.1992, *Beshko* 92147 (herbarium of the Nuratau Nature Reserve); mountains south of the village Kyzylcha, 10.05.2016, *Usmonov* (www.plantarium.ru). **I-4-b Aktau Range:** near the village Dekhibaland, 28.05.1936, *Kharchenko* (TASH); mountains Aktau, Samarkand Region, 29.05.1963, *Khaydarov* 1659 (TASH); sources of river Bitau, 27.05.1964, *Zuckerwanik* 305 (TASH); Navoi Region, Khatyrchi District, surroundings of the pass Langar, 40.34281° N, 66.0152° E, 18.05.2024, *Beshko* (www.inaturalist.org); northern slope of Aktau Range, Charkhansay, 17.05.2024, *Beshko*, *Volis et al.* (TASH). **I-4-b Mt. Kokcha:** southern slope of mountains Kokcha, 18.05.1964, *Shorakhimov* 2413 (TASH). **I-4-c North-Nuratau insular low mountains:** the range Balykli, 25.04.1941, *Bukasov* (TASH); Jizzakh Region, Farish District, Pistalitau, 40.5427° N, 67.39413° E, 09.05.2024, *Beshko* (www.inaturalist.org).

Crucianella L.

838. *Crucianella chlorostachys* Fisch. & C.A.Mey., Index Seminum (LE, Petropolitanus) 4: 25 (1838). Annual, therophyte. Caucasian, Irano-Turanian. Shrubland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** reported in «Conspectus Florae Asiae Mediae», vol. 9, 1987, p. 287.

839. *Crucianella exasperata* Fisch. & C.A.Mey., Index Seminum (LE, Petropolitanus) 4: 8 (1838). Annual, therophyte. Caucasian, Irano-Turanian. Shrubland, Grassland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, upper reaches of Amandara, 06.08.1934, *Botschantzev* (TASH); Nuratau Range, Farish District, 19.05.1941, *Momotov* (TASH); 2–3 km north-west of the village Kokbulak, 18.07.1937, *Demurina* 599 (TASH); 5–6 km west of the village Guzhum, 23.07.1937, *Demurina* 720 (TASH); Nuratau Nature Reserve, Hayatsay, Andebaraut, 06.06.2011, *Beshko* (TASH); Nuratau Nature Reserve, Hayatsay, Andebaraut, 40.51989° N, 66.7428° E, 05.06.2022, *Beshko* (TASH, www.inaturalist.org). **I-4-b Karatau Range:** variegated foothills near Ijant, 17.05.1941, *Zakirov* (LE). **I-4-b Khobduntau Range:** reported by Kudrjashev in “Vegetation of the Khobduntau and Karachatau Mountains” (1929, p. 66).

840. *Crucianella filifolia* Regel & Schmalh., A.P.Fedtschenko, Putesh. Turkestan 3: 18 (1879). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** reported in «Conspectus Florae Asiae Mediae», vol. 9, 1987, p. 286. **I-4-b Aktau Range:** Nurata, *Iris* steppe, 09.05.1913, *Korovin* 976 (TASH); village Angudan, foothills, 10.06.1928, *Lepeschkin* (TASH).

Cruciata Mill.

841. *Cruciata pedemontana* (Bellardi) Ehrend., Ann. Naturhist. Mus. Wien 65: 18 (1961 publ. 1962). Annual, therophyte. Tethyan. Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** piedmont plain near Yangikishlak, 09.05.2010, *Beshko* 10007 (TASH, herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** mountains Aktau near the village Andak, 01.05.1920, *Popov* 23, 38 (TASH).

Galium L.

842. *Galium aparine* L., Sp. Pl.: 108 (1753). Annual, therophyte. Euro-Siberian, Tethyan. Forest, Shrubland, Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** foothills between the village Farish and Kattasay, 27.05.1956, *Zaprometova* (TASH); upper reaches of Ustuksay, 29.05.1964, *Zuckerwanik* 383 (TASH); Hayatsay, 14.05.2008, *Beshko* 08013 (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** Khanbandy – Chuya, shistaceous mountain slopes, 02.05.1913, *Korovin* 212 (TASH). **I-4-b Karatau Range:** Aksakalata, 18.05.1941, *Popov* (TASH). **I-4-b Khobduntau**

Range: reported by Kudrjashev in “Vegetation of the Khobduntau and Karachatau Mountains” (1929, p. 66). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 08.04.1911, *Dimo, Sprygin, Shulga* 883 (TASH); Pistalitau, 08.04.1915, *Popov* 6 (TASH).

843. *Galium ceratopodium* Boiss., Diagn. Pl. Orient. 3: 45 (1843). Annual, therophyte. Irano-Turanian. Shrubland, Rocky areas. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Alaysay, 25.03.1958, *Zaprometova* 83 (TASH); Sentob, 0.5 km south of the village Yukary-Kurgan, southern slope, 11.05.1958, *Li, Zakirov* 490 (TASH).

844. *Galium humifusum* M.Bieb. (*Asperula humifusa* (M.Bieb.) Besser). Perennial, hemicryptophyte. Euro-Siberian, Irano-Turanian. Forest, Shrubland, Grassland, Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, the village Osmansay, 01.06.1931, *Kobranova* (TASH); Mts. Koytash, southern slope, 23.07.1931, *Kobranova* 58 (TASH); Mts. Koytash, northern slope, 29.07.1931, *Kobranova* (TASH); the pass through Nuratau, valley near the village Saukbulak, 02.08.1931, *Kasimenko* 1425 (TASH); Kadan, 16.06.1963, *Khaydarov* 1770 (TASH); Hayatsay, July 1990, *Beshko, Yakovenko* 90095, 90096 (herbarium of the Nuratau Nature Reserve); Hayatsay, Khotunon, 08.06.2006, *Beshko* 06206 (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** 2–3 km south of the village Kokbulak, 01.07.1937, *Demurina* 368 (TASH). **I-4-b Karatau Range:** Sarmysh, 05.06.1967, *students* 165 (TASH). **I-4-b Karachatau Range:** Karachatau, piedmont plain 2 km north-east of the village Kaunchi, 07.07.1937, *Demurina* 453 (TASH). **I-4-b Khobduntau Range:** reported by Kudrjashev in “Vegetation of the Khobduntau and Karachatau Mountains” (1929, p. 66).

845. *Galium karakulense* Pobed., Fl. URSS 23: 712 (1958). Perennial, hemicryptophyte. Middle Asian. Wetlands (inland). Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, northern slope, along a stream, 28.06.1971, *Botschantzev, Kamelin* (LE); Madjrumsay, upper reaches, 29.06.2011, *Beshko* 011071, 011072, 011075 (herbarium of the Nuratau Nature Reserve, TASH).

846. *Galium pamiroalaicum* Pobed., Fl. URSS 23: 718 (1958). Perennial, hemicryptophyte. Mountain Middle Asian. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Koytash, southern slope, 28.06.1971, *Botschantzev, Kamelin* (LE); Nuratau Nature Reserve, Hayatsay, about 1300 m a.s.l., June 1979, *Korshunov* (TASH); Nuratau Nature Reserve, upper reaches of Kachaksay, northern slope, about 1900 m a.s.l., 20.08.1977, *Levichev* (TASH); Hayatsay, Khotunon, 23.05.2006, *Beshko* 06061 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 05.06.2022, *Beshko* (www.plantarium.ru).

847. *Galium pseudorivale* Tzvelev (*Asperula aparine* M.Bieb.), Novosti Sist. Vyssh. Rast. 18: 255 (1981). Perennial, hemicryptophyte. Euro-Siberian, Tethyan. Forest, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Nature Reserve, Hayatsay, about 1200 m a.s.l., June 1979, *Korshunov* (TASH); Hayatsay, field station of nature reserve, 08.09.2008, *Beshko* 08034 (herbarium of the Nuratau Nature Reserve, TASH).

848. *Galium setaceum* Lam. (*Galium decaisnei* Boiss.), Encycl. 2: 584 (1788). Annual, therophyte. Tethyan, Saharo-Arabian. Shrubland, Grassland, Rocky areas, Wetlands (inland), Artificial terrestrial. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Sentob, 28.06.1892, *Komarov* (LE); upper reaches of Ustuksay, 29.05.1964, *Zuckerwanik* 370 (TASH).

849. *Galium spurium* L., Sp. Pl.: 106 (1753). Annual, therophyte. Circumtemperate. Forest, Shrubland, Grassland, Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Mt. Zargar 3 km NE of the village Urtasay, 11.05.1957, *Momotov, Li* 251 (TASH); Pistalisay, 24.03.1958, *Zaprometova*

(TASH); Garashasay, 27.03.1958, *Zaprometova* 146 (TASH); Gatchasay, 10.04.1958, *Zaprometova* 392 (TASH); Jingildysay, 13.04.1952, *Zaprometova* (TASH); 2 km north of Saurbel Pass, 27.04.1958, *Li, Zakirov* 149 (TASH); near the pass through Pistalisay, 07.05.1958, *Li, Zakirov* 405 (TASH); gorge Alichaksay, 27.05.1969, *Mambetjumaev* 69 (TASH); 6 km north-west of the village Khukala, 17.05.1958, *Li, Zakirov* 652 (TASH); Bolosay, 26.04.1992, *Beshko* 92082 (herbarium of the Nuratau Nature Reserve, sub nom. *Galium ibicinum*); Madjrumsay, 06.05.1993, *Beshko* 93097 (herbarium of the Nuratau Nature Reserve); Asrafsay, 04.06.1996, *Beshko* 96101 (herbarium of the Nuratau Nature Reserve); Hayatsay, 03.05.2000, *Beshko* 001, 026 (herbarium of the Nuratau Nature Reserve); Hayatsay, Novi Khushk, 24.05.2006, *Beshko* 06356 (herbarium of the Nuratau Nature Reserve); Hayatsay, field station of nature reserve, 26.06.2007, *Beshko* 07034, 07035 (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** Khatyrchi District, hill, 05.05.1928, *Lepeschkin* (TASH); mountains Aktau, Samarkand Region, 29.05.1963, *Khaydarov* 1673 (TASH). **I-4-b Karatau Range:** valley Bakachinak, 05.05.1955, *Momotov, Li* 136 (TASH). **I-4-b Mt. Kokcha:** piedmont of remnant mountain Kokcha, 28.07.1958, *Adylov* 681 (TASH).

850. *Galium tenuissimum* M.Bieb., Fl. Taur.-Caucas. 1: 104 (1808). Annual, therophyte. Euro-Siberian, Tethyan. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** Nuratau, 10.05.1915, *Spiridonov* (LE); 3 km south-east of the village Karysay, 19.05.1958, *Li, Zakirov* 660 (TASH); Karysay, upper reaches, 19.06.1992, *Beshko* 92331 (herbarium of the Nuratau Nature Reserve); Hayatsay, field station, 03.06.2006, *Beshko* 06170 (herbarium of the Nuratau Nature Reserve).

851. *Galium tianschanicum* Popov, Byull. Moskovsk. Obshch. Isp. Prir., Otd. Biol. 47: 88 (1938). Perennial, hemicryptophyte. Mountain Middle Asian. Shrubland, Grassland, Rocky areas. Montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** reported in «Conspectus Florae Asiae Mediae», vol. 9, 1987, p. 315.

852. *Galium tricornutum* Dandy, Watsonia 4: 47 (1957). Annual, therophyte. Tethyan. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** Tamerlane's Gate, 12.04.1915, *Fedtschenko* (LE); **I-4-c North-Nuratau insular low mountains:** between Pistalитай and lake Tuzkan, 08.04.1911, *Dimo, Sprygin, Shulga* 479 (TASH).

853. *Galium turkestanicum* Pobed., Fl. URSS 23: 717 (1958). Perennial, hemicryptophyte. Mountain Middle Asian, Dzungarian. Forest, Shrubland, Grassland, Rocky areas. Foothills, montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** foothills of Nuratau Range, Farish District, Kirov State Farm, 12.05.1943, *Vernik, Raykova* 65 (TASH).

854. *Galium verticillatum* Danthoine ex Lam., Encycl. [J. Lamarck & al.] 2(2): 585 (1788). Annual, therophyte. Euro-Siberian, Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** mountains near Tamerlane's Gate gorge, left bank, 03.05.1921, *Kultiasow* 105 (TASH); Nuratau Range, Farish District, 15.05.1941, *Momotov* (TASH); Gatchasay, 27.04.1958, *Zaprometova* (TASH); Alaysay, 14.05.1960, *Zaprometova* 4 (TASH); piedmont plain near district center Yangikishlak, 09.05.2010, *Beshko* 10007 (herbarium of the Nuratau Nature Reserve). **I-4-b Khobduntau Range:** reported by Kudrjashev in "Vegetation of the Khobduntau and Karachatau Mountains" (1929, p. 66). **I-4-c North-Nuratau insular low mountains:** mountains Balyklitau south of the village Chimkurgan, 31.05.1958, *Vvedensky, Nabiev* (TASH).

855. *Galium verum* L. (*Galium ruthenicum* Willd.), Sp. Pl. 1: 107 (1753). Perennial, hemicryptophyte. Euro-Siberian, Tethyan. Forest, Shrubland, Grassland, Rocky areas. Foothills, montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** Mts. Koytash, north slopes, 23.07.1931,

Kobranova 37 (TASH). **I-4-b Aktau Range:** mountains Aktau near the village Yangibino, 27.05.1963, *Khaydarov 1387* (TASH).

Rubia L.

856. *Rubia regelii* Pojark., Fl. URSS 23: 723 (1958). Subshrub, chamaephyte. Western Tien Shan, Western Pamir-Alay. Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Mt. Dushokh, 17.05.1995, *Beshko 95085–95088* (herbarium of the Nuratau Nature Reserve); upper reaches of Tykchasay, 14.07.1999, *Beshko 99032* (herbarium of the Nuratau Nature Reserve); watershed crest between Hayatsay and Tykchasay, 21.06.2011, *Beshko* (www.plantarium.ru, www.inaturalist.org); Nuratau Nature Reserve, upper reaches of Hayatsay, Alichak, 27.06.2012, *Beshko* (TASH).

Gentianaceae Juss.

Centaurium Hill

857. *Centaurium erythraea* subsp. *turcicum* (Velen.) Melderis ex Greuter & Burdet (*Centaurium uliginosum* (Waldst. & Kit.) Beck), Greuter et al. (eds.), Med-Checklist 3: 236 (1986). Biennial, therophyte. Pontic, Tethyan. Wetlands (inland). Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Madjrum say, 27.08.2003, *Beshko 03025* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Madjrum say, 29.06.2011, *Beshko 11071* (herbarium of the Nuratau Nature Reserve, www.plantarium.ru). **I-4-b Aktau Range:** Langar, 27.06.1935, *Korotkova 151* (TASH).

858. *Centaurium pulchellum* (Sw.) Druce, Fl. Berkshire: 342 (1898). Annual, therophyte. Euro-Siberian, Tethyan. Grassland, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Nakrutsay, near the village Chalakarga, 23.07.1940, *Gomolitsky, Dolgikh 208* (TASH); Kichik say, 15.06.1956, *Zaprometova* (TASH); Karysay, 23.06.1984, *Petrochenko 84056* (herbarium of the Nuratau Nature Reserve); Hayatsay, Khotunon, 11.06.1992, *Beshko 92148, 92149* (herbarium of the Nuratau Nature Reserve); surroundings of Yangikishlak, 23.06.1992, *Beshko 92464* (herbarium of the Nuratau Nature Reserve); Hayatsay, Andebaraut, 30.07.2006, *Beshko 06337* (herbarium of the Nuratau Nature Reserve); Navoi Region, Nurata District, Sobsay, 40.60491° N, 66.63230° E, 11.06.2013, *Beshko* (www.inaturalist.org); surroundings of Fazilman Lake, 40.54402° N, 66.59767° E, 12.07.2019, *Beshko* (www.inaturalist.org).

Gentiana L.

859. *Gentiana leucomelaena* Maxim., Mélanges Biol. Bull. Phys.-Math. Acad. Imp. Sci. Saint-Pétersbourg 13: 175 (1891). Annual, biennial, therophyte. Siberian, Middle Asian, Himalayan. Wetlands (inland). Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** shore of Fazilman Lake, 08.06.2013, *Beshko* (TASH); shore of Fazilman Lake, 05.07.2024, *Beshko* (TASH).

860. *Gentiana olivieri* Griseb., Gen. Sp. Gent.: 278 (1838). Perennial, hemicryptophyte. Irano-Turanian. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Kyzylchali, 28.04.1913, *Korovin 132* (TASH); Dzhus – Koshrabad, *Iris* steppe, 03.05.1913, *Korovin 240* (TASH); Koshrabad, Mt. Mirishkar, 05.05.1913, *Korovin 305a, 344* (TASH); Farish District, 26.04.1941, *Momotov 41* (TASH); Farish District, 29.04.1941, *Momotov 10* (TASH); Farish District, 06.05.1941, *Momotov 143, 144* (TASH); gorge Koblatysay, 02.05.1943, *Djanaeva 115* (TASH); Kyzylcha, 10.05.1951, *Savinkova* (TASH); Kyzylcha, 17.04.1954, *Burygin* (TASH); 2.5 km south-east of Kyzylcha State Farm,

27.04.1954, *Zaprometova* (TASH); piedmont plain near Kyzylcha State Farm, 29.04.1954, *Zaprometova* (TASH); southern slopes, Ustusay, 02.06.1954, *Burygin* 350, 351 (TASH); Koblatysay, 14.05.1960, *Nikiforova* 12 (TASH); Hayatsay, 28.05.1969, *Mambetjumaev* 82 (TASH); Andygensay, Kachak, 20.05.1981, *Mukhina* 81087, 81088 (herbarium of the Nuratau Nature Reserve); Sanguzarsay, 07.05.1992, *Beshko* 92306 (herbarium of the Nuratau Nature Reserve); Karysay, Guzhm, 28.06.1992, *Beshko* 92526 (herbarium of the Nuratau Nature Reserve); Bolosay (f. *alba*), 30.06.1992, *Beshko* 92384, 92385 (TASH, herbarium of the Nuratau Nature Reserve); Mt. Dushokh (f. *alba*), 15.05.1995, *Beshko* 95092 (herbarium of the Nuratau Nature Reserve); Hayatsay, 20.05.2006, *Beshko* 06070, 06071 (herbarium of the Nuratau Nature Reserve); Mt. Kichik Fazilman, near Fazilman Lake, 06.05.2020, *Akbarov, Turdiev, Juramurodov* 6052020101 (TASH); watershed crest near Hayat Pass, 19.05.2021, *Beshko* (www.inaturalist.org, www.plantarium.ru); Nuratau Nature Reserve, Mt. Parrandoz, 40.480703° N, 66.808299° E, 28.05.2023, *Beshko* (www.inaturalist.org); Jizzakh Region, Farish District, surroundings of village Ukhum, 40.55149° N, 66.798759° E, 13.05.2024, *langli* (www.inaturalist.org). **I-4-b Aktau Range:** Aktau, north of the village Khodzha-Kolishan, 08.06.1926, *Popov* 3/104 (TASH); surroundings of Langar, valley Yangokly, 13-21.05.1941, *Zakirov, Niyazov* (TASH, SAM); mountains Aktau, near the pass Tikalik, 3 km from the village Sarykul, 12.05.1957, *Momotov, Li* 294 (TASH); Nurata, 20.05.1960, *Muminov* (SAM); Charkhansay (f. *alba*), 10.05.2013, *Beshko* (TASH, www.plantarium.ru). **I-4-b Karatau Range:** mountains Karatau, 20.05.1936, *Kharchenko* 1115 (TASH); 4.5 km north-east of the village Kyzyl-October, 03.05.1955, *Momotov, Li* 82 (TASH); mountains Karatau, valley Bakachinak, 05.05.1955, *Momotov, Li* 124 (TASH); 2.5 km south-west of the ruins of the village Sarmysh, 06.05.1955, *Momotov, Li* 184 (TASH); Yarkuduk well, 06.05.1955, *Momotov* 79 (TASH). **I-4-b Mt. Kokcha:** southern slopes of Kokchatau, 26.04.1965, *Klimovskaya* 67 (TASH); southern slopes of Kokchatau, 24.04.1965, *Shorakhimov* 2484 (TASH). **I-4-b Khobduntau Range:** plain between mountains Khobduntau and Karachatau, surroundings of Kuropatkino railway station, 08.06.1929, *Kudrjashev* (TASH); Mts. Khobduntau, near the village Khodzha-Kabud, 15.06.1929, *Kudrjashev* (TASH); surroundings of Milyutinskaya Station, 05.05.1930, *Tarasevich* 40 (TASH); Gallaaral District, experimental station of cereal crops, 07.04.1934, *Toporova* (TASH); Gallaaral District, surroundings of town Gallaaral, 40.03371° N, 67.62472° E, 30.04.2023, *Choriev* (www.inaturalist.org). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 08.04.1915, *Kultiasow* 128 (TASH); Pistalitau, 18.04.2012, *Batashov* 164 (TASH).

Apocynaceae Juss.

Cynanchum L.

861. *Cynanchum acutum* subsp. *sibiricum* (Willd.) Rech.f. (*Cynanchum sibiricum* Willd.), Fl. Iranica 73: 9 (1970). Perennial, hemicryptophyte, climber. Siberian, Irano-Turanian. Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Rare. Native. **Occurrence records:** **I-4-b Aktau Range:** Khatyrchi District, 25.09.1931, *Gomolitsky* (TASH).

Poacynum Baill.

862. *Poacynum scabrum* (Russanov) Mavrodiev, Laktionov & Yu.E.Alexeev (*Trachomitum scabrum* (Russanov) Pobed.), Novosti Sist. Vyssh. Rast. 46: 162 (2015). Perennial, hemicryptophyte. Irano-Turanian. Wetlands (inland), Artificial aquatic. Plain, foothills, montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** Ukansay, 28.05.1951, *Zaprometova* (TASH). **I-4-b Aktau Range:** Khatyrchi District, 03.08.1928, *Lepeschkin* (TASH).

Heliotropiaceae Schrad.

Heliotropium L.

863. *Heliotropium biannulatifforme* Popov, Trudy Bot. Sada Akad. Nauk S.S.S.R. 42: 227 (1931). Annual, therophyte. Turanian. Desert, Shrubland, Rocky areas. Plain, foothills. Rare. Native. **Occurrence records: I-4-b Karatau Range:** hills 6 km north of Kanimekh, 12.07.1934, *Anfilov, Ivanova* 48 (TASH).

864. *Heliotropium bogdanii* Czukav., Dokl. Akad. Nauk Tadzhiksk. S.S.R. 18(2): 60 (1975). Annual, therophyte. Pamir-Alay. Rocky areas, Artificial terrestrial. Foothills. Rare. Native. **Occurrence records: I-4-b Khobduntau Range:** plain between mountains Khobduntau and Karachatau, surroundings of Kuropatkino railway station. Reported in «Conspectus Florae Asiae Mediae», vol. 8, 1986, p. 96.

865. *Heliotropium dasycarpum* Ledeb., Pl. Nov. Casp.-Cauc.: 11 (1831). Perennial, hemicryptophyte. Irano-Turanian. Desert, Shrubland, Rocky areas, Artificial terrestrial. Plain, foothills. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Urganchi, 01.05.1913, *Korovin* (TASH); Farish District, 26.04.1941, *Momotov* 53 (TASH). **I-4-b Aktau Range:** Nurata, 29.04.1913, *Korovin* 142a (TASH); Nurata, *Iris* steppe, 09.05.1913, *Korovin* 475z (TASH); from the village Tutaksay to Nuratau valley, 21.06.1951, *Neustrueva* 334 (LE). **I-4-b Karatau Range:** surroundings of town Kanimekh, north of town, 10.07.1934, *Tyshchenko* 8, 9, 10 (LE); surroundings of town Kanimekh, 5 km north of town, 15.07.1934, *Tyshchenko* 85 (TASH).

866. *Heliotropium ellipticum* Ledeb., Pl. Nov. Casp.-Cauc.: 10 (1831). Annual, therophyte. Pontic, Irano-Turanian. Desert, Shrubland, Rocky areas, Artificial terrestrial. Plain, foothills. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** piedmont plain near the village Uchma, 14.07.1914, *Mikhelson* (LE); Jizzakh Region, Farish District, 5 km south-west of town Yangikishlak, 01.06.2023, *Fateryga* (www.plantarium.ru).

867. *Heliotropium lasiocarpum* Fisch. & C.A.Mey., Index Seminum (LE, Petropolitanus) 4: 38 (1838). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Nature Reserve, Hayatsay, Novi Daroz, 20.06.2007, *Beshko* 07054 (herbarium of the Nuratau Nature Reserve). **I-4-b Khobduntau Range:** surroundings of Milyutinskaya Station, 1934, *Toporova* (TASH). **I-4-c North-Nuratau insular low mountains:** mountains Balyklitau, south of Pistalitau, 02.09.1934, *Botschantzev* (TASH).

868. *Heliotropium olgae* Bunge, Trudy Imp. S.-Peterburgsk. Bot. Sada 3(1): 114 (1874). Annual, therophyte. Middle Asian. Desert, Shrubland, Rocky areas, Artificial terrestrial. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Reported by Zakirov in «Vegetation cover of Nuratau Mountains» (1969, p. 36) and «Botanical geography of low mountains of Kyzylkum and Nuratau Range» (1971, p. 69), as well as in «Conspectus Florae Asiae Mediae», vol. 8, 1986, p. 96.

869. *Heliotropium seravschanicum* Popov, Trudy Bot. Sada Akad. Nauk S.S.S.R. 42: 222 (1931). Annual, therophyte. Western Pamir-Alay. Desert, Shrubland, Rocky areas. Plain, foothills. Rare. Native. **I-4-b Aktau Range:** variegated deposits near Katta-kishlak, 14.05.1941, *Popov, Zakirov* (TASH).

Boraginaceae Juss.

Anchusa L.

870. *Anchusa ovata* Lehm. (*Lycopsis orientalis* L.), Norsk Fl.: 526 (1940). Annual, therophyte. Euro-Siberian, Irano-Turanian. Artificial terrestrial. Plain, foothills, montane zone. Rare. Native.

Occurrence records: I-4-b Khobduntau Range: Gallaaral District, experimental station of cereal crops, 05.06.1934, *Toporova* (TASH); Gallaaral State Farm, 13.06.1951, *Klyueva 10* (TASH).

871. *Anchusa azurea* Mill. (*Anchusa italica* Retz.), Gard. Dict., ed. 8.: no. 9 (1768). Perennial, hemicryptophyte. Tethyan. Forest, Shrubland, Grassland, Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Nature Reserve, Hayatsay, 1400 m a.s.l., slope, July 1979, *Korshunov* (TASH); village Hayat, July 1979, *Korshunov*, *Mukhina 79001*, *79002* (herbarium of the Nuratau Nature Reserve); village Hayat, 02.07.1981, *Mukhina 81054*, *81055*, *81056* (herbarium of the Nuratau Nature Reserve); Hayatsay, Khotunon, 08.06.2006, *Beshko 06205* (herbarium of the Nuratau Nature Reserve); Hayatsay, field station of nature reserve, 11.05.2007, *Beshko* (www.plantarium.ru); Jizzakh Region, Farish District, Nuratau Nature Reserve, Madjrumsay, 40.58267° N, 66.72469° E, 27.04.2024, *Beshko* (www.inaturalist.org); Jizzakh Region, Farish District, surroundings of village Ukhum, 40.51571° N, 66.78761° E, 12.05.2024, *langli* (www.inaturalist.org). **I-4-b Aktau Range:** well Pashat, mountains, 04.05.1913, *Korovin 250*, *278* (TASH); Koshrabad, 04.05.1913, *Korovin 253* (TASH, LE); Khatyrchi District, 15.05.1928, *Lepeschkin* (TASH). **I-4-b Khobduntau Range:** Gallaaral District, surroundings of Milyutinskaya Station, experimental station of cereal crops, 10.06.1934, *Toporova* (TASH). **I-4-c North-Nuratau insular low mountains:** plain between mountains Koytash and Balyklitau, 23.05.1931, *Kobranova 428* (TASH).

Arnebia Forsk.

872. *Arnebia coerulea* Schipcz., Bot. Mater. Gerb. Glavn. Bot. Sada R.S.F.S.R. 2: 97 (1921). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** south-eastern slopes of Nuratau Mts., 10.05.1915, *Spiridonov* (LE); piedmont plain north of Nuratau Range, near Kyzylcha State Farm, 01.04.1958, *Zaprometova 135*; Gatchasay, 24.03.1958, *Zaprometova 71* (TASH, as *A. grandiflora*); Pistalisay, 24.03.1958, *Zaprometova 36* (TASH); Gatchasay, 29.03.1958, *Zaprometova 212* (TASH); Gatchasay, April 1958, *Zaprometova 361* (TASH); Gatchasay, 27.04.1958, *Zaprometova 136* (TASH); 20 km north of the village Dzhush, 29.05.1964, *Zuckerwanik 398* (TASH); village Ukhum, 10.05.1981, *Mukhina 81057–059* (herbarium of the Nuratau Nature Reserve, as *A. grandiflora*); Farish District, near the village Nurak, holy place Hoja Bogbon, 27.04.2008, *Tillaev* (www.plantarium.ru). **I-4-b Aktau Range:** village Angudan, 10.06.1928, *Lepeschkin* (TASH); mountains Aktau 8 km from village Chuya, 07.05.1978, *Botschantzev*, *Litvinova*, *Sumerin 1054* (MW). **I-4-b Khobduntau Range:** plain between mountains Khobduntau and Karachatau, surroundings of Kuropatkino railway station, 08.06.1929, *Kudrjashev* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 08.04.1911, *Dimo*, *Sprygin*, *Shulga 872* (TASH); Pistalitau, 08.04.1915, *Kultiasow 63* (TASH); Pistalitau, 09.04.1915, *Kultiasow 71* (TASH); southern slopes of mountains Pistalitau, 17.04.2012, *Batashov 203* (TASH).

873. *Arnebia decumbens* (Vent.) Coss. & Kralik, Bull. Soc. Bot. France 4: 402 (1857). Annual, therophyte. Tethyan. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** north slopes of Nuratau Mts., 23.04.1913, *Korovin* (TASH); Kyzylchali, sagebrush steppe, 28.04.1913, *Korovin 5* (TASH); Urganchi, *Iris* formation, 01.05.1913, *Korovin 10* (TASH); Urganchi – Ak-Chap, *Iris* formation, 01.05.1913, *Korovin* (TASH); Dzhush – Koshrabad, *Iris* steppe, 03.05.1913, *Korovin 247* (TASH); plain north of the spring Yangaly, 09.05.1939, *Mikhaylova*, *Popova* (TASH); Farish District, 17.04.1952, *Novikova* (TASH); Gatchasay, 31.05.1954, *Zaprometova 140*, *145*, *146* (TASH); [same locality], 14.06.1956, *Zaprometova 264* (TASH); Kichiksay, 15.06.1956, *Zaprometova* (TASH); northern slopes of Nuratau, Gatchasay, 27.03.1958, *Zaprometova* (TASH); [same locality], 29.03.1958, *Zaprometova 223* (TASH); north slopes, Ukansay, 02.04.1958, *Zaprometova 303* (TASH); Gatchasay, 08.04.1958, *Zaprometova*

380 (TASH); [same locality], 20.04.1958, *Zaprometova* 345 (TASH); Alaysay, 20.04.1958, *Zaprometova* (TASH). **I-4-b Aktau Range:** Koshrabad – Shurcha, 16.04.1913, *Teplov* (TASH); south-west of district center Nurata, 15.04.1952, *Zaprometova* (TASH); the spring Bitav, 18.04.1963, *Khaydarov* 932 (TASH); the village Yangibino, 27.05.1963, *Khaydarov* 1381 (TASH); south of district center Nurata, plain, 22.05.1974, *Pratov* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, watershed, 03.04.2012, *Tojibaev, Batashov* 237 (TASH); Pistalitau, 04.05.2012, *Batashov* (TASH); Egarbelistag, 04.05.2012, *Batashov* (TASH); Balyklitau, 04.05.2012, *Batashov* 0025a (TASH); Egarbelistag, 15.04.2012, *Batashov* 00261 (TASH); Pistalitau, 18.04.2012, *Batashov* (TASH).

874. *Arnebia transcaspica* Popov, Fl. URSS 19: 705 (1953). Annual, therophyte. Turanian. Desert, Artificial terrestrial. Plain. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** Nurata State Farm, 28.05.1943, *Djanaeva* 97 (TASH); 20 km east of Sentob, 26.05.1956, *Zaprometova* (TASH). **I-4-b Aktau Range:** the spring Bitav, 19.04.1963, *Khaydarov* 970 (TASH).

Asperugo L.

875. *Asperugo procumbens* L., Sp. Pl.: 138 (1753). Annual, therophyte. Euro-Siberian, Tethyan. Desert, Forest, Shrubland, Grassland, Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** Farish District, piedmont plain, 17.04.1952, *Novikova* (TASH); Koblatysay, 17.03.1952, *Zaprometova* (TASH); 2.5 km south-east of Kyzylcha State Farm, 21.04.1954, *Zaprometova* (TASH); 2 km south-east of Kyzylcha State Farm, 01.05.1954, *Zaprometova* (TASH); Gatchasay, 09.05.1956, *Zaprometova* (TASH); northern spurs of Nuratau Mts., 12.04.1960, *Leonova* (LE); upper reaches of Ukhumsay, 02.06.1964, *Zuckerwanik* 464 (TASH); village Hayat, 18.04.1981, *Mukhina* 81060-81062, 81143 (herbarium of the Nuratau Nature Reserve); village Hayat, 25.04.1992, *Beshko* 92096 (herbarium of the Nuratau Nature Reserve); Hayatsay, 22.04.2006, *Beshko* 06024 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 03.05.2008, *Beshko* (www.plantarium.ru); Farish District, village Hayat, 40.527158°N, 66.774815°E, 23.04.2023, *Beshko* (www.inaturalist.org). **I-4-b Karatau Range:** mountains Karakarga, the pass Jizlan, 22.04.1913, *Korovin* 159 (TASH); Navoi Region, Nurata District, Sarmyshsay, 40.27145° N, 65.53253° E, 19.04.2024, *jeanjacquesgodon* (www.inaturalist.org). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 07.04.1911, *Dimo, Sprygin, Shulga* 870, 1069, 1204 (TASH); Pistalitau, 07.04.1915, *Kultiasow* 46 (TASH); Pistalitau, 09.04.1915, *Popov* 147 (TASH); Balyklitau, 14.04.2012, *Batashov* (TASH).

Buglossoides Moench

876. *Buglossoides arvensis* (L.) J.M.Johnst. (*Rhytispernum arvense* (L.) Link), J. Arnold Arbor. 35: 42 (1954). Annual, therophyte. Euro-Siberian, Tethyan. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** Koblatysay, 04.04.1952, *Zaprometova* (TASH); Jingilsay, 12.04.1952, *Zaprometova* (TASH); 2.5 km south-east of Kyzylcha State Farm, 21.04.1954, *Zaprometova* (TASH); Ambulatory Pass, 01.04.1958, *Zaprometova* 269 (TASH); 3 km south-east of the village Karysay, 19.05.1958, *Li, Zakirov* 662 (TASH); Hayatsay, 20.05.2006, *Beshko* 06112 (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** Khatyrchi District, 05.05.1928, *Lepeschkin* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 08.04.1915, *Kultiasow* 56 (TASH); Pistalitau, 13.04.2011, *Batashov* (TASH); Egarbelistag, 14.04.2011, *Batashov* (TASH); Uchkulach, 04.04.2012, *Batashov* 228 (TASH); Egarbelistag, 10.04.2012, *Batashov* (TASH).

Cynoglossum L.

877. *Cynoglossum creticum* Mill., Gard. Dict., ed. 8.: n.° 3 (1768). Annual, biennial, therophyte. Tethyan. Artificial terrestrial. Plain, foothills, montane zone. Rare. Probably alien. **Occurrence**

records: I-4-a Nuratau Range: Jizzakh, 10.05.1915, *Spiridonov* (LE). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 14.04.2012, *Batashov* (TASH).

Echium L.

878. *Echium biebersteinii* (Lacaita) Dobrocz. (*Echium italicum* subsp. *biebersteinii* (Lacaita) Greuter & Burdet), Fl. Evropeiskoi Chasti SSSR 5: 138 (1981). Biennial, therophyte. European, Tethyan. Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** south-eastern slopes of Nuratau Mts., 1915, *Spiridonov* 146 (LE); Mts. Koytash, 3 km south-west of the village Jizzakly, 28.05.1940, *Gomolitsky* 56 (TASH); Farish District, 18.05.1941, *Momotov* (TASH); surroundings of village Sentob, 24.06.1971, *Botschantzev* 404 (LE); Hayatsay, 15.07.1983, *Baskakova* 83013 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 22.05.2006, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 05.06.2022, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** valley Chashma, 13.06.1962, *Khaydarov* 178 (TASH). **I-4-b Khobduntau Range:** reported by Kudrjashev in "Vegetation of the Khobduntau and Karachatau Mountains" (1929, p. 65).

Heterocaryum DC.

879. *Heterocaryum laevigatum* (Kar. & Kir.) A.DC., A.P.de Candolle, Prodr. 10: 145 (1846). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Reported by Zakirov in «Vegetation cover of Nuratau Mountains» (1969, p. 36) and «Botanical geography of low mountains of Kyzylkum and Nuratau Range» (1971, p. 69).

880. *Heterocaryum macrocarpum* Zakirov, Fl. Uzbekistan. 5: 631 (1961). Annual, therophyte. Caucasian, Irano-Turanian. Shrubland, Grassland, Rocky areas, Artificial terrestrial. Foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Nature Reserve, Mt. Parrandoz, 24.05.1982, *Mukhina* (TASH).

881. *Heterocaryum rigidum* A.DC., A.P.de Candolle, Prodr. 10: 145 (1846). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau mountains, 07.04.1915, *Spiridonov* (LE); village Hayat, 03.05.1981, *Mukhina* 81063 (herbarium of the Nuratau Nature Reserve); village Hayat, 06.05.1992, *Beshko* 92529 (herbarium of the Nuratau Nature Reserve). **I-4-b Karatau Range:** mountains Karakarga, the pass Jizlan, 22.04.1913, *Korovin* 15 (TASH); Koshrabad, 06.05.1913, *Korovin* 399a (TASH). **I-4-b Khobduntau Range:** from the village Sadyr to Koshrabad, 15.04.1913, *Teplov* 5 (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 07.04.1911, *Dimo, Sprygin, Shulga* 363 (TASH, LE); between Pistalitau and the village Kok-tyube, 09.04.1911, *Dimo, Sprygin, Shulga* 995 (TASH); north-eastern piedmonts of Pistalitau, Kensay well, 02.04.1915, *Spiridonov* 67 (LE); Pistalitau, 08.04.1915, *Kultiasow* 62 (TASH); south-eastern slopes of Pistalitau, 10.04.1915, *Spiridonov* 62 (LE); between mountains Pistalitau and Kalmante, 12.04.1915, *Spiridonov* 83, 84 (LE); 30 km north of Yangikishlak, 15.05.1978, *Botschantzev, Litvinova, Rachkovskaya* 1358 (LE).

882. *Heterocaryum subsessile* Vatke, Z. Naturwiss. 45: 129 (1875). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** reported in «Conspectus Florae Asiae Mediae», vol. 8, 1986, p. 146.

883. *Heterocaryum szovitsianum* (Fisch. & C.A.Mey.) A.DC., A.P.de Candolle, Prodr. 10: 145 (1846). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:**

Reported by Zakirov in «Vegetation cover of Nuratau Mountains» (1969, p. 36) and «Botanical geography of low mountains of Kyzylkum and Nuratau Range» (1971, p. 69), as well as in «Conspectus Florae Asiae Mediae», vol. 8, 1986, p. 145–146. **I-4-c North-Nuratau insular low mountains:** Pistalitau (south-western part), 15.04.2012, *Batashov* (TASH); Pistalitau, 04.05.2012, *Batashov* (TASH).

Lappula Moench

884. *Lappula barbata* (M.Bieb.) Gürke, H.G.A.Engler & K.A.E.Prantl, Nat. Pflanzenfam. 4(3a): 107 (1894). Annual, biennial, therophyte. Pontic, Caucasian, Irano-Turanian. Shrubland, Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau, 1964, *Khaydarov 102* (TASH).

885. *Lappula brachycentra* (Ledeb.) Gürke, H.G.A.Engler & K.A.E.Prantl, Nat. Pflanzenfam. 4(3a): 107 (1894). Annual, biennial, therophyte. Siberian, Mountain Middle Asian, Dzungarian. Shrubland, Rocky areas. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** reported in «Conspectus Florae Asiae Mediae», vol. 8, 1986, p. 134.

886. *Lappula consanguinea* (Fisch. & C.A.Mey.) Gürke, H.G.A.Engler & K.A.E.Prantl, Nat. Pflanzenfam. 4(3a): 107 (1894). Annual, biennial, therophyte. Palearctic. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Kyzylcha, 26.05.1960, *Zaprometova, Ashirova 223* (TASH).

887. *Lappula microcarpa* (Ledeb.) Gürke. Annual, biennial, therophyte. Siberian, Irano-Turanian, Himalayan. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau, 14.04.1915, *Spiridonov 92* (LE); village Hayat, 03.05.1981, *Mukhina 81064, 81065* (herbarium of the Nuratau Nature Reserve); Mt. Parrandoz, 24.05.1982, *Mukhina* (TASH); Hayatsay, 30.05.1990, *Beshko, Yakovenko 90123* (herbarium of the Nuratau Nature Reserve); lower reaches of Bolosay, 26.04.1992, *Beshko 92098* (herbarium of the Nuratau Nature Reserve); watershed between Hayatsay and Madjrum, 26.07.2012, *Beshko* (TASH). **I-4-b Aktau Range:** 2–3 km south of the village Kokbulak, 01.07.1937, *Demurina 364* (TASH). **I-4-b Khobduntau Range:** between Khobduntau and Karachatau, surroundings of Kuropatkino railway station, 08.06.1929, *Kudrjashev* (TASH); near the village Gumsay, 12.06.1929, *Kudrjashev* (TASH); Gallaaral District, surroundings of Milyutinskaya Station, 14.05.1934, *Toporova* (TASH); [same locality], 25.05.1934, *Toporova* (TASH). **I-4-b Karachatau Range:** 2.5–3 km north-east of the village Yukary-Kariya, 06.07.1937, *Demurina 535* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 31.03.1915, *Spiridonov 32* (LE); Pistalitau, 02.04.1915, *Spiridonov 68* (LE); Pistalitau, 07.04.1915, *Kultiasow 38* (TASH); Pistalitau, 09.04.1915, *Kultiasow 134* (TASH); Pistalitau, 12.04.1915, *Spiridonov 81* (LE).

888. *Lappula nuratavica* Nabiev & Zakirov, Fl. Uzbekistan. 5: 631 (1961). Perennial, hemicryptophyte. Nuratau (endemic). Shrubland, Rocky areas. Montane zone. Rare. Native. UzbRDB 2. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, village Ukhum, 01.07.1931, *Kobranova 85* (TASH); Mts. Koytash, Ukhum Pass, 28.07.1937, *Demurina 772* (holotype TASH 002691); Tykchasay, 23.05.1983, *Petrochenko, Fominykh 83014–017* (herbarium of the Nuratau Nature Reserve); Karysay, Kazhum, 24.05.1982, *Mukhina 82051–053* (herbarium of the Nuratau Nature Reserve); upper reaches of Tykchasay, 14.08.2012, *Beshko* (TASH); Nuratau Nature Reserve, watershed crest between valleys Hayat and Madjrum, 16.06.2019, *Beshko* (TASH); [same locality], 05.06.2022, *Beshko* (www.plantarium.ru); [same locality], 15.05.2024, *Beshko* (www.plantarium.ru); watershed crest between Madjrum Pass and Mt. Hayatbashi, about 1980 m a.s.l., 25.05.2025, *Beshko* (TASH).

889. *Lappula occultata* Popov, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk S.S.S.R. 14: 331 (1951). Annual, therophyte. Mountain Middle Asian, Dzungarian. Shrubland, Rocky areas. Foothills,

montane zone. Rare. Native. **I-4-b Khobduntau Range:** Gallaaral District, surroundings of Milyutinskaya Station, experimental station of cereal crops, 07.04.1934, *Toporova* (TASH).

890. *Lappula sessiliflora* (Boiss.) Gürke, H.G.A.Engler & K.A.E.Prantl, Nat. Pflanzenfam. 4(3a): 107 (1894). Annual, therophyte. Caucasian, Irano-Turanian. Shrubland, Rocky areas. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau mountains, south-eastern slopes, 07.04.1915, *Spiridonov* (LE); mountains south-west of town Jizzakh, 04.05.1921, *Kultiasow* 135 (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 09.04.1915, *Kultiasow* (TASH).

891. *Lappula sinaica* (A.DC.) Asch. & Schweinf., Mém. Inst. Égypt. 2: 111 (1887). Annual, therophyte. Irano-Turanian. Shrubland, Grassland, Rocky areas, Artificial terrestrial. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Alaysay, 25.03.1958, *Zaprometova* 93 (TASH); Fuzhaksay, 09.04.1981, *Mukhina* 81066–069, 81144–145 (herbarium of the Nuratau Nature Reserve). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 07.04.1911, *Dimo*, *Sprygin*, *Shulga* 1055 (TASH); Pistalitau, 08.04.1915, *Kultiasow* (TASH); mountains Balyklitau, south of the village Chimbukurgan, 31.05.1958, *Vvedensky*, *Nabiev* (TASH); Pistalitau, 16.04.2011, *Batashov* (TASH).

892. *Lappula spinocarpos* (Forssk.) Asch. ex Kuntze, Trudy Imp. S.-Peterburgsk. Bot. Sada 10: 215 (1887). Annual, therophyte. Tethyan. Desert, Shrubland, Rocky areas, Artificial terrestrial. Plain, foothills. Occasional. Native. **Occurrence records: I-4-c North-Nuratau insular low mountains:** Pistalitau, 07.04.1911, *Dimo*, *Sprygin*, *Shulga* (LE).

Lindelofia Lehm.

893. *Lindelofia macrostyla* (Bunge) Popov, Fl. URSS 19: 627 (1953). Perennial, hemicryptophyte. Irano-Turanian. Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** village Hayat, July 1978, *Korshunov*, *Mukhina* 78005–78008 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, July 1979, *Korshunov* (TASH); Hayatsay, 02.06.1981, *Mukhina* 81070, 81146, 81147 (herbarium of the Nuratau Nature Reserve); Hayatsay, 15.07.1983, *Baskakova* 83018, 83019 (herbarium of the Nuratau Nature Reserve); Hayatsay, 27.04.1983, *Fominykh* 83020 (herbarium of the Nuratau Nature Reserve); Hayatsay, Andebaraut, 22.05.2006, *Beshko* 06325, 06326 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 05.06.2022, *Beshko* (www.plantarium.ru); Jizzakh Region, Farish District, 4 km south-west of town Yangikishlak, 02.06.2023, *Fateryga* (www.plantarium.ru).

Myosotis L.

894. *Myosotis cespitosa* Schultz, Prodr. Fl. Starg. Suppl. 1: 11 (1819). Perennial, hemicryptophyte. Palearctic. Wetlands (inland). Foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** reported in «Conspectus Florae Asiae Mediae», vol. 8, 1986, c. 119.

895. *Myosotis refracta* Boiss., Voy. Bot. Espagne 2: 433 (1841). Annual, therophyte. Tethyan. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Farish District, 05.05.1941, *Momotov* (TASH); northern slope, 2.5 km south-east of Kyzylcha State Farm, 28.04.1954, *Zaprometova* (TASH).

896. *Myosotis stricta* Link ex Roem. & Schult. (*Myosotis micrantha* Pall. & Lehm.), Syst. Veg. 4: 104 (1819). Annual, therophyte. Euro-Siberian, Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** surroundings of Jizzakh, Iran-kishlak, 11.04.1915, *Fedtschenko* 205 (LE); Koblatysay, 18.03.1952, *Zaprometova* (TASH); Andygensay, Kachak, 17.04.1981, *Mukhina* 81071

(herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** the village Andak, 01.04.1925, *Popov* 27 (TASH).

Nonea Medik.

897. *Nonea caspica* (Willd.) G.Don., Gen. Hist. 4: 336 (1837). Annual, therophyte. Pontic, Caucasian, Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau, 10.05.1915, *Spiridonov* 196 (LE); mountains Nuratau, 31.06.1915, *Spiridonov* 32 (LE); Farish District, 17.04.1952, *Novikova* (TASH); Gatchasay, 27.03.1958, *Zaprometova* 138, 383 (TASH); north slopes, 2 km from Kyzylcha State Farm, 01.04.1958, *Zaprometova* 285 (TASH); Gatchasay, 09.09.1958, *Zaprometova* 383 (TASH); spurs of Nuratau, 12.04.1960, *Leonova* (LE); piedmont plain of Nuratau Range (Farish Steppe), 27.04.2007, *Beshko* (www.plantarium.ru); Jizzakh Region, Farish District, surroundings of village Ukhum, 40.51571° N, 66.78761° E, 12.05.2024, *langli* (www.inaturalist.org). **I-4-b Aktau Range:** Khatyrchi District, 23.05.1928, *Lepeschkin* (TASH). **I-4-b Karatau Range:** Navoi Region, Nurata District, Sarmyhsay, 40.27145° N, 65.53253° E, 19.04.2024, *jeanjacquesgodon* (www.inaturalist.org); Gizhduvan District, southern foothills of Karatau, 40.40678° N, 65.13566° E, 21.04.2024, *Beshko* (www.inaturalist.org). **I-4-b Mt. Kokcha:** southern slopes of Kokchatau, 18.05.1964, *Adylov*, *Shorakhimov* 2405 (TASH); Kokchatau, 28.04.2013, *Batashov* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 12.04.1915, *Spiridonov* 81 (LE); Pistalitau, 20.04.2012, *Batashov* (TASH).

Onosma L.

898. *Onosma dichroantha* Boiss., Diagn. Pl. Orient. 11: 107 (1849). Perennial, hemicryptophyte. Irano-Turanian. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** north slopes of Nuratau Mts., 23.04.1913, *Korovin* 165, 166 (TASH); Nuratau, 10.05.1915, *Spiridonov* 146 (LE); northern slope of Koytash Mts., 26.05.1931, *Kasimenko* (TASH); Mts. Koytash, the village Osmansay, 06.1931, *Kobranova* 457 (TASH); Nuratau, 17.05.1941, *Zakirov* (SAM); Farish District, Kirov State Farm, 06.06.1943, *Vernik*, *Raykova* 92 (TASH); Kyzylcha State Farm, 19.05.1955, *Zaprometova* (TASH); on the way from gorge Ustuksay to Fazilman Lake, 11.05.1956, *Korotkova* 5102 (TASH); Mt. Zargar, near the village Urtasay, 02.05.1957, *Momotov* 216 (TASH); Alaysay, 3 km from Kyzylcha State Farm, 15.05.1960, *Zaprometova* 84 (TASH); Alaysay, 15.05.1960, *Zaprometova*, *Nikero* 58 (LE); Koytash, 28.04.1971, *Botschantzev*, *Kamelin* 556 (LE); Hayatsay, 09.05.1981, *Mukhina*, 81072, 81073, 81140, 81141 (herbarium of the Nuratau Nature Reserve); Hayatsay, Andebaraut, 28.04.1983, *Fominykh* 83021, 83022 (herbarium of the Nuratau Nature Reserve); [same locality], 29.05.1990, *Beshko*, *Yakovenko* 90083 (herbarium of the Nuratau Nature Reserve); Hayatsay, 19.05.2007, *Beshko* (www.plantarium.ru); Sobsay, 09.05.2013, *Beshko* (www.plantarium.ru); watershed crest between Hayatsay and Madjrumsay, 20.05.2013, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 19.05.2021, *Beshko* (www.plantarium.ru); Hayatsay, 22.04.2023, *Beshko* (www.plantarium.ru); Jizzakh Region, Farish District, 5 km south-west of town Yangikishlak, 01.06.2023, *Fateryga* (www.plantarium.ru). **I-4-b Aktau Range:** Nurata, 23.04.1913, *Korovin* (TASH); well Pashat, 24.04.1913, *Korovin* 55 (TASH); Mt. Takhkutau, 07.05.1913, *Korovin* (TASH); mountains Aktau, 28.05.1956, *Momotov* 1063 (TASH). **I-4-b Khobduntau Range:** near Rostovtsevo station, 14.05.1909, *Androssov* 53 (TASH); plain between mountains Khobduntau and Karachatau, 07.06.1929, *Kudrjashev* (TASH). **I-4-b Karachatau Range:** 2.5–3 km north-east of the village Yukary-Kariya, 06.07.1937, *Demurina* 536 (TASH).

Rindera Pall.

899. *Rindera tetraspis* Pall., Reise Russ. Reich. 1: 486 (1771). Perennial, hemicryptophyte. Euro-Siberian, Irano-Turanian. Desert, Forest, Shrubland, Grassland, Rocky areas. Plain, foothills, montane

zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Ukhum Pass, 01.05.1892, *Glazunov* (LE); south-eastern slopes of mountains Nuratau, 31.03.1915, *Spiridonov* 32 (LE); near Tamerlane's Gate gorge, left bank of the river Sanzar, 19.05.1921, *Kultiasow* 58, 59 (TASH); valley 2.5 km south-west of Kyzylcha State Farm, 11.04.1954, *Zaprometova* (TASH); Gatchasay, 31.05.1954, *Zaprometova* 130, 131 (TASH); Karasay, 12.04.1955, *Zaprometova* (TASH); Nuratau, north-eastern slopes, 15.05.1955, *Zaprometova* (TASH); south-western slopes near the pass 3–7 km south-east of Kyzylcha, 20.05.1955, *Zaprometova* (TASH); Farish District, piedmont plain, 11.05.1956, *Zaprometova* 104 (TASH); Koblatysay, 05.05.1957, *Zaprometova* (TASH); Gatchasay, 27.03.1958, *Zaprometova* 137 (TASH); Gatchasay, 29.03.1958, *Galkina* (TASH); Ukansay, 02.04.1958, *Zaprometova* 287 (TASH); 1.5 km south-west of Saurbel Pass, 27.04.1958, *Li, Zakirov* 110 (TASH); 2 km north of Saurbel Pass, 27.04.1958, *Li, Zakirov* 160 (TASH); 5 km south-east of the village Yukary Ukhum, near Ukhum Pass, south-south-east of the village Hayat, 30.04.1958, *Li, Zakirov* 255 (TASH); 3 km south of the village Yukary Ukhum, 03.05.1958, *Li, Zakirov* 302 (TASH); Kyzylcha, 20.05.1955, *Galkina* (TASH); Mts. Koytash, surroundings of Koytash, 28.06.1971, *Botschantzev, Kamelin* 555 (LE); on the way to the pass Madjrum, 05.05.1978, *Botschantzev et al.* 960 (LE); southern slope of Mt. Zargar, 26.04.1979, *Pimenov et al.* 97 (MW); Andygensay, Kachak, 08.04.1981, *Mukhina* 81074, 81075 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 10.04.2007, *Beshko* (www.plantarium.ru); Farish District, near the village Nurak, 26.04.2008, *Tillaev* (www.plantarium.ru); Hayatsay, 27.03.2011, *Gaziev* (www.plantarium.ru); Hayatsay, 27.03.2011, *Davkaev* (www.plantarium.ru); Farish district, near the village Chuprak, 40.33492° N, 67.24769° E, 20.04.2013, *Iougarou* (www.inaturalist.org); Madjrum, 25.03.2016, *Beshko* (www.plantarium.ru, www.inaturalist.org); Nuratau Nature Reserve, Hayatsay, Andebaraut, 1475 m a.s.l., 19.05.2021, *Beshko, Madaminov* NB2021246 (TASH); Jizzakh Region, Farish District, Nuratau Nature Reserve, Hayatsay, 40.51352° N, 66.7394° E, 14.05.2024, *Beshko* (www.plantarium.ru, www.inaturalist.org); [same locality], 40.51362° N, 66.74054° E, 26.04.2024, *Beshko* (www.inaturalist.org); [same locality], 40.51351° N, 66.7394° E, 26.04.2024, *Beshko* (www.inaturalist.org). **I-4-b Aktau Range:** upper reaches of river Bitau, 26.05.1964, *Zuckerwanik* 249 (TASH). **I-4-b Karatau Range:** Sarmysh, 26.04.1965, *Pryakhin* (LE). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 16.04.2012, *Batashov* 180, 217 (TASH); southern slope of Pistalitau, 18.03.2013, *Tojibaev, Shomurodov, Beshko, Batashov* (TASH); Farish district, Egarbelistag, 40.36465° N, 67.4614° E, 14.04.2016, *Beshko* (www.inaturalist.org).

Rochelia Rchb.

900. *Rochelia bungei* Trautv., Trudy Imp. S.-Peterburgsk. Bot. Sada 9: 462 (1886). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** south-western slopes of Gatchasay, 14.04.1953, *Zaprometova* (TASH); Pistalisay, 08.05.1957, *Zaprometova* (TASH); Gatchasay, 15.04.1958, *Zaprometova* (TASH). **I-4-b Aktau Range:** 10 km from the village Ravat, 06.05.1978, *Botschantzev et al.* 1026 (LE). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 16.04.2012, *Batashov* 216 (TASH).

901. *Rochelia disperma* (L.f.) K.Koch, Linnaea 22: 649 (1849). Annual, therophyte. Tethyan. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Sentob, 28.04.1892, *Glazunov* (LE); Nuratau mountains, 14.04.1915, *Spiridonov* (LE); Koytash, surroundings of Yangikishlak, 11.05.1978, *Botschantzev et al.* 1250 (LE). **I-4-b Aktau Range:** between well Pashat and Kara-Yuzgan, 25.04.1913, *Korovin* (TASH).

902. *Rochelia cardiosepala* Bunge, Beitr. Fl. Russl.: 244 (1852). Annual, therophyte. Caucasian, Irano-Turanian. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau, 14.04.1915,

Spiridonov (LE); surroundings of town Jizzakh, 06.05.1922, *Sovetkina 19* (TASH); Farish District, 05.05.1941, *Momotov* (TASH); Farish District, 07.05.1941, *Momotov 171* (TASH); Farish District, 10.05.1941, *Momotov 196/4* (TASH); Gatchasay, 08.04.1958, *Zaprometova* (LE); gorge Alichaksay, 27.05.1969, *Mambetjumaev 60* (TASH); Karysay, 05.06.1982, *Mukhina 82029* (herbarium of the Nuratau Nature Reserve); Hayatsay, 20.05.2006, *Beshko 06106, 06107* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 01.05.2009, *Beshko* (www.plantarium.ru); Hayatsay, 14.05.2009, *Beshko* (www.plantarium.ru); Hayatsay, 1200 m, 05.05.2012, *Beshko* (TASH). **I-4-b Aktau Range:** between well Pashat and the village Nurata, 24.04.1913, *Korovin* (TASH); Khanbandy – Chuya, 02.05.1913, *Korovin* (TASH); near the village Pichet, 04.05.1913, *Korovin* (TASH); near the village Langar, 19–21.05.1941, *Zakirov, Niyazov* (TASH); mountains Aktau, 28.05.1956, *Momotov 1051* (TASH). **I-4-b Khobduntau Range:** reported by Kudrjashev in “Vegetation of the Khobduntau and Karachatau Mountains” (1929, p. 65). **I-4-c North-Nuratau insular low mountains:** Pistalitu, 15.04.2012, *Batashov 131* (TASH).

903. *Rochelia leiocarpa* Ledeb., Fl. Altaic. 1: 172 (1829). Annual, therophyte. Altay, Middle Asian. Shrubland, Grassland, Rocky areas. Plain, foothills, montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** reported in «Conspectus Florae Asiae Mediae», vol. 8, 1986, p. 149.

904. *Rochelia peduncularis* Boiss., Diagn. Pl. Orient. 7: 35 (1846). Annual, therophyte. Irano-Turanian. Shrubland, Grassland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** 7 km south of the village Farish, 22.06.1952, *Karimov* (TASH); Koytash, gorge Suluklisay, 14.05.1978, *Botschantzev et al. 1318* (LE); Bolosay, 10.06.1996, *Beshko 96082* (herbarium of the Nuratau Nature Reserve).

905. *Rochelia retorta* (Pall.) Lipsky, Trudy Imp. S.-Peterburgsk. Bot. Sada 26: 455 (1910). Annual, therophyte. Euro-Siberian, Irano-Turanian. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** Nuratau, 14.04.1915, *Spiridonov 91* (LE); Gatchasay, 13.04.1953, *Zaprometova 429* (TASH); Gatchasay, 14.04.1953, *Zaprometova 425* (TASH); Ustuksay, 03.06.1954, *Burygin 326, 327* (TASH); northern slopes of Nuratau, 29.03.1958, *Zaprometova 197* (TASH); northern slopes of Gatchasay and Alaysay, 15.04.1958, *Zaprometova* (TASH); Bolosay, 10.06.1996, *Beshko 96080* (herbarium of the Nuratau Nature Reserve); Hayatsay, 20.05.2006, *Beshko 06110–06111* (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** 16 north of town Koshrabad, 05.05.1978, *Litvinova, Botschantzev, Elsukov 911* (LE).

Solenanthus Ledeb.

906. *Solenanthus circinnatus* Ledeb., Icon. Pl. Fl. Ross. 1: 8 (1829). Perennial, hemicryptophyte. Caucasian, Irano-Turanian. Forest, Shrubland, Rocky areas. Foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** Mt. Mirishkar, 05.05.1913, *Korovin 330, 332, 341* (TASH); Mt. Piyazli, 24.04.1941, *Bukasov* (TASH); gorge Koblatysay, 02.05.1943, *Djanaeva 110* (TASH); surroundings of Kyzylcha State Farm, Koblatysay, 08.04.1952, *Zaprometova* (TASH); the village Yukary Ukhum, near Ukhum Pass, 30.04.1958, *Li, Zakirov 274* (TASH); village Hayat, 30.04.1958, *Li, Zakirov 275* (TASH); southern slope of Mt. Zargar, 23.04.1979, *Pimenov et al. 76* (MW); Andygensay, Kachak, 09.04.1981, *Mukhina 81077, 81078, 81142* (herbarium of the Nuratau Nature Reserve); Karysay, 28.04.1982, *Mukhina 82030, 82031* (herbarium of the Nuratau Nature Reserve); Karysay, 04.05.1984, *Petrochenko 84061* (herbarium of the Nuratau Nature Reserve); Gurdara, 15.04.1984, *Petrochenko 84062, 84063, 84090* (herbarium of the Nuratau Nature Reserve); Gurdara, 04.04.2022, *Beshko* (www.plantarium.ru; www.inaturalist.org); Nuratau Nature Reserve, Hayatsay, 40.51426° N, 66.73913° E, 26.04.2024, *Beshko* (www.inaturalist.org).

907. *Solenanthus turkestanicus* (Regel & Smirn.) Kuzn., Fl. Caucas. Crit. 4(2): 141 (1913). Perennial, hemicryptophyte. Irano-Turanian. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** mountains Nuratau, 31.04.1915, *Spiridonov* 32 (LE); near Jizzakh, 06.05.1928, *Sovetkina* 32 (TASH); Farish District, 05.05.1941, *Momotov* 20 (TASH); Nurata State Farm, 13.04.1943, *Djanaeva* 20 (TASH); Koblatysay, 07.04.1952, *Zaprometova* (TASH); Karasay, 11.04.1954; *Zaprometova* (TASH); Kyzylcha, 16.04.1955, *Zaprometova* 27 (TASH); Ustuksay, 17.05.1956, *Korotkova* 5767 (TASH); 10 km from the village Dzhush, 02.05.1957, *Momotov*, *Li* 286 (TASH); upper reaches of Ustuksay, 29.05.1964, *Zuckerwanik* 377 (TASH); the village Yangi-Hayat, 28.05.1969, *Mambetjumaev* 89 (TASH); Hayatsay, 15.04.1981, *Mukhina* 81079, 81080 (herbarium of the Nuratau Nature Reserve); Asrafsay, 28.03.1981, *Mukhina* 81081, 81082 (herbarium of the Nuratau Nature Reserve); Hayatsay, 15.04.1983, *Petrochenko*, *Fominykh* 83025–83027 (herbarium of the Nuratau Nature Reserve); Hayatsay, Zamezhak, 18.04.1984, *Petrochenko* 84091 (herbarium of the Nuratau Nature Reserve); Hayatsay, 10.04.2008, *Beshko* (www.plantarium.ru); foothills near the village Anamuna, 02.05.2014, *Beshko* (www.plantarium.ru); Madjrumsay, 23.03.2020, *Beshko* (www.plantarium.ru); Gurdara, 04.04.2022, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** Nurata, 04.05.1913, *Korovin* 296 (TASH); the village Andak, 01.05.1925, *Popov* 18 (TASH); Chashma, 13.06.1962, *Khaydarov* 158 (TASH); Chashma, 27.03.1963, *Markova* (TASH); sources of river Bitau, 27.05.1964, *Zuckerwanik* 297 (TASH). **I-4-b Karatau Range:** slopes of Sarmyshsay, 26.04.1965, *Pryakhin* (LE); surroundings of Sarmyshsay, 26.04.1965, *Pryakhin* (TASH).

Trichodesma R.Br.

908. *Trichodesma incanum* (Bunge) A.DC., A.P.de Candolle, Prodr. 10: 174 (1846). Perennial, hemicryptophyte. Irano-Turanian. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, northern slope, 29.07.1931, *Kobranova* 82 (TASH); 6–7 km west of the village Guzhum, 23.07.1937, *Demurina* 736 (TASH); west of the village Jizzakly, near the valley Bereshek, 28.05.1940, *Gomolitsky*, *Dolgikh*, *Arkhireev* 33 (TASH); valley of Mikhinsay (middle reaches), south of the village Yangikishlak, 22.07.1940, *Gomolitsky*, *Dolgikh*, *Arkhireev* 189 (TASH); Ukansay, 12.05.1951, *Zaprometova* 90 (TASH); Gatchasay, 02.06.1957, *Zaprometova* (TASH); surroundings of the village Koytash, 28.06.1971, *Botschantzev*, *Kamelin* 549 (LE); Hayatsay, 31.07.1980, *Pjatina*, *Mukhina* 80012, 80013, 80035 (herbarium of the Nuratau Nature Reserve); Hayatsay, 10.07.1983, *Petrochenko* 83028, 83029 (herbarium of the Nuratau Nature Reserve); Hayatsay, the village Upper Hayat, field station of Nuratau Nature Reserve, 30.05.2006, *Beshko* (www.plantarium.ru); Hayatsay, 03.06.2006, *Beshko* 06151 (herbarium of the Nuratau Nature Reserve); Jizzakh Region, Farish District, 4 km south-west of town Yangikishlak, 02.06.2023, *Fateryga* (www.plantarium.ru); 5 km south-west of town Yangikishlak, 01.06.2023, *Fateryga* (www.plantarium.ru); Jizzakh Region, Farish District, surroundings of village Ukhum, 40.51571° N, 66.78761° E, 11.05.2024, *langli* (www.inaturalist.org); Jizzakh Region, Farish District, gorge Gurdara, 40.52261°N, 66.91961°E, 24.04.2025, *Beshko* (www.inaturalist.org). **I-4-b Aktau Range:** Dzhush – Koshrabad, *Iris* formation, 03.05.1913, *Korovin* 246a, 248a (TASH); ascent to the pass Tikalik, 01.06.1914, *Neustrujeva-Knorring*, *Cvetkova* 236 (LE); north of the village Gazgan, 14.07.1937, *Mironov* 9 (TASH); Aktau, south of well Uzunkuduk, 02.08.1937, *Mironov* 95 (TASH); mountains Aktau, 28.05.1963, *Khaydarov* 1523 (TASH); Navoi Region, Nuratau mountains, northern slope of Aktau Range, Charkhansay, about 700 m a.s.l., 17.05.2024, *Beshko* (www.plantarium.ru, www.inaturalist.org); Charkhansay, 17.05.2024, *Beshko*, *Volis*, *Azimov*, *Sindirov* (TASH). **I-4-b Karatau Range:** eastern part of Karatau Mts., 20.05.1936, *Kharchenko* (TASH). **I-4-b Khobduntau Range:** Milyutinskaya Station, 10.05.1909, *Mikhelson* 264 (TASH); near Rostovtsevo Station, 26.06.1913, *Fedtschenko* 2647 (LE); near the village Kyrk, 19.06.1929, *Kudrjashev* (TASH); Bulungur District, Khobduntau, Ingichkasay, 1275 m a.s.l.,

39°53'17.33" N, 67°18'07.41" E, *Beshko* (plant community description). **I-4-b Karachatau Range:** 2.5–3 km north-east of the village Yukary-Kariya, 06.07.1937, *Demurina 541* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 07.04.1915, *Kultiasow* (TASH); Balyklitau, 25.05.1931, *Kobranova 441, 448* (TASH); Pistalitau, 25.05.1956, *Zaprometova* (TASH).

Convolvulaceae Juss.

Calystegia R.Br.

909. *Calystegia sepium* (L.) R.Br. Perennial, hemicryptophyte, climber. Pluriregional. Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Nature Reserve, Madjrumsay, about 750 m a.s.l., 13.09.2014, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, lower reaches of Madjrumsay, about 800 m a.s.l., 13.09.2014, *Beshko* (TASH).

Convolvulus L.

910. *Convolvulus arvensis* L., Sp. Pl.: 153 (1753). Perennial, hemicryptophyte, climber. Pluriregional. Desert, Forest, Shrubland, Grassland, Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Probably alien. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, 13.07.1978, *Korshunov 78017, 78018, 78019* (herbarium of the Nuratau Nature Reserve); Jizzakh Region, Farish District, Hayatsay, 22.05.2006, 40.521579° N 66.747161° E, *Beshko* (www.inaturalist.org); upper reaches of Osmansay, above the summer camp «Zangori Olov», N 40°20'13" E 67°13'22", 28.04.2020, 24.09.2020, *Beshko, Shomurodov, Adilov* (plant community description); upper reaches of Osmansay, upstream of the village Baland Osman, N 40°19'20" E 67°17'25", 28.04.2020, *Beshko, Shomurodov, Adilov* (plant community description). **I-4-b Aktau Range:** valley Chashma, 09.06.1962, *Khaydarov* (TASH). **I-4-b Khobduntau Range:** between mountains Khobduntau and Karachatau, near the village Gumsay, 11.06.1929, *Kudrjashev* (TASH); Bulungur District, Khobduntau, Ingichkasay, 1275 m a.s.l., 39°53'17.33" N, 67°18'07.41" E, *Beshko* (plant community description). **I-4-c North-Nuratau insular low mountains:** outskirts of the village Biresik, plain near western part of Pistalitau, N 40°33'51", E 67°19'58", 25.09.2019, *Beshko, Shomurodov, Adilov, Abduraimov* (plant community description); the crest of Egarbelistag, 1.5 km west of the Carbonat JSC quarry, N 40°21'44" E 67°29'06", 22.09.2020, *Beshko, Shomurodov, Adilov* (plant community description).

911. *Convolvulus fruticosus* Pall., Reise Russ. Reich. 2: 734 (1773). Subshrub, chamaephyte. Irano-Turanian. Desert, Shrubland, Rocky areas. Plain, foothills. Rare. Native. **Occurrence records: I-4-b Karatau Range:** on the way from Nurata to Karmana, mountains Karakarga, 11.05.1913, *Korovin* (TASH); [same locality], 12.05.1913, *Korovin* (TASH); 7–8 km east-north-east of town Kanimekh, 18.05.1936, *Tarasevich* (TASH).

912. *Convolvulus hamadae* (Vved.) Petrov, Byull. Moskovsk. Obshch. Isp. Prir., Otd. Biol., n.s., 44: 135 (1935). Subshrub, chamaephyte. Irano-Turanian. Desert, Shrubland, Rocky areas. Plain, foothills. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** north-western spurs of Nuratau Range, 16.07.1931, *Kasimenko* (MW); foothills of Nuratau, north-western part, Kyzylchali, 25.07.1931, *Kasimenko* (MW); Mt. Mirishkar, south-western slopes, Nurata District, 03.08.1931, *Kasimenko* (MW); 1 km from the village Dzhus, southern slope of Nuratau Mts., 11.07.1932, *Knorring, Emme 60* (MW); mountains Nuratau, middle part of slope, on variegated beds, 19.07.1932, *Neustrujeva-Knorring* (MW); Nuratau, variegated foothills, 17.05.1941, *Popov* (TASH); proluvial plain about 2 km north of the well Usarbay, 2 km east of the village Suyunkuduk and 5 km north-west of village Tulibay, N 40°38'13", E 67°01'52", 24.09.2020, *Beshko, Shomurodov, Adilov, Abduraimov* (plant community description). **I-4-b**

Aktau Range: Nurata, 09.05.1913, *Korovin* (TASH); near the village Murdash, on cliffs, 04.07.1932, *Knorring, Emme 1* (MW); piedmont valley near the village Khodzha-Akhmeti-Kabir, 21.06.1937, *Demurina* (TASH); north-west of the town Nurata, northern slopes of the western part of the range, 20.06.1937, *Demurina* (TASH). **I-4-b Karatau Range:** Kanimekh District, foothills 16 km north of town, 24.05.1931, *Muravlyansky 21* (MW); surroundings of town Kanimekh, 5 km north of town, 15.07.1934, *Tyshchenko* (TASH); northern foothills of Karatau Range, ascent to Karakarga Pass, 11.06.2018, Beshko (www.plantarium.ru); Gizhduvan District, 40.42852° N, 65.20874° E; 28.09.2024, Beshko (www.inaturalist.org). **I-4-c North-Nuratau insular low mountains:** remnant mountain Pistalitu, 20.06.1997, Beshko 97004 (herbarium of the Nuratau Nature Reserve).

913. *Convolvulus lineatus* L., Syst. Nat. ed. 10, 2: 923 (1759). Perennial, hemicryptophyte. Euro-Siberian, Tethyan. Shrubland, Grassland, Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Range, Farish District, 19.05.1941, *Momotov* (TASH); village Ukhum, 19.05.1981, *Mukhina 81104* (herbarium of the Nuratau Nature Reserve); upper reaches of Gurdara, 30.06.1992, Beshko 92408 (herbarium of the Nuratau Nature Reserve); Yongoklisay, 16.05.2009, Beshko (www.plantarium.ru); upper reaches of Osmansay, above the summer camp «Zangori Olov», N 40°20'13" E 67°13'22", 05.04.2019, 28.06.2019, Beshko, *Adilov* (plant community description).

914. *Convolvulus pilosellifolius* Desr., J.B.A.M.de Lamarck, Encycl. 3: 551 (1792). Perennial, hemicryptophyte. Irano-Turanian. Desert, Shrubland, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** mountains Nuratau, 17.07.1963, *Khaydarov* (TASH). **I-4-b Aktau Range:** valley Chashma, 13.06.1962, *Khaydarov* (TASH).

915. *Convolvulus pseudocantabrica* Schrenk, Enum. Pl. Nov. 1: 21 (1841). Perennial, hemicryptophyte. Hyrcanian, Mountain Middle Asian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, 3 km west of village Tutli, 29.05.1940, *Gomolitsky, Dolgikh* (TASH); Andygensay, 07.07.1995, Beshko 95087, 95088, 95089 (herbarium of the Nuratau Nature Reserve); Yongoklisay, 01.06.2009, Beshko (www.plantarium.ru); piedmonts of Mt. Karatash, N 40°22'03" E 67°22'00", 28.06.2019, Beshko, *Shomurodov, Adilov* (plant community description). **I-4-b Karachatau Range:** southern slope 1 km north-east of the village Ingichka, 07.07.1937, *Demurina* (TASH). **I-4-c North-Nuratau insular low mountains:** the crest of Egarbelistag, 1.5 km west of the Carbonat JSC quarry, N 40°21'44" E 67°29'06", 26.06.2019, 22.09.2020, Beshko, *Shomurodov, Adilov* (plant community description).

916. *Convolvulus subhirsutus* Regel & Schmalh., Trudy Imp. S.-Peterburgsk. Bot. Sada 6: 339 (1879). Perennial, hemicryptophyte. Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** mountains Nuratau, 2 km south of Karabay Pass, 05.08.1932, *Knorring, Emme 122* (MW); Mts. Koytash, south-west of town Jizzakh, 28.05.1940, *Gomolitsky, Dolgikh* (TASH); Ukansay, 13.05.1951, *Zaprometova* (TASH); Gatchasay, 31.05.1954, *Zaprometova* (TASH); nameless valley near Kyzylcha State Farm, 03.06.1957, *Zaprometova* (TASH); Koblatysay, 09.06.1957, *Zaprometova* (TASH); Tamerlane's Gate, Karanchisay, 05.06.1973, *Khamidov* (TASH); Hayatsay, 12.06.1984, *Petrochenko, 84057–060* (herbarium of the Nuratau Nature Reserve); Asrafsay, 13.06.1993, Beshko 93058–060 (herbarium of the Nuratau Nature Reserve); foothills of Nuratau, surroundings of district center Yangikishlak, 13.05.2012, Beshko (TASH); lower reaches of Sobsay, 23.05.2025, Beshko, *Khabibullaev* (TASH). **I-4-b Aktau Range:** 2 km west of the village Tikalik, 06.07.1932, *Knorring, Emme 25* (MW); 10 km south of the village Dekhibaland, 28.05.1936, *Kharchenko* (TASH). **I-4-b Khobduntau Range:** surroundings of Kuropatkino railway station, 07.06.1929, *Androssov* (TASH);

plain between mountains Khobduntau and Karachatau, 07.06.1929, *Kudrjashev* (TASH); Gallaaral District, experimental station of cereal crops, 10.06.1934, *Toporova* (TASH). **I-4-c North-Nuratau insular low mountains:** piedmonts of Pistalitau, near the railway, 15 km east of the village Yangiabab, 13.05.2012, *Beshko* (TASH).

Cuscuta L.

917. *Cuscuta approximata* Bab. (*C. cupulata* Engelm.), Ann. Mag. Nat. Hist. 13: 253 (1844). Annual, therophyte, parasite. Pluriregional. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Host plants are *Medicago sativa*, *Setaria viridis*, *Cynodon dactylon*, *Convolvulus arvensis* and other weeds. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Jizzakh District, northern slope of Koytash Mts. near the village Bogdon, 25.05.1914, *Mikhelson* (LE); Nuratau Nature Reserve, Hayat, dry lateral valley, 1600 m a.s.l., 16.08.1978, *Korshunov* (TASH); Farish District, foothills of Nuratau, near the village Anamuna, 30.05.2011, *Beshko* (www.plantarium.ru). **I-4-b Khobduntau Range:** Gallaaral Station, piedmont steppe, 29.06.1929, *Kudrjashev* 345 (TASH).

918. *Cuscuta australis* R.Br., Prodr. Fl. Nov. Holland.: 491 (1810). Annual, therophyte, parasite. Tethyan, Paleotropical. Artificial terrestrial. Host plants are agricultural crops (vegetables, melons, legumes, ornamentals), weeds, rarely wild herbs. Plain, foothills. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Koytash, southern slope, fallow land, 28.06.1971, *Botschantzev*, *Kamelin* (LE).

919. *Cuscuta brevistyla* A.Braun ex A.Rich., Tent. Fl. Abyss. 2: 79 (1850). Annual, therophyte, parasite. Tethyan. Forest, Shrubland, Grassland, Rocky areas. Host plants are different wild herbs and subshrubs. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Jizzakh District, northern slope of Koytash Mts. near the village Bogdon, 25.05.1914, *Mikhelson* (LE).

920. *Cuscuta campestris* Yunck., Mem. Torrey Bot. Club 18: 138 (1932). Annual, therophyte, parasite. Pluriregional. Artificial terrestrial. Host plants are different crops, vegetables and ornamentals, as well as weeds and wild species of *Polygonum*, *Zygophyllum*, etc.. Plain, foothills. Rare. Alien. **Occurrence records: I-4-a Nuratau Range:** mountains Nuratau, 06.07.1963, *Khaydarov* 1782 (TASH); Jizzakh Region, 02.10.2020, *Mardonov* (www.plantarium.ru).

921. *Cuscuta europaea* L., Sp. Pl.: 124 (1753). Annual, therophyte, parasite. Palearctic. Forest, Shrubland, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Host plants are different wild herbs (*Glycyrrhiza glabra*, *Ferula* sp., *Artemisia* sp., etc.), semishrubs, shrubs and young trees. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** reported in «Conspectus Florae Asiae Mediae», vol. 8, 1986, p. 83.

922. *Cuscuta lehmanniana* Bunge, Beitr. Fl. Russl.: 220 (1852). Annual, therophyte, parasite. Irano-Turanian. Forest, Shrubland, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Host plants are different cultivated and wild herbs, subshrubs, shrubs and trees (more than 200 species). Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** near town Jizzakh, 06.08.1921, *Vvedensky* 1750, 1751 (TASH); Nuratau Nature Reserve, Hayatsay, 07.08.1980, *Mukhina*, *Pjatina* (TASH). **I-4-b Aktau Range:** Khatyrchi District, 03.09.1928, *Lepeschkin* (TASH).

923. *Cuscuta monogyna* Vahl, Symb. Bot. 2: 32 (1791). Annual, therophyte, parasite. Euro-Siberian, Irano-Turanian. Forest, Shrubland, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Host plants are different cultivated and wild herbs, shrubs and trees (species of genera *Rhamnus*, *Salix*, *Tamarix*, *Rosa*, *Fraxinus*, *Pistacia*, *Vitis*, etc.). Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Nature Reserve, watershed between Hayat and Kachaksay, about 1800 m a.s.l., 20.08.1977, *Levichev* (TASH); Hayatsay, Andebaraut, 30.07.2006, *Beshko* 06339 (herbarium of the Nuratau Nature Reserve).

924. *Cuscuta pedicellata* Ledeb., Fl. Altaic. 1: 293 (1829). Annual, therophyte, parasite. Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Host plants are different wild herbs and shrubs (*Poa bulbosa*, *Peganum harmala*, *Alhagi sp.*, *Trifolium sp.*, *Trigonella sp.*, *Galium sp.*, *Artemisia sp.*, etc.). Plain, foothills. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** reported in «Conspectus Florae Asiae Mediae», vol. 8, 1986, p. 79.

925. *Cuscuta pellucida* Butkov, Bot. Mater. Gerb. Inst. Bot. Zool. Akad. Nauk Uzbeksk. S.S.R. 11: 15 (1948). Middle Asian. Annual, therophyte, parasite. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Host plants are different wild herbs and subshrubs (*Alhagi sp.*, *Artemisia sp.*, *Origanum sp.* et al.). Plain, foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Sentob, 24.06.1971, *Botschantzev, Kamelin* (LE). **I-4-b Aktau Range:** 10 km south-east of the town Nurata, northern spurs of Bakhiltau Mts., 23.05.1964, *Khaydarov* (TASH).

Solanaceae Juss.

Datura L.

926. *Datura stramonium* L., Sp. Pl.: 179 (1753). Annual, therophyte. Pluriregional (native to Mexico). Artificial terrestrial. Plain, foothills, montane zone. Rare. Alien. **Occurrence records: I-4-a Nuratau Range:** ascent from Upper Ukhum to Mt. Dushokh, 24.07.1994, *Beshko 94123* (herbarium of the Nuratau Nature Reserve); near the village Lower Hayat, 06.06.2007, *Beshko 07072* (herbarium of the Nuratau Nature Reserve).

Hyoscyamus L.

927. *Hyoscyamus niger* L., Sp. Pl.: 179 (1753). Biennial, therophyte. Circumtemperate. Artificial terrestrial. Plain, foothills, montane zone. Occasional. Alien. **Occurrence records: I-4-a Nuratau Range:** Farish, 04.05.1912, *Paletsky* (LE); southern slopes of Ustuksay, 11.05.1956, *Korotkova 5098* (TASH); Mt. Dushokh, 15.08.1980, *Mukhina 80020* (herbarium of the Nuratau Nature Reserve); [same locality], 16.05.1982, *Mukhina 82047, 82048* (herbarium of the Nuratau Nature Reserve); Madjrumsay, 06.05.1993, *Beshko 93015* (herbarium of the Nuratau Nature Reserve); Jizzakh Region, Farish District, Tykchasay, 40.501008° N 66.77392° E, 11.05.2009, *Beshko* (www.inaturalist.org, www.plantarium.ru); [same locality], 13.04.2016 *Beshko* (www.plantarium.ru). **I-4-b Karatau Range:** basin of Sarmysh, 27.04.1965, *Pryakhin* (TASH). **I-4-b Khobduntau Range:** reported by Kudrjashev in “Vegetation of the Khobduntau and Karachatau Mountains” (1929, p. 66).

928. *Hyoscyamus pusillus* L., Sp. Pl.: 180 (1753). Annual, therophyte. Caucasian, Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** mountains Nuratau, 12.06.1963, *Khaydarov 1690* (TASH); Hayatsay, 27.05.1984, *Petrochenko 84079* (herbarium of the Nuratau Nature Reserve); Hayatsay, field station of Nuratau Nature Reserve, 12.05.2007, *Beshko 07017–019* (herbarium of the Nuratau Nature Reserve, www.plantarium.ru). **I-4-b Aktau Range:** Nurata valley, 03.08.1931, *Tyshchenko* (TASH); piedmont plain near the town Nurata, 09.05.1964, *Markova* (TASH); near the town Nurata, 24.05.1964, *Pryakhin* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 25.05.1956, *Zaprometova* (TASH).

Lycium L.

929. *Lycium dasystemum* Pojark., Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk S.S.S.R. 13: 268 (1950). Shrub, phanerophyte. Irano-Turanian. Wetlands (inland), Artificial aquatic. Plain, foothills. Rare. Native. **Occurrence records: I-4-c North-Nuratau insular low mountains:** Pistalitau, 08.04.1911, *Dimo, Sprygin, Shulga 368* (TASH); Pistalitau, 07.04.1915, *Kultiasow 86* (TASH).

930. *Lycium ruthenicum* Murray, Commentat. Soc. Regiae Sci. Gott. 1: 9 (1780). Shrub, phanerophyte. Caucasian, Irano-Turanian, Siberian. Wetlands (inland), Artificial aquatic. Plain, foothills. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Khanbandy – Chuya, Dzhush, gorge in shistaceous mountains, 02.05.1913, *Korovin 185* (TASH). **I-4-b Aktau Range:** Navoi Region, Nurata District, near the town Nurata, 18.04.2013, 40.550207° N 65.68225° E, *Christian Bravard (lougrou)* (www.inaturalist.org).

Solanum L.

931. *Solanum dulcamara* L. (*Solanum asiae-mediae* Pojark., *Solanum kitagawae* Schonb.-Tem.), Sp. Pl.: 185 (1753). Subshrub, chamaephyte. Circumtemperate. Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Gurdara, valley of stream, 23.06.1971, *Botschantzev, Kamelin* (LE); Bolosay, near the lower waterfall, 14.09.1996, *Beshko 96064, 96065* (herbarium of the Nuratau Nature Reserve).

932. *Solanum nigrum* L., Sp. Pl.: 186 (1753). Annual, therophyte. Pluriregional. Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Alien. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, field station of nature reserve, 10.07.2006, *Beshko 06339* (herbarium of the Nuratau Nature Reserve). **I-4-b Khobduntau Range:** reported by Kudrjashev in “Vegetation of the Khobduntau and Karachatau Mountains” (1929, p. 66).

933. *Solanum villosum* Mill. (*Solanum olgae* Pojark.), Gard. Dict. ed. 8: n.с 2 (1768). Annual, therophyte. Pluriregional. Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Alien. **Occurrence records: I-4-a Nuratau Range:** Karysay, 23.07.1990, *Beshko, Yakovenko 90092* (herbarium of the Nuratau Nature Reserve); Hayatsay, field station of nature reserve, 10.07.2006, *Beshko 06338* (herbarium of the Nuratau Nature Reserve); Jizzakh Region, Farish District, Hayatsay, field station of Nuratau Nature Reserve, 31.08.2020, 40.527082° N 66.774824° E, *Beshko* (www.inaturalist.org, www.plantarium.ru).

Oleaceae Hoffmanns. & Link

Fraxinus L.

934. *Fraxinus angustifolia* subsp. *syriaca* (Boiss.) Yalt. (*Fraxinus syriaca* Boiss.), Fl. Turkey 6: 152 (1978). Tree, phanerophyte. Eastern Mediterranean, Hyrcanian. Forest, Artificial terrestrial. Montane zone. Rare. Alien (introduced). **Occurrence records: I-4-a Nuratau Range:** Ustuksay, 27.07.1936, *Vilkova* (TASH); Hayatsay, Khotunon, 08.06.2006, *Beshko 06211* (herbarium of the Nuratau Nature Reserve); Hayatsay, Khotunon, 22.05.2008, *Beshko 08027* (herbarium of the Nuratau Nature Reserve, TASH).

935. *Fraxinus sogdiana* Bunge (*Fraxinus potamophila* Herder), Beitr. Fl. Russl.: 214 (1852). Tree, phanerophyte. Mountain Middle Asian. Forest. Montane zone. Occasional. Native. IUCN RL (NT). **Occurrence records: I-4-a Nuratau Range:** Tykchasay, 16.08.1980, *Mukhina 80025* (herbarium of the Nuratau Nature Reserve); Madjrumsay, 10.07.1992, *Beshko 92336, 92337* (herbarium of the Nuratau Nature Reserve); Hayatsay, Khotunon, 08.06.2006, *Beshko 06210* (herbarium of the Nuratau Nature Reserve).

Plantaginaceae Juss.

Chaenorhinum (DC.) Rchb.

936. *Chaenorhinum spicatum* Korovin, Bot. Mater. Gerb. Glavn. Bot. Sada R.S.F.S.R. 5: 180 (1924). Annual, therophyte. Middle Asian. Desert, Shrubland, Rocky areas. Plain, foothills. Rare. Native. **Occurrence records: I-4-b Mt. Kokcha:** southern slope of mountains Kokchatau, 18.05.1964, *Adylov, Shorakhimov, Shermatov* 2400 (TASH).

Hippuris L.

937. *Hippuris vulgaris* L., Sp. Pl.: 4 (1753). Perennial, hydrophyte. Circumtemperate. Wetlands (inland). Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Fazilman Lake, 08.06.2013, *Beshko* (TASH, www.plantarium.ru); Samarkand Region, Koshrabad District, Ustusay, 40.53442° N, 66.54251° E, 06.07.2024, *Beshko* (www.inaturalist.org).

Limosella L.

938. *Limosella aquatica* L. in Sp. Pl.: 631 (1753). Annual, hydrophyte. Pluriregional. Wetlands (inland). Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** north shore of Fazilman Lake, 40.552165° N 66.588563° E, 01.07.2024, *Volkova, Dadykin* (IBIW).

Linaria Mill.

939. *Linaria jaxartica* Levichev, Opred. Rast. Sred. Azii 9: 363 (1987). Perennial, hemicryptophyte. Western Tien Shan, Western Pamir-Alay. Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Gallaaral District, Karakuduk, 04.06.1934, *Rybakov* (TASH); northern slopes of Nuratau, the pass 2 km west of Kyzylcha State Farm, 24.05.1960, *Zaprometova, Nikerov* 223, 228 (TASH).

940. *Linaria popovii* Kuprian., Trudy Bot. Inst. Akad. Nauk S.S.S.R., Ser. 1, Fl. Sist. Vyssh. Rast. 4: 319 (1937). Perennial, hemicryptophyte. Mountain Middle Asian. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, northern slopes, 19.07.1937, *Demurina* 615 (TASH); Mts. Koytash, 5 km north of the village Narvan, 19.07.1937, *Demurina* 611 (TASH); Mts. Koytash, southern slopes, 23.07.1937, *Demurina* 721 (TASH); the pass Guzhumsay, 23.07.1937, *Demurina* 673 (TASH); Ukhum Pass, 28.07.1937, *Demurina* 750 (TASH); northern slopes, Tykchabel Pass, 02.08.1940, *Gomolitsky, Dolgikh, Arkhireev* 239 (TASH); valley near the village Piyazli, 24.04.1941, *Bukasov* (TASH); Nuratau Range, northern slopes, 04.06.1957, *Zaprometova* (TASH); Hayatsay, Andebaraut, 02.06.2006, *Beshko* 06158, 06159 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 14.07.2006, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** 8 km south-west of the village Chuya, 29.06.1937, *Demurina* 311 (TASH); 2–3 km south of village Kokbulak, 01.07.1937, *Demurina* 356, 357, 375 (TASH); the spring Bitav, 18.04.1963, *Khaydarov* 815 (TASH); Charkhansay, about 900 m a.s.l., 10.05.2013, *Beshko* (www.plantarium.ru). **I-4-b Karachatau Range:** 3–5 km south-east of the village Kursafar, 07.07.1937, *Makarchuk* 567 (TASH). **I-4-b Khobduntau Range:** Mts. Khobduntau, upper reaches of river Bodbod, 20.06.1929, *Kudrjashev* (TASH).

Plantago L.

941. *Plantago lanceolata* L., Sp. Pl. 1: 113 (1753). Perennial, hemicryptophyte. Circumtemperate. Desert, Forest, Shrubland, Grassland, Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, the village Osmansay, 14.05.1928, *Sovetkina* 490, 491 (TASH); Payaryk District, near the village Savryukbazar, 25.07.1931, *Kobranova* 213, 215 (TASH); southern slopes of Nuratau Range, near the spring, 02.06.1954, *Burygin* 330 (TASH); Nuratau Range, 17.05.1957, *Zaprometova* 182 (TASH); Hayatsay, 1979, *Korshunov* 79006–009 (herbarium of the Nuratau Nature Reserve); Hayatsay, 13.07.1983, *Baskakova* 83065 (herbarium of the Nuratau Nature Reserve); Hayatsay, field station of nature reserve, 07.07.2006, *Beshko* 06214, 06215 (herbarium of the Nuratau Nature Reserve);

upper reaches of Osmansay above the Zangori Olov summer camp, 05.04.2019, 28.06.2019, 28.04.2020, *Beshko*, *Shomurodov*, *Adilov*, *Abduraimov* (plant community description); upper reaches of right tributary of Uchmasay, upstream of the village Jakak, 28.03.2019, 28.06.2019, 27.09.2019, *Beshko*, *Abduraimov* (plant community description); upper reaches of Osmansay, upstream of the village Baland Osman, 05.04.2019; 26.06.2019, 28.04.2020, 02.07.2020, *Beshko*, *Adilov* (plant community description). **I-4-b Aktau Range:** Khanbandy – Chuya, 02.05.1913, *Korovin* (LE); piedmont plain near district center Nurata, 08.05.1963, *Markova* (TASH). **I-4-b Karachatau Range:** Karachatau Range, eastern slope, 02.08.1931, *Kobranova 123* (TASH). **I-4-b Khobduntau Range:** plain between Khobduntau and Karachatau Mts., near the village Gumsay, 02.06.1929, *Kudrjashev* (TASH); Mts. Khobduntau, north-western slopes, 30.07.1931, *Kobranova 111, 112* (TASH); Gallaaral District, experimental station of cereal crops, 17.06.1934, *Toporova* (TASH); [same locality], 03.07.1934, *Toporova* (TASH); Bulungur District, Khobduntau, Ingichkasay, 1275 m a.s.l., 39°53'17.33" N, 67°18'07.41" E, *Beshko* (plant community description).

942. *Plantago major* L., Sp. Pl. 1: 112 (1753). Perennial, hemicryptophyte. Circumtemperate. Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** Payaryk District, near the village Savryukbazar, 25.07.1931, *Kobranova 204, 209* (TASH); Hayatsay, 09.08.1980, *Mukhina 80016, 80017* (herbarium of the Nuratau Nature Reserve); upper reaches of Tykchasay, 18.07.1994, *Beshko* (TASH); Jizzakh Region, Farish District, Hayatsay, 40.527287° N 66.774837° E, 22.09.2010, *Beshko* (www.inaturalist.org). **I-4-b Karachatau Range:** Karachatau Range, eastern slope, 02.08.1931, *Kobranova 121* (TASH).

Veronica L.

943. *Veronica anagallis-aquatica* L., Sp. Pl. 1: 12 (1753). Perennial, hemicryptophyte. Pluriregional. Wetlands (inland), Artificial aquatic. Plain, foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** Gatchasay, 31.05.1954, *Zaprometova 135, 136* (TASH); Hayatsay, Khotunon, 23.05.2006, *Beshko 06039, 06040* (herbarium of the Nuratau Nature Reserve); upper reaches of Hayatsay, 27.05.2023, *Beshko* (www.plantarium.ru).

944. *Veronica anagalloides* Guss., Pl. Rar.: 5, tab. 3 (1826). Perennial, hemicryptophyte. Euro-Siberian, Tethyan. Wetlands (inland), Artificial aquatic. Plain, foothills, montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** Nuratau Range, north slopes, 15.04.1956, *Zaprometova 214* (TASH). **I-4-c North-Nuratau insular low mountains:** plain near piedmonts of Pistalitau, swamps, 04.05.2012, *Batashov* (TASH).

945. *Veronica argute-serrata* Regel & Schmalh., Acta Horti Petropolit. 5: 626 (1877). Annual, therophyte. Pontic, Caucasian, Irano-Turanian. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** Mts. Koytash, pass from the village Uzunbulak to Yangikishlak, 08.08.1932, *Botschantzev* (TASH); Nuratau Range, Farish District, 07.05.1941, *Momotov 179* (TASH); [same locality], 18.05.1941, *Momotov* (TASH); [same locality], 19.05.1941, *Momotov* (TASH); piedmont plain north of Nuratau Range, 23.04.1954, *Zaprometova* (TASH); southern slopes of Nuratau, Ustusay, 03.06.1954, *Burygin 320* (TASH); Nuratau Range, 25.05.1958, *Li, Zakirov 801* (TASH); Nuratau Range, northern slopes, 02.06.1964, *Zuckerwanik 467* (TASH); Hayatsay, 30.05.1969, *Mambetjumaev 116* (TASH); Karysay, 04.05.1984, *Petrochenko 84062* (herbarium of the Nuratau Nature Reserve); Karysay, Pubsay, 16.05.1993, *Beshko 93061* (herbarium of the Nuratau Nature Reserve); Yangikishlak, near the office of nature reserve, 13.04.1995, *Beshko 95013, 95014* (herbarium of the Nuratau Nature Reserve); Hayatsay, Novi Daroz, 05.05.2006, *Beshko 06335* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Gurdara, 03.05.2012, *Beshko* (TASH); Nuratau Nature Reserve, Hayatsay, 05.05.2012, *Beshko* (TASH); watershed of Nuratau Range, about 2 km east

of Saurbel Pass, 06.04.2019, 28.06.2019, *Beshko*, *Shomurodov*, *Adilov*, *Abduraimov* (plant community description); upper reaches of Osmansay, upstream of the village Baland Osman, 05.04.2019; 26.06.2019, *Beshko*, *Adilov* (plant community description). **I-4-b Aktau Range:** Dzhush – Koshrabad, 03.05.1913, *Korovin* (LE); 2–3 km south of the village Kokbulak, 01.07.1937, *Demurina* 370 (TASH).

946. *Veronica arvensis* L., Sp. Pl. 1: 13 (1753). Annual, therophyte. European, Tethyan. Forest, Shrubland, Grassland, Artificial terrestrial. Foothills, montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** Jizzakh Region, Farish District, upper reaches of Osmansay above Zangori Olov summer camp, 40.337156° N 67.223058° E, 29.04.2011, *Beshko* (www.inaturalist.org).

947. *Veronica beccabunga* L., Sp. Pl. 1: 12 (1753). Perennial, hemicryptophyte. Circumtemperate. Wetlands (inland), Artificial aquatic. Plain, foothills, montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** Nurata District, Nuratau, 25.01.1955, *Zaprometova* (TASH); Mt. Dushokh, Kudukcha, 11.06.1995, *Beshko* 95077 (TASH); upper reaches of Ustuksay, 09.06.2013, *Beshko* (www.inaturalist.org, www.plantarium.ru); Navoi Region, Nurata District, Nuratau Range, surroundings of Fazilman Lake, 40°32'37" N 66°35'55" E, 1645 m a.s.l., 12.07.2019, *Beshko* (TASH).

948. *Veronica biloba* Schreb. ex L., Mant. Pl. 2: 172 (1771). Annual, therophyte. Irano-Turanian. Shrubland, Rocky areas. Plain, foothills, montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** Reported by Zakirov in «Vegetation cover of Nuratau Mountains» (1969, p. 38) and «Botanical geography of low mountains of Kyzylkum and Nuratau Range» (1971, p. 72).

949. *Veronica campylopoda* Boiss., Hohenacker, Plantae aleppicae, kurdistanicae et mossulenses: No. 145 (1843), Diagn. Pl. Orient. 4: 80 (1844). Annual, therophyte. Irano-Turanian. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** Farish District, 07.05.1941, *Momotov* 171 (TASH); [same locality], 10.05.1941, *Momotov* (TASH); southern slopes, on the way from the village Yangi-Turmush, 10.05.1956, *Korotkova* 5055 (TASH); Koblatysay, 20.04.1958, *Zaprometova* (TASH); Hayatsay, 06.05.1992, *Beshko* 92417 (herbarium of the Nuratau Nature Reserve); Madjrumsay, 06.05.1993, *Beshko* 93024 (herbarium of the Nuratau Nature Reserve); Yangikishlak, near the office of nature reserve, 13.04.1995, *Beshko* 95012 (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** valley Bitau, 27.05.1964, *Zuckerwanik* 285 (TASH); piedmont plain near district center Nurata, 02.04.1963, *Markova* (TASH); district center Nurata, 07.06.1964, *Markova* (TASH). **I-4-b Karatau Range:** Karatau, 2.5 km from the village Dekhibaland, 28.09.1958, *Zakirov*, *Li* 934 (TASH); Nurata District, near Karakarga Pass, 40.38307° N, 65.5131° E, 18.04.2013, *lougarou* (www.inaturalist.org). **I-4-b Mt. Kokcha:** slopes of Kokchatau, 18.04.1964, *Adylov* 2303 (TASH). **I-4-b Khobduntau Range:** from Sanzar to Koshrabad, 15.04.1913, *Korovin* (LE); Gallaaral State Farm, 4 km from Milyutinskaya Station, 01.05.1930, *Tarasevich* 55 (TASH); surroundings of Milyutinskaya Station, experimental station of cereal crops, 07.05.1934, *Toporova* (TASH).

950. *Veronica capillipes* Nevski, in Trudy Bot. Inst. Akad. Nauk S.S.S.R., Ser. 1, Fl. Sist. Vyssh. Rast. 4: 319 (1937). Annual, therophyte. Hyrcanian, Mountain Middle Asian. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** Urganchi, Iris formation, 01.05.1913, *Korovin* 167, 180 (TASH); mountains near Tamerlane's Gate gorge, on the left bank of Sanzar, 03.05.1921, *Kultiasow* 71 (TASH); Gallaaral District, Gallaaral State Farm, farmstead Karizkuduk, 08.06.1934, *Rybakov* (TASH); Nuratau Range, Farish District, 29.04.1941, *Bukasov* (TASH); Nuratau Range, Farish District, 05.05.1941, *Momotov* (TASH); Nuratau Range, Nurata State Farm, 14.04.1943, *Djanaeva* 34 (TASH); on the way from the village Yangi-Turmush to Saukbulaksay, 10.05.1956, *Korotkova* 5055 (TASH); Alaysay, 25.03.1958, *Zaprometova* 110 (TASH); Nuratau Range, northern slopes, 30.03.1958, *Zaprometova* 234, 240 (TASH); Kyzylcha, 1958, *Zaprometova* (TASH); Gatchasay, 08.04.1958, *Zaprometova* 387 (TASH); Gatchasay, 20.04.1958, *Zaprometova* (TASH); 2 km north of Saurbel Pass,

27.04.1958, *Momotov, Zakirov 135* (TASH); 2 km south of the village Ustakhan, 25.05.1958, *Li, Zakirov 802* (TASH); surroundings of village Hayat, 03.05.1981, *Mukhina* (TASH); Navoi Region, Nurata District, surroundings of village Sentob, 40.5985° N, 66.66428° E, 19.04.2012, *Beshko* (www.inaturalist.org); Jizzakh Region, Farish District, surroundings of village Ukhum, 40.51571° N, 66.78761° E, 12.05.2024, *langli* (www.inaturalist.org); Hayatsay, near the village Upper Hayat, 23.04.2025, *Beshko* (TASH). **I-4-b Aktau Range:** Khanbandy – Chuya, 02.05.1913, *Korovin 194* (TASH); 12 km north of district center Nurata, 27.03.1963, *Markova* (TASH); sources of river Bitau, 27.05.1964, *Zuckerwanik 319* (TASH); Navoi Region, Khatyrchi District, near the pass Langar, 40.3375° N, 66.01388° E, 22.04.2024, *Selyutina* (www.inaturalist.org). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 08.04.1911, *Dimo, Sprygin, Shulga 876* (TASH).

951. *Veronica cardiocarpa* (Kar. & Kir.) Walp., Repert. Bot. Syst. 3: 335 (1844). Annual, therophyte. Irano-Turanian. Forest, Shrubland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** Mts. Koytash, above the village Koytash, 13.07.1972, *Kamelin* (LE); Asrafsay, 04.06.1996, *Beshko 96100* (herbarium of the Nuratau Nature Reserve); 40°29'00" N, 66°48'17,6" E, Karysay, Pubsay, plateau, 13.05.2010, *Beshko 10002, 10003* (TASH, herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, upper reaches, 1200 m a.s.l., 04.05.2012, *Beshko* (TASH); Nuratau Nature Reserve, upper reaches of Hayatsay, about 1200 m a.s.l., 22.04.2023, *Beshko* (www.inaturalist.org, www.plantarium.ru).

952. *Veronica hederifolia* L., Sp. Pl. 1: 13 (1753). Annual, therophyte. European, Tethyan. Forest, Shrubland, Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. **Occurrence records:** **I-4-a Nuratau Range:** Nuratau Nature Reserve, Karysay, 28.04.1982, *Mukhina* (TASH); Hayatsay, 14.04.1984, *Petrochenko 84074, 84075* (herbarium of the Nuratau Nature Reserve); Hayatsay, field station of nature reserve, 10.04.1993, *Beshko 93003* (herbarium of the Nuratau Nature Reserve); Hayatsay, field station of nature reserve, 22.04.2006, *Beshko 06025* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, about 1000 m a.s.l., 40.524793° N 66.759753° E, 03.04.2007, *Beshko* (www.plantarium.ru, www.inaturalist.org); Madjrumsay, 40.5859° N 66.72727° E, 23.03.2024, *Beshko* (www.inaturalist.org).

953. *Veronica intercedens* Bornm., Beih. Bot. Centralbl. 22(2): 112 (1907). Annual, therophyte. Irano-Turanian. Shrubland, Rocky areas. Foothills, montane zone. **Occurrence records:** **I-4-a Nuratau Range:** Bolosay, 10.06.1996, *Beshko 96079* (herbarium of the Nuratau Nature Reserve).

954. *Veronica oxycarpa* Boiss., Diagn. Pl. Orient. Nov. 7: 44 (1846). Perennial, hemicryptophyte. Irano-Turanian. Wetlands (inland), Artificial aquatic. Plain, foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** Nuratau Nature Reserve, valley opposite the village Hayat, 02.06.1981, *Mukhina* (TASH). **I-4-b Aktau Range:** Khanbandy – Chuya – Dzhush, 02.05.1913, *Korovin 188* (TASH). **I-4-b Karatau Range:** Sarmysh, 05.06.1967, *students 165* (TASH). **I-4-b Khobduntau Range:** Mts. Khobduntau, 10.06.1929, *Kudrjashev* (TASH);

955. *Veronica persica* Poir., Lamarck, Encycl. Meth. Bot. 8: 542 (1808). Annual, therophyte. Pluriregional (native to Caucasus and Iran). Forest, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Alien. **Occurrence records:** **I-4-a Nuratau Range:** Hayatsay, field station of nature reserve, 10.04.1993, *Beshko 93001, 93002* (herbarium of the Nuratau Nature Reserve); Hayatsay, field station of nature reserve, 22.04.2006, *Beshko 06031, 06032* (herbarium of the Nuratau Nature Reserve); Hayatsay, field station of nature reserve, 26.06.2007, *Beshko 07036, 07037* (herbarium of the Nuratau Nature Reserve); Jizzakh Region, Farish District, surroundings of village Ukhum, 40.51571° N, 66.78761° E, 12.05.2024, *langli* (www.inaturalist.org).

956. *Veronica polita* Fr., Novit. Fl. Svec. 5: 63 (1819). Annual, therophyte. European, Tethyan. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Rare. Alien. **Occurrence records: I-4-a Nuratau Range:** Koblatysay, 06.04.1958, *Zaprometova* 328 (TASH).

957. *Veronica verna* L., Sp. Pl. 1: 14 (1753). Annual, therophyte. European, Tethyan. Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, field station of nature reserve, 22.04.2006, *Beshko* 06018, 06019 (herbarium of the Nuratau Nature Reserve); Jizzakh Region, Farish District, near the village Osmansay, 40.4125° N 67.29389° E, 14.04.2021, *Beshko* (www.inaturalist.org); Nuratau Nature Reserve, Hayatsay, 40.51928° N 66.73587° E, 14.04.2021, *Beshko* (TASH, www.plantarium.ru, www.inaturalist.org).

Scrophulariaceae Juss.

Scrophularia L.

958. *Scrophularia griffithii* Benth. ex DC., Prodr. 10: 312 (1846). Perennial, hemicryptophyte. Western Tien Shan, Pamir-Alay. Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Nature Reserve, Karysay, Pubsay, northern slope of Mt. Parrandoz, about 1900 m a.s.l., 20.06.2009, *Beshko* (TASH, herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, northern slope of Mt. Hayatbashi, 19.05.2021, *Beshko*, *Madaminov* NB2021234 (TASH).

959. *Scrophularia leucoclada* Bunge, Beitr. Fl. Russl.: 248 (1851). Perennial, hemicryptophyte. Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Mt. Zargar, 3 km north-east of the village Urtasay, 11.05.1957, *Momotov* 251 (TASH); Nakrutsay, 30.05.1964, *Zuckerwanik* (TASH). **I-4-b Aktau Range:** village Chuya, stony riverbed, 15.07.1932, *Knorring*, *Emme* 87 (MW); spurs of Nuratau Mts., Arapsay, 10.06.1936, *Kharchenko* 1298, 1299 (TASH); surroundings of district center Nurata, 21.09.1963, *Khaydarov* 1821 (TASH). **I-4-b Karatau Range:** mountains Karatau, Karimkuduk well, 25.10.1956, *Momotov*, *Li* 522 (TASH); Karatau Range, 26.05.1964, *Pryakhin* (TASH). **I-4-b Mt. Kokcha:** surroundings of the well Kokcha, 16.08.1934, *Tyshchenko* (TASH).

960. *Scrophularia sangtodensis* B. Fedtsch., Consp. Fl. Turkestanicae 5: 86 (1913). Biennial, hemicryptophyte. Pamir-Alay. Grassland, Rocky areas. Foothills. Rare. Native. **Occurrence records: I-4-b Aktau Range:** Dzhusay – Koshabad, 03.05.1913, *Kultiasow* (TASH).

961. *Scrophularia scoparia* Pennell, Acad. Nat. Sci. Philadelphia Monogr. 5: 48 (1943). Perennial, hemicryptophyte. Irano-Turanian. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Balamansay, 30.07.1940, *Gomolitsky*, *Dolgikh*, *Arkhireev* 225 (TASH); Ustuksay, 11.07.1956, *Vvedensky* 80 (TASH).

962. *Scrophularia umbrosa* Dumort., Fl. Belg.: 37 (1827). Perennial, hemicryptophyte. Euro-Siberian, Irano-Turanian. Wetlands (inland), Artificial aquatic. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Gurdara, 23.06.1971, *Botschantzev*, *Kamelin* (LE); Koytash, northern slope, 28.06.1971, *Botschantzev*, *Kamelin* (LE); Hayatsay, 20.08.1977, *Levichev* (TASH); Hayatsay, field station of nature reserve, 07.06.2006, *Beshko* 06190 (herbarium of the Nuratau Nature Reserve); Hayatsay, village Upper Hayat, field station of Nuratau Nature Reserve, about 950 m a.s.l., 17.09.2023, *Beshko* (www.plantarium.ru). **I-4-b Khobduntau Range:** Mts. Khobduntau, valley Bodbod, 20.06.1929, *Kudrjashev* (TASH); Bulungur District, Khobduntau, Ingichkasay, 1275 m a.s.l., 39°53'17.33" N, 67°18'07.41" E, *Beshko* (plant community description).

963. *Scrophularia vvedenskyi* Bondarenko & Filatova, Fl. Uzbekistan 5: 639 (1961). Biennial, hemicryptophyte. Western Tien Shan, Pamir-Alay. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** south-west of Jizzakh Sation, left bank of river Sanzar, 02.05.1921, *Kultiasow* 25 (TASH); Mts. Koytash, south-west of town Jizzakh, the village Jizzakly, 28.05.1940, *Gomolitsky* 61 (TASH); Hayatsay, 20.08.1977, *Levichev* (TASH). **I-4-b Aktau Range:** Dzhush – Koshrabad, 03.05.1913, *Kultiasow* (TASH).

964. *Scrophularia xanthoglossa* Boiss., Diagn. Pl. Orient. Nov., ser. 1, 12: 38 (1853). Perennial, hemicryptophyte. Irano-Turanian. Shrubland, Rocky areas. Montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau mountains, 03.05.1913, *Korovin* (LE); Hayatsay, about 1800 m a.s.l., 20.08.1977, *Levichev* (TASH); Tykchasay, Parrandoz, 11.05.2010, *Beshko* 10004 (TASH).

Verbascum L.

965. *Verbascum blattaria* L., in Sp. Pl.: 178 (1753). Annual, biennial, therophyte. Euro-Siberian, Tethyan. Forest, Shrubland, Grassland, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Sentob, 24.06.1971, *Botschantzev*, *Kamelin* (LE); Karysay, 23.06.1984, *Petrochenko* 84061 (herbarium of the Nuratau Nature Reserve); Hayatsay, field station of nature reserve, 13.06.1990, *Beshko*, *Yakovenko* 90093 (herbarium of the Nuratau Nature Reserve); [same locality], 03.06.2006, *Beshko* 06153 (herbarium of the Nuratau Nature Reserve); [same locality], 24.06.2007, *Beshko* 07030 (herbarium of the Nuratau Nature Reserve); [same locality], 09.07.2006, *Beshko* (www.plantarium.ru); Jizzakh Region, Farish District, Hayatsay, field station of Nuratau Nature Reserve, 40.527376° N 66.774944° E, 31.08.2020, *Beshko* (www.inaturalist.org). **I-4-b Khobduntau Range:** Gallaaral District, experimental station of cereal crops, 06.06.1934, *Toporova*, *Titov* (TASH); [same locality], 03.08.1934, *Toporova*, *Titov* (TASH).

966. *Verbascum erianthum* Benth. (*V. bactrianum* Bunge), Prodr. 10: 235 (1846). Biennial, hemicryptophyte. Hyrcanian, Mountain Middle Asian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Range, north slopes, 29.05.1951, *Zaprometova* (TASH); Asrafsay, 04.06.1996, *Beshko* 96102 (herbarium of the Nuratau Nature Reserve). **I-4-b Khobduntau Range:** Mts. Khobduntau, valley Bodbod, 20.06.1929, *Kudrjashev* (TASH).

967. *Verbascum songaricum* Schrenk, Fischer & C.A.Meyer, Enum. Pl. Nov. 1: 26 (1841). Biennial, hemicryptophyte. Caucasian, Irano-Turanian. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Koshrabad, mountains Mirishkar, 05.05.1913, *Korovin* (TASH); Mts. Koytash, south-west of the village Savryuk, 20.07.1931, *Kobranova* 160 (TASH); Mts. Koytash, southern slope, 23.07.1931, *Kobranova* 70 (TASH); Hayatsay gorge, 05.06.1969, *Mambetjumaev* 152 (TASH); Nuratau Nature Reserve, watershed crest between Hayatsay and Andygensay, about 1550 m a.s.l., 20.07.2007, *Beshko* (www.plantarium.ru); surroundings of Saurbel Pass, about 1200 m a.s.l., 06.06.2009, *Beshko* (www.plantarium.ru); piedmonts of Mt. Karatash, 26.09.2019, 03.07.2020, *Beshko*, *Shomurodov*, *Adilov*, *Abduraimov* (plant community description); upper reaches of Osmansay above the Zangori Olov summer camp, 28.06.2019, *Beshko*, *Shomurodov*, *Adilov*, *Abduraimov* (plant community description); upper reaches of right tributary of Uchmasay, upstream of the village Jakak, 02.07.2020, *Beshko*, *Shomurodov*, *Adilov*, *Abduraimov* (plant community description); watershed of Nuratau Range, about 2 km east of Saurbel Pass, 02.07.2020, *Beshko*, *Shomurodov*, *Adilov*, *Abduraimov* (plant community description). **I-4-b Aktau Range:** Khanbandy – Chuya – Dzhush, 02.05.1913, *Korovin* 193 (TASH); near the spring Pashat, 04.06.1936, *Kharchenko* 1214, 1217 (TASH); spurs of Nuratau Mts., Arasay, 10.06.1936, *Kharchenko* 1292 (TASH). **I-4-b Khobduntau**

Range: valley Bodbod, 20.06.1929, *Kudrjashev* (TASH). **I-4-b Karachatau Range:** south-east of the village Kursafar, 07.07.1937, *Makarchuk* 575 (TASH). **I-4-c North-Nuratau insular low mountains:** 5 km north of town Band, between two dumps of the Uchkulach open pit, N 40°32'22", E 67°16'51", 25.09.2019, *Beshko, Shomurodov, Adilov* (plant community description).

Verbenaceae J.St.-Hil.

Verbena L.

968. *Verbena officinalis* L., Sp. Pl.: 20 (1753). Perennial, hemicryptophyte. Pluriregional. Forest, Shrubland, Grassland, Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** Hayatsay, field station of nature reserve, date unknown, *Korshunov* 02713 (herbarium of the Nuratau Nature Reserve); Hayatsay, 12.06.1984, *Petrochenko* 84083 (herbarium of the Nuratau Nature Reserve); Hayatsay, field station of nature reserve, 21.06.2006, *Beshko* 06171 (herbarium of the Nuratau Nature Reserve). **I-4-b Khobduntau Range:** Bulungur District, Khobduntau, Ingichkasay, 1275 m a.s.l., 39°53'17.33" N, 67°18'07.41" E, *Beshko* (plant community description).

Lamiaceae Martinov (Labiatae Juss.)

Dracocephalum L.

969. *Dracocephalum nuratavicum* Adylov, Opred. Rast. Sred. Azii 9: 361 (1987). Subshrub, chamaephyte. Nuratau, Aktau (endemic). Shrubland, Grassland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** Nuratau Range, Farish District, 06.05.1941, *Momotov* 130 (TASH); Nuratau Range, Mts. Koytash, 28.05.1941, *Lepeschkin* (TASH); declivia borealia jugi Nuratau, loco Sintab, ad ripam sinistram supra puteum; declive austro-orientale, rupibus primigenii denudates, 29.06.1983, *Bulgakova* 184 (holotype TASH); Nuratau Nature Reserve, watershed between Hayatsay and Andygensay, 13.06.1992, *Beshko, Yakovenko* 90083, 90126 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Bolosay, 30.06.1992, *Beshko* 92499, 92450 (herbarium of the Nuratau Nature Reserve); Nuratau Range, Mt. Dushokh, 1750 m a.s.l., 07.06.1994, *Beshko* 94004 (herbarium of the Nuratau Nature Reserve, TASH); Nuratau Range, watershed between Hayatsay and Madjrumsay, 1800 m a.s.l., 06.06.2011, *Beshko* 054/2011 (herbarium of the Nuratau Nature Reserve, TASH); Nuratau Nature Reserve, Hayatsay, 06.06.2011, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, about 1600 m a.s.l., 30.05.2016, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, upper reaches of Hayatsay, 06.06.2018, *Abdullaeva* (TASH); Nuratau Nature Reserve, Hayatsay, about 1500 m a.s.l., 16.06.2019, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, watershed of Hayatsay, 1335 m a.s.l., 16.06.2019, *Beshko* (TASH); Nuratau Nature Reserve, Hayatsay, about 1450 m a.s.l., 30.05.2020, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 1325 m a.s.l. 19.05.2021, *Beshko, Madaminov* NB20212247 (TASH). **I-4-b Aktau Range:** mountains Aktau, 00.06.1984, *Shimolina* (TASH).

Drepanocaryum Pojark.

970. *Drepanocaryum sewerzowii* (Regel) Pojark., Fl. URSS 20: 228 (1954). Annual, therophyte. Irano-Turanian. Forest, Shrubland, Rocky areas, Artificial terrestrial. Foothills, montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** Ak-Chap – Khanbandy – Chuya, shistaceous mountains, 02.05.1913, *Korovin* (TASH); Tamerlane's Gate, 12.04.1915, *Fedtschenko* (LE); Ukansay, 02.04.1958, *Zaprometova* 290 (TASH); Gatchasay, 27.04.1958, *Zaprometova* (TASH); Gatchasay,

29.04.1958, *Zaprometova* (TASH); Gatchasay, 01.05.1958, *Burygin 31* (TASH); Tykchasay, 23.05.1983, *Fominykh 83073* (herbarium of the Nuratau Nature Reserve); Hayatsay, field station of nature reserve, 02.05.1992, *Beshko 92420* (herbarium of the Nuratau Nature Reserve); [same locality], 21.04.2006, *Beshko 06016, 06017* (herbarium of the Nuratau Nature Reserve, TASH); Jizzakh Region, Farish District, Hayatsay, field station of nature reserve, 40.527578° N 66.775029° E, 12.05.2007, *Beshko* (www.inaturalist.org); Nuratau Nature Reserve, Hayatsay, 40.522187° N 66.763718° E, 05.05.2020, *Akbarov, Turdiev, Juramurodov 5052020017* (TASH); Nuratau Nature Reserve, Hayatsay, about 1100 m a.s.l., 14.05.2024, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** mountains Aktau, Samarkand Region, 29.05.1963, *Khaydarov 1672* (TASH); northern slope of Aktau Range, Kattasay, 40.339269° N 66.008395° E, 07.05.2020, *Akbarov, Turdiev, Juramurodov 7052020173* (TASH). **I-4-b Karatau Range:** Navoi Region, Nurata District, surroundings of Karakarga Pass, 40.37056° N, 65.48857° E, 27.04.2024, *Beshko* (www.plantarium.ru, www.inaturalist.org). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 07.04.1911, *Dimo, Sprygin, Shulga 1068* (TASH); Jizzakh Region, Farish District, Balyklitau, 40.32731° N, 67.61698° E, 09.04.2024, *Turginov* (www.inaturalist.org).

Hypogomphia Bunge

971. *Hypogomphia turkestanica* Bunge (*Hypogomphia turkestanica* Regel), Bull. Acad. Imp. Sci. Saint-Petersbourg, sér. 3, 18: 30 (1872). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** northern spurs of Nuratau Mts., surroundings of the well Kazybay, foothills, 05.05.1939, *Mikhaylova, Popova* (TASH); Nuratau Range, Farish District, 01.05.1941, *Momotov* (TASH); Nuratau Range, Akbel, 14.06.1963, *Khaydarov 1739* (TASH); Farish District, foothills of Nuratau between the villages Karatash and Egiz-Bulak, 03.05.2013, *Beshko* (www.plantarium.ru, www.inaturalist.org). **I-4-b Aktau Range:** Dzhush – Koshrabad, *Iris* steppe, 03.05.1913, *Korovin 243* (TASH); mountains Aktau, Khatyrchi District, the village Turk, loess hills, 00.06.1928, *Lepeschkin* (TASH); valley Chashma, 24.04.1962, *Khaydarov 82* (TASH); [same locality], 10.05.1962, *Khaydarov 134* (TASH); near district center Nurata, 13.05.1963, *Markova* (TASH); southern slope of Aktau Range, valley Altynsay, downstream of the village Langar, 28.04.1979, *Pimenov, Kljuykov, Boryaev, Baranova, Vassiljeva 148* (MW). **I-4-b Karatau Range:** Navoi Region, Nuratau mountains, southern foothills Karatau Range, near the road to Karakarga Pass, about 450 m a.s.l., 17.04.2012, *Beshko* (www.plantarium.ru, www.inaturalist.org); southern foothills of Karatau Range, about 370 m a.s.l., 21.04.2024, *Beshko* (www.plantarium.ru). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 07.04.1911, *Dimo, Sprygin, Shulga 1062* (TASH); piedmonts of remnant mountains Egarbelistag, near the Carbonat JSC quarry, 500 m a.s.l., 40.35118° N 67.50488° E, 03.05.2013, *Tojibaev, Beshko, Batashov, Azimova* (TASH).

Hyssopus L.

972. *Hyssopus seravschanicus* (Dubj.) Pazij, Index Seminum (Hort. Bot. Univ. As. Med.) 1945: 4 (1945). Subshrub, chamaephyte. Western Tien Shan, Pamir-Alay. Shrubland, Rocky areas. Montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** reported in «Conspectus Florae Asiae Mediae», vol. 9, 1987, p. 163.

Kudrjaschevia Pojark.

973. *Kudrjaschevia jacubii* (Lipsky) Pojark., Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk S.S.S.R. 15: 281 (1953). Annual, therophyte. Western Tien Shan, Pamir-Alay. Shrubland, Rocky areas. Montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** upper reaches of Karakulsay, 11.06.1993, *Beshko 93045, 93046* (herbarium of the Nuratau Nature Reserve, TASH); Nuratau Nature Reserve, upper reaches of Hayatsay, Alichak, 27.06.2012, *Beshko* (TASH).

Lagochilus Bunge ex Benth.

974. *Lagochilus inebrians* Bunge, Beitr. Fl. Russl.: 262 (1852). Subshrub, chamaephyte. Kyzylkum, Western Pamir-Alay. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. UzbRDB 3. **Occurrence records: I-4-a Nuratau Range:** Nurata District, Kyzylchali, 16.07.1931, *Kasimenko 1499* (TASH); Nuratau mountains, Sarymsak, 30.07.1931, *Kobranova* (TASH); Mts. Koytash, on the way from the village Yangikishlak to the uplands Kaunchitau, 10.08.1934, *Botschantzev* (TASH); 6–7 km west of the village Guzhum, 23.07.1937, *Demurina 724* (TASH); Hayat Pass, 03.08.1940, *Gomolitsky, Dolgikh 241* (TASH); variegated foothills near Karakishlak, 17.05.1941, *Popov, Zakharov* (TASH); Gatchasay, 31.05.1954, *Zaprometova 118* (TASH); Gatchasay, 14.07.1956, *Vvedensky 117* (TASH); Uruskuduk, 25.05.1963, *Khaydarov 1322* (TASH); Nuratau Nature Reserve, valley Hayat, August 1980, *Pjatina* (TASH); Nuratau Nature Reserve, Hayatsay, Alichak, 1500 m a.s.l., 28.06.1994, *Beshko* (TASH); Nuratau Nature Reserve, 15.05.2001, *Egamberdiev* (TASH); lower reaches of Hayatsay, 22.07.2007, *Beshko 07068, 07069* (herbarium of the Nuratau Nature Reserve, TASH); Navoi Region, piedmonts of Nuratau Range, about 370 m a.s.l., 11.06.2018, *Beshko* (www.plantarium.ru); foothills of Nuratau, near the village Lower Hayat, about 700 m a.s.l., 31.08.2020, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** the town Nurata, north slopes of Nuratau Mts., 23.04.1913, *Korovin 23* (TASH); mountains Aktau, village Angudan, foothills, 10.06.1928, *Lepeschkin* (TASH); foothills near 3rd farmstead of Narpay State Farm, 29.09.1931, *Gomolitsky 762* (TASH); Nurata valley, dry riverbed, 15.07.1932, *Neustrueva-Knorring, Emme* (MW); north of the village Gazgan, 14.07.1937, *Mironov 7* (TASH); plain between mountains Koytash and Takhkuta, 31.05.1941, *Lepeschkin* (TASH); Aktau, 3 km west of the village Aktash, 12.05.1957, *Momotov, Li 359, 360* (TASH); Nurata District, the village Chashma (south of Bakhiltau Mts.), foothills, 05.06.1964, *Pryakhin* (TASH); Samarkand Region, Nurata District, near the village Kuray (south of Bakhiltau), 06.06.1964, *Pryakhin* (TASH); Aktau, dry riverbeds 10 km from the spring Bitau, 1982, *Shermatov, Kazakbaev, Levichev, Tagaev 106* (TASH). **I-4-b Karatau Range:** foothills of Nuratau, mountains Karatau, surroundings of Kalkanata, 05.06.1926, *Popov 1304* (TASH, (MW); surroundings of town Kanimekh, 7 km north of town, remnant hills, 15.07.1934, *Tyshchenko 154* (TASH); mountains Karatau, eastern part, 20.05.1936, *Kharchenko 1081* (TASH); 3 km north of Karymkuduk well, 25.10.1956, *Momotov, Li 523, 524, 535* (TASH). **I-4-b Mt. Kokcha:** Kokcha Mts., stony slopes and riverbeds, 17.08.1934, *Sakhabutdinov, Neumina 862* (TASH). **I-4-b Karachatau Range:** Karachatau, 09.06.1929, *Kudrjashev* (TASH).

975. *Lagochilus olgae* Kamelin, Bot. Zhurn. (Moscow & Leningrad) 58: 631 (1973). Subshrub, chamaephyte. Nuratau (endemic). Shrubland, Grassland, Rocky areas. Montane zone. Rare. Native. UzbRDB 2. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, southern slopes, northern slope in upper reaches of Garashasay, 20.07.1937, *Demurina 640* (TASH); 2–3 km east-north-east of Ukhum Pass, 29.07.1937, *Demurina 806* (TASH); Nuratau Range, Farish District, 06.05.1941, *Momotov 133* (TASH); 6 km south of the village Upper Ukhum, 03.05.1958, *Li, Zakirov 305* (TASH); 3 km north-west of the village Khukala, 17.05.1958, *Li, Zakirov 630* (TASH); mountains 2–5 km south of the village Sarymsak, 14.06.1962, *Karimov* (TASH); Nakrutsay, middle reaches, 30.05.1964, *Zuckerwanik 401* (TASH); valley Uchma, 01.06.1964, *Zuckerwanik 454* (TASH); ad declivitates septentrionales jugi Nuratau, Gurdara prope pagum Sarymsak, locis schistosis, 23.06.1971, *Botschanzev, Kamelin 391* (LE); Nuratau Nature Reserve, Karysay, 1600 m a.s.l., 05.08.1981, *Mukhina* (TASH); Hayatsay, Khotunon, 16.07.1990, *Beshko, Yakovenko 90084–086* (herbarium of the Nuratau Nature Reserve); upper reaches of Gurdara, 30.06.1992, *Beshko 92491* (herbarium of the Nuratau Nature Reserve); Karysay, Kazhum, 22.07.1992, *Beshko 92471* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Tykchasay, 18.06.2010, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, about 1575 m a.s.l., 07.07.2024, *Beshko* (www.plantarium.ru).

976. *Lagochilus proskorjakovii* Ikramov, Fl. Centr. Azii: 38 (1976). Subshrub, chamaephyte. Nuratau (endemic). Shrubland, Rocky areas. Montane zone. Rare. Native. UzbRDB 1. **Occurrence records: I-**

4-a Nuratau Range: Nuratau mountains (Koytash), *unknown date and collector* (TASH); Karysay, Hushkak, 27.06.2011, *Beshko 2011/063–064* (herbarium of the Nuratau Nature Reserve, TASH, www.plantarium.ru); Nuratau Nature Reserve, watershed of Hayatsay and Madjrum, 1800 m a.s.l., 26.07.2012, *Beshko* (TASH); Nuratau Nature Reserve, western slope of Mt. Hayatbashi, about 2160 m a.s.l., 10.08.2012, *Beshko* (www.plantarium.ru); Samarkand Region, Koshrabad District, upper reaches of Ustuksay, near watershed with Sentobsay, 1736 m a.s.l., 40°31'01,9" N 66°35'44,1" E, 08.06.2013, *Beshko* (TASH); Nuratau Nature Reserve, watershed crest between valleys Hayat and Madjrum, 1820 m a.s.l., 16.06.2019, *Beshko* (TASH); Nuratau Nature Reserve, watershed Hayat-Madjrum, 1809 m a.s.l., 19.05.2021, *Beshko, Madaminov NB2021239* (TASH); Nuratau Nature Reserve, watershed of Hayatsay and Madjrum, 1850 m a.s.l. 40.5116° N, 66.7228° E 05.06.2022, *Beshko* (TASH, www.plantarium.ru); upper reaches of Ustuksay, about 1750 m a.s.l., 05.07.2024, *Beshko* (www.plantarium.ru).

Lallemantia Fisch. & C.A.Mey.

977. *Lallemantia royleana* (Benth.) Benth., A.P.de Candolle, Prodr. 12: 404 (1848). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** Gallaaral District, Karakuduk, 05.06.1934, *Rybakov* (TASH); Farish District, piedmont plain, 17.04.1952, *Novikova* (TASH); Nuratau, piedmont plain, 10.04.1958, *Galkina* (TASH); 0.5 km west of the village Tegirmanaul, foothills, 16.05.1958, *Li, Zakirov 598* (TASH); northern slope of Nuratau Range south-west of town Jizzakh, Sanzar river gorge, 26.04.1979, *Pimenov, Kljuykov, Boryaev, Baranova, Vassiljeva 22* (MW); foothills of Nuratau between the villages Karatash and Egiz-Bulak, 03.05.2013, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** Koshrabad – Shurcha, 16.04.1913, *Teplov 11* (TASH); surroundings of district center Nurata, piedmont plain, 13.05.1964, *Markova* (TASH). **I-4-b Karatau Range:** station Karmana – mountains Karakarga, *Iris*-sagebrush steppe, 22.04.1913, *Korovin 6* (TASH); Bukhara Region, Gizhduvan District, Nuratau mountains, western part of Karatau Range, 13.04.2025, *Beshko* (TASH). **I-4-b Mt. Kokcha:** southern slope of Kokchatau Mts., 18.05.1958, *Adylov 2402* (TASH). **I-4-b Khobduntau Range:** Sadyr – Koshrabad, 15.04.1913, *Teplov 8* (TASH); plain between mountains Khobduntau and Karachatau, surroundings of Kuropatkino railway station, 08.06.1929, *Kudrjashev* (TASH); Milyutinskaya Station, Gallaaral State Farm, 4 km north-west of the village Alyamli, 00.04.1930, *Tarasevich 33* (TASH); Gallaaral District, experimental station of cereal crops, 03.05.1934, *Toporova* (TASH); [same locality], 07.05.1934, *Toporova* (TASH); [same locality], 13.05.1934, *Toporova* (TASH); Gallaaral District, experimental station of cereal crops, near the railway, 14.05.1934, *Toporova* (TASH); Gallaaral District, experimental station of cereal crops, 07.06.1934, *Toporova* (TASH); [same locality], 24.07.1934, *Toporova* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 08.04.1911, *Dimo, Sprygin, Shulga 879* (TASH); Pistalitau, 08.04.1915, *Popov 22* (TASH); Pistalitau, 09.04.1915, *Popov 74* (TASH); mountains Pistalitau, 22.04.1986, *Pimenov, Kljuykov, Vassiljeva, Melibaev 118* (MW); piedmonts of remnant mountains Egarbelistag, near the Carbonat JSC quarry, 500 m a.s.l., 40.35118° N 67.50488° E, 03.05.2013, *Tojibaev, Beshko, Batashov, Azimova* (TASH).

Lamium L.

978. *Lamium album* L., Sp. Pl.: 579 (1753). Perennial, hemicryptophyte. Palearctic. Wetlands (inland). Montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** reported in «Conspectus Florae Asiae Mediae», vol. 9, 1987, p. 116.

979. *Lamium amplexicaule* L., Sp. Pl.: 579 (1753). Annual, therophyte. Palearctic. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** Nuratau, 31.03.1915, *Spiridonov* (TASH); mountains near Tamerlane's Gate gorge, left bank of river Sanzar, 03.05.1921, *Kultiasow 101* (TASH);

Nuratau Range, Farish District, 29.04.1941, *Bukasov* (TASH); Nuratau Range, Farish District, 06.05.1941, *Momotov 132* (TASH); Koblatysay, 07.04.1952, *Zaprometova* (TASH); valley 2.5 km south-east of Kyzylcha State Farm, 21.04.1954, *Zaprometova* (TASH); Mt. Zargar, 3 km north-east of the village Urtasay, 11.05.1957, *Momotov, Li 281* (TASH); Gatchasay, 30.03.1958, *Zaprometova 33* (TASH); 2 km north of Saurbel Pass, 27.04.1958, *Momotov, Li, Zakirov 134* (TASH); Hayatsay gorge, 30.05.1969, *Mambetjumaev 65* (TASH); Nuratau Nature Reserve, Hayatsay, about 1000 m a.s.l., 29.05.1978, *Korshunov* (TASH); Hayatsay, 07.04.1992, *Beshko 92013* (herbarium of the Nuratau Nature Reserve); Hayatsay, field station of nature reserve, 21.04.2006, *Beshko 06003, 06004* (herbarium of the Nuratau Nature Reserve); Hayatsay, 40.52499° N, 66.75678° E, 15.04.2007, *Beshko* (www.inaturalist.org); Jizzakh Region, Farish District, surroundings of village Chuprak, 40.33977° N, 67.25332° E, 19.05.2013, *lougrou* (www.inaturalist.org); www.inaturalist.org; surroundings of the village Ukhum, www.inaturalist.org, 05.05.2020, *Juramurodov, Akbarov, Turdiev 5052020050* (TASH); www.inaturalist.org; Nuratau Nature Reserve, Hayatsay, 09.06.2020, *Ortikov, Pulatov, Turdiev, Juramurodov, Makhmudjanov 9062020567* (TASH); Jizzakh Region, Farish District, surroundings of village Ukhum, 40.51571° N, 66.78761° E, 12.05.2024, *langli* (www.inaturalist.org). **I-4-b Aktau Range:** valley Chashma, 03.04.1963, *Khaydarov 263* (TASH); the town Nurata, piedmont plain, 04.04.1963, *Markova* (TASH). **I-4-b Karatau Range:** Navoi Region, Nurata District, Sarmyshsay, 40.28444° N, 65.58905° E, 19.04.2024, *jeanjacquesgodon* (www.inaturalist.org). **I-4-b Khobduntau Range:** surroundings of Milyutinskaya Station, 00.05.1934, *Tarasevich 56* (TASH); Gallaaral District, experimental station of cereal crops, 13.05.1934, *Toporova* (TASH).

Leonurus L.

980. *Leonurus turkestanicus* V.I.Krecz. & Kuprian., Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk S.S.S.R. 11: 136 (1949). Perennial, hemicryptophyte. Mountain Middle Asian. Shrubland, Grassland, Rocky areas, Wetlands (inland). Montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** Bolosay, 30.06.1992, *Beshko 92386, 92387* (herbarium of the Nuratau Nature Reserve); Karysay, Pubsay, 20.06.2009, *Beshko 09031, 09032* (herbarium of the Nuratau Nature Reserve, TASH); Nuratau Nature Reserve, Hayatsay, 09.06.2020, *Ortikov, Pulatov, Turdiev, Juramurodov, Makhmudjanov 9062020664* (TASH); Nuratau Nature Reserve, upper reaches of Hayatsay, about 1600 m a.s.l., 27.05.2023, *Beshko* (www.plantarium.ru).

Lycopus L.

981. *Lycopus europaeus* L., Sp. Pl.: 21 (1753). Perennial, hemicryptophyte. Circumtemperate. Wetlands (inland), Artificial aquatic. Plain, foothills, montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** Sentobsay, 08.09.1996, *Beshko 96061–063* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, lower reaches of Madjrumsay, about 700 m a.s.l., 13.09.2014, *Beshko* (TASH); Nuratau Nature Reserve, lower reaches of Madjrumsay, 40.58202° N, 66.72396° E, 31.08.2020, *Beshko* (www.inaturalist.org); Nuratau Nature Reserve, lower reaches of Madjrumsay, about 800 m a.s.l., 16.09.2023, *Beshko* (www.inaturalist.org, www.plantarium.ru).

Marrubium L.

982. *Marrubium anisodon* K.Koch, Linnaea 21: 696 (1849). Perennial, hemicryptophyte. Pontic, Caucasian, Irano-Turanian. Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** Mts. Koytash, southern slope, 23.07.1931, *Kobranova 60* (TASH); Kyzylcha State Farm, 29.05.1951, *Novikova* (TASH); Koblatysay, 08.06.1957, *Zaprometova* (TASH); Nuratau Mts., Jizzakh Region, 12.05.1963, *Khaydarov 1699* (TASH); Hayatsay, 12.06.1990, *Beshko, Yakovenko 90088* (herbarium of the Nuratau Nature Reserve); Hayatsay, Novi Daroz, 23.05.2006, *Beshko 06139, 06140* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, about 1100 m a.s.l., 05.06.2022,

Beshko (www.plantarium.ru); Navoi Region, Nurata District, near the village Simbulak, 31.05.2023, *Fateryga* (www.plantarium.ru). **I-4-b Aktau Range:** near the village Dekhibaland, 28.05.1936, *Kharchenko 1122* (TASH); valley Chashma, 13.06.1962, *Khaydarov 175* (TASH). **I-4-b Khobduntau Range:** Mts. Khobduntau, mountain peaks opposite the village Gumsay, 11.06.1929, *Kudrjashev* (TASH).

Mentha L.

983. *Mentha longifolia* var. *asiatica* (Boriss) Rech.f., Fl. Iranica 150: 559 (1982). Perennial, hemicryptophyte. Irano-Turanian. Wetlands (inland), Artificial aquatic. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Payaryk District, near the village Savryukbazar, 25.07.1931, *Kobranova* (TASH); Nuratau Nature Reserve, Hayatsay, about 1300 m a.s.l., 03.08.1980, *Mukhina* (TASH); Hayatsay, 13.06.1983, *Baskakova 83061* (herbarium of the Nuratau Nature Reserve); Hayatsay, field station of nature reserve, 14.06.1990, *Beshko*, *Yakovenko 90087*, *90120* (herbarium of the Nuratau Nature Reserve); Hayatsay, Alichak, 25.06.2006, *Beshko 06242*, *06243* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, lower reaches of Madjrumsay, about 700 m a.s.l., 12.07.2007, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** valley Chashma, 13.06.1962, *Khaydarov 169* (TASH). **I-4-b Khobduntau Range:** Mts. Khobduntau, north-western slope, 30.07.1931, *Kobranova* (TASH).

984. *Mentha pamiroalaica* Boriss., Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk S.S.S.R. 16: 283 (1954). Perennial, hemicryptophyte. Western Pamir-Alay. Wetlands (inland). Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Sentob, 24.06.1971, *Botschantzev*, *Kamelin* (LE); Hayatsay, Alichak, 13.08.2010, *Beshko 10025–027* (TASH, herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, about 1600 m a.s.l., 10.07.2015, *Beshko* (www.plantarium.ru).

Nepeta L.

985. *Nepeta cataria* L., Sp. Pl.: 570 (1753). Perennial, hemicryptophyte. Palearctic. Shrubland, Rocky areas, Wetlands (inland). Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Gurdara, 23.06.1971, *Botschantzev*, *Kamelin* (LE); Koytash, northern slope, 28.06.1971, *Botschantzev*, *Kamelin* (LE); Hayatsay, 1200 m a.s.l., Alichak – Novi Khushk, 12.07.1978, *Korshunov* (TASH); Hayat, 1200 m a.s.l., 15.07.1978, *Korshunov* (TASH); Hayatsay, 1250 m a.s.l., Alichak – Novi Khushk, 09.08.1978, *Korshunov* (TASH); Kachaksay, 1400 m a.s.l., 04.07.1981, *Mukhina* (TASH); Karysay, Pubsay, 15.07.1993, *Beshko 93086* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, gorge Bolosay, about 1500 m a.s.l., 01.07.2008, *Beshko* (www.plantarium.ru).

986. *Nepeta olgae* Regel, Izv. Imp. Obshch. Lyubit. Estestv. Moskovsk. Univ. 34(2): 65 (1882). Perennial, hemicryptophyte. Western Tien Shan, Pamir-Alay. Shrubland, Rocky areas. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** near the village Urganchi, 10.07.1932, *Knorring*, *Emme 49* (MW); Mts. Koytash, 700–900 m a.s.l., July 1982, *Shermatov*, *Kazakbaev*, *Levichev*, *Tagaev 182* (TASH). **I-4-b Aktau Range:** Nurata, Khanbandy dam – Chuya, 02.05.1913, *Korovin 196* (TASH); mountains Aktau, village Angudan, 10.06.1928, *Lepeschkin* (TASH); Aktau, 10.06.1928, *Yakimova* (TASH); south of Uzunkuduk well, 02.08.1937, *Mironov 90* (TASH); the spring Bitav, 18.04.1963, *Khaydarov 936* (TASH); sources of river Bitau, 27.05.1964, *Zuckerwanik 301* (TASH); the spring Bitau, 30.07.1982, *Shermatov*, *Kazakbaev*, *Levichev*, *Tagaev 107* (TASH); southern slope of Aktau Range, surroundings of Langar Pass, about 950 m a.s.l., 18.05.2024, *Beshko* (www.plantarium.ru). **I-4-b Karatau Range:** variegated foothills near Ijant, 17.05.1941, *Zakirov* (TASH); near the village Kuraish (south of Bakhiltai Mts.), 06.06.1964, *Pryakhin* (TASH); Bubak (ruins south of Bakhiltai Mts.), 07.06.1964, *Pryakhin* (TASH); Sarmysh, 05.06.1967, *Pryakhin* (TASH); road Navoi – Nurata, Karakarga Pass, 24.04.1987, *Pimenov*, *Vassiljev 58* (MW).

987. *Nepeta pungens* Benth., Labiat. Gen. Spec.: 487 (1834). Annual, therophyte. Irano-Turanian. Shrubland, Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Mt. Hayatbashi, 24.07.1993, *Beshko* 93984 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, upper reaches of Hayatsay, Novi Khushk, 1600 m a.s.l., 31.05.2012, *Beshko* (TASH); Nuratau Nature Reserve, watershed crest between Hayatsay and Madjrumsay, about 1850 m a.s.l., 05.06.2022, *Beshko* (TASH, www.plantarium.ru). **I-4-b Khobduntau Range:** Mts. Khobduntau, a peak opposite the village Kazanly, 1600 m a.s.l., 27.06.1929, *Kudrjashev* (TASH).

988. *Nepeta schtschurowskiana* Regel (*Lophanthus schtschurowskianus* (Regel) Lipsky), Izv. Imp. Obshch. Lyubit. Estestv. Moskovsk. Univ. 34(2): 66 (1882). Perennial, hemicryptophyte. Western Tien Shan, Pamir-Alay. Shrubland, Grassland, Rocky areas. Montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** 2–3 km east-north-east of Ukhum Pass, 29.07.1937, *Demurina* 808 (TASH); northern slope, 1500 m a.s.l., 07.06.1981, *Mukhina* (TASH); northern slope, surroundings of village Hayat, 1600 m a.s.l., 09.07.1981, *Mukhina* (TASH); Ukhum Pass, 19.06.1992, *Beshko* 92323, 92324, 92325 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, upper reaches of Hayatsay, about 2000 m a.s.l., 15.05.2007, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, upper reaches of Novi Khushk, 31.05.2012, *Beshko* (TASH); Nuratau Nature Reserve, upper reaches of Hayatsay, Alichak, 27.06.2012, *Beshko* (TASH); Nuratau Nature Reserve, Hayatsay, about 1900 m a.s.l., 27.05.2014, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, watershed crest between valleys Hayat and Madjrum, 16.06.2019, *Beshko* (TASH); Nuratau Nature Reserve, watershed crest between Hayatsay and Madjrumsay, about 1850 m a.s.l., 05.06.2022, *Beshko* (TASH).

Origanum L.

989. *Origanum vulgare* subsp. *gracile* (K.Koch) Ietsw. (*Origanum tyttanthum* Gontsch.), Leiden Bot. Ser. 4: 111 (1980). Perennial, hemicryptophyte. Hyrcanian, Mountain Middle Asian. Shrubland, Grassland, Rocky areas, Wetlands (inland). Montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, northern slope, 29.07.1931, *Kobranova* 83 (TASH); Nuratau Nature Reserve, Pubsay, eastern slope, 14.08.1980, *Mukhina* (TASH); Nuratau Nature Reserve, Karysay, about 1400 m a.s.l., 14.08.1980, *Mukhina* (TASH); Madjrumsay, Fargun, 06.08.1983, *Petrochenko* 83041 (herbarium of the Nuratau Nature Reserve); **I-4-b Khobduntau Range:** ravine Bodbod, 23.04.1927, *Androssov* (TASH); valley Bodbod, 20.06.1929, *Kudrjashev* (TASH); Khobduntau Mts., north-western slopes, 30.07.1931, *Kobranova* 108 (TASH); Bulungur District, Khobduntau, Ingichkasay, 1275 m a.s.l., 39°53'17.33" N, 67°18'07.41" E, *Beshko* (plant community description).

Phlomis L.

990. *Phlomis linearifolia* Zakirov, Bot. Mater. Gerb. Inst. Bot. Zool. Akad. Nauk Uzbeksk. S.S.R. 9: 3 (1947). Perennial, hemicryptophyte. Nuratau, Kuhistan (subendemic). Shrubland, Grassland, Rocky areas. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, 3 km west of village Tutli, 28.05.1940, *Gomolitsky, Dolgikh* 85, 87 (TASH); Mts. Koytash, Arbankul between the village Sarymsakly and Tutli, 29.05.1940, *Gomolitsky, Dolgikh* 68 (TASH); near the village Ulfatan, 24.07.1940, *Gomolitsky, Dolgikh* 212 (TASH); Nuratau Range, Farish District, 26.04.1941, *Momotov* 55 (TASH); [same locality], 09.05.1941, *Momotov* (TASH); Koblatysay, near the pass, 800 m a.s.l., 27.05.1953, *Zaprometova* 376, 379 (TASH); Ustuksay, foothills, 13.07.1956, *Vvedensky* 116 (TASH); Mt. Zargar 2 km north-east of the village Urtasay, 1400 m a.s.l., 11.05.1957, *Momotov, Li* 271 (TASH); 2 km north-west of the village Khukala, 17.05.1958, *Li, Zakirov* 620, 621 (TASH); Navoi Region, Sentobsay, middle reaches of Kargesay, 1400 m a.s.l., 13.07.1992, *Beshko* 92338, 92339 (TASH, herbarium of the Nuratau Nature Reserve); Jizzakh Region, Farish District, foothills of Nuratau, surroundings of the village Karatash, 10.05.2010, *Beshko* (www.plantarium.ru); main watershed 1 km west of Saurbel Pass, 40°21'34" N 67°05'45" E, 1285 m a.s.l., 27.05.2012,

Beshko (TASH, www.plantarium.ru); southern slope, Ustuksay, about 1700 m a.s.l., 09.06.2013, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** 5 km west of the village Tikalik, 04.07.1932, *Knorring, Emme* 33 (LE); 7–9 km south of village Chuya, 01.07.1937, *Demurina* 407, 408 (TASH); mountains Aktau, ascent to the pass Tikalik, 14.06.1951, *Neustrujeva-Knorring, Cvetkova* 229 (LE); Samarkand Region, Nurata District, near the village Kuray (south of Bakhiltai Mts.), foothills, 06.06.1964, *Pryakhin* (LE, TASH). **I-4-b Khobduntai Range:** Mts. Khobduntai, northern slope, 1200 m a.s.l., 11.06.1929, *Kudrjashev* (TASH). **I-4-b Karachatau Range:** 1 km south of the village Borsake, 20.05.1958, *Li, Zakirov* 672 (TASH). **I-4-c North-Nuratau insular low mountains:** mountains Balyklitai, 23.05.1931, *Kobranova* 431 (TASH).

991. *Phlomis nubilans* Zakirov, Bot. Mater. Gerb. Inst. Bot. Zool. Akad. Nauk Uzbeesk. S.S.R. 9: 3 (1947). Perennial, hemicryptophyte. Nuratau, Aktau (endemic). Shrubland, Grassland, Rocky areas. Montane zone. Frequent. Native. UzbRDB 3. **Occurrence records:** **I-4-a Nuratau Range:** near Ukhum Pass, gorge Nakrut, 15.07.1914, *Mikhelson* (LE); Koytash Mts., 23.07.1931, *Kobranova* (LE); 4 km from the village Khukala, 02.09.1932, *Knorring, Emme* 154 (LE, MW); Mts. Koytash, 2–3 km north-west of the village Kokbulak, 18.07.1937, *Demurina* 589, 591 (TASH); Mts. Koytash, upper reaches of Garashasay, 20.07.1937, *Demurina* 643 (TASH); near the village Ustakhan, 23.08.1937, *Titov* (TASH); near the village Ustuk, 29.07.1937, *Mironov* 35 (TASH); valley Mikhinsay (middle reaches), south of the village Yangikishlak, 22.07.1940, *Gomolitsky, Dolgikh* 188 (TASH); 7 km north-east of the village Narvan, 21.05.1958, *Li, Zakirov* 696 (TASH); Nakrutsay, middle reaches, 30.05.1964, *Zuckerwanik* 412, 414 (TASH); northern slope of Mts. Koytash south of Kirov State Farm, 20.06.1971, *Botschantzev, Kamelin* 243 (LE); northern slope of Nuratau Range, gorge Gurdara near the village Sarymsak, 23.06.1971, *Botschantzev, Kamelin* 386 (LE); Mts. Koytash, ascent from the village Koytash to the ridge, 12.07.1972, *Kamelin* 37 (LE); Nuratau Nature Reserve, Karysay, about 1500 m a.s.l., 15.08.1980, *Mukhina* (TASH); Tamerlane's Gate, 04.07.1981, *Pimenov, Kljuykov, Baranova, Tomkovich, Vassiljeva, Lavrova* 2 (MW); Sentob, right side, above ruins Kurgan, southern slope of watershed, 22.06.1983, *Bulgakova* 97 (TASH); Hayatsay, 17.07.1990, *Beshko, Yakovenko* 90089 (herbarium of the Nuratau Nature Reserve); Hayatsay, 02.07.1991, *Maximova* 91014, 91015 (herbarium of the Nuratau Nature Reserve); watershed between Hayatsay and Andygensay, 18.07.1992, *Beshko* 92192, 92193, 92195, 92196 (herbarium of the Nuratau Nature Reserve, TASH); Mt. Hayatbashi, 2100 m a.s.l., 28.06.1994, *Beshko* 94036–038 (herbarium of the Nuratau Nature Reserve, TASH); Nuratau Nature Reserve, watershed crest between Hayatsay and Madjrumsay, about 1700 m a.s.l., 19.06.2010, *Beshko* (www.plantarium.ru); Hayatsay, Khotunon, 08.06.2006, *Beshko* 06207 (herbarium of the Nuratau Nature Reserve); Dzhizak region, northern slope of Nuratau Ridge, Nuratau Nature Reserve, Madjerum valley, western slope, 937 m.s.l., 40°34'15"N, 66°43'14", 18.04.2019, *Beshko* (TASH); Nuratau Nature Reserve, Hayatsay, Andebaraut, 1300 m a.s.l., 16.06.2019, *Beshko* (TASH); Nuratau Nature Reserve, Hayatsay, Andebaraut, 1470 m a.s.l., 16.06.2019, *Beshko* (TASH, www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 40.513754° N 66.743058° E, 09.06.2020, *Ortikov, Pulatov, Turdiev, Juramurodov, Makhmudjanov* 9062020647, 9062020648, 9062020649, 9062020693 (TASH); surroundings of Saurbel Pass, about 1200 m a.s.l., 03.06.2021, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** 2 km west of the village Tikalik, 06.07.1932, *Knorring, Emme* 23 (LE, MW); 6–8 km south of Mt. Takhku, 29.06.1937, *Demurina* 321 (TASH); near the village Karakisa, 30.07.1937, *Mironov* 51 (TASH); south of well Uzunkuduk, stony mountain slopes, 02.08.1937, *Mironov* 51 (TASH); Yangokly, near Langar, 19–20.05.1941, *Zakirov, Niyazov* (TASH); upper reaches of river Tutak, dry lateral gorge, 04.06.1951, *Neustrujeva-Knorring, Cvetkova* 89 (LE); [same locality], 05.06.1951, *Neustrujeva-Knorring, Cvetkova* 119 (LE); montes Ak-tau ad fontes rivuli Tutak, clivibus septentrionali-occidentalibus, 07.06.1951, *Neustrujeva-Knorring, Cvetkova* (LE, MW).

992. *Phlomis olgae* Regel, Izv. Imp. Obshch. Lyubit. Estestv. Moskovsk. Univ. 34(2): 68 (1882). Perennial, hemicryptophyte. Western Pamir-Alay. Shrubland, Grassland, Rocky areas. Montane zone.

Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Range, Farish District, 06.05.1941, *Momotov 141* (TASH). **I-4-b Aktau Range:** Sangijuman, 25.05.1869, *O. Fedtschenko* (LE, MW).

993. *Phlomis salicifolia* Regel, Trudy Imp. S.-Peterburgsk. Bot. Sada, prepr. 6: 371 (1879). Perennial, hemicryptophyte. Western Tien Shan, Western Pamir-Alay. Shrubland, Grassland, Rocky areas. Foothills, montane zone. **Occurrence records: I-4-a Nuratau Range:** Reported by Zakirov in «Botanical geography of low mountains of Kyzylkum and Nuratau Range» (1971, p. 71). **I-4-b Khobduntau Range:** Mts. Khobduntau, northern slope, 1200 m a.s.l., 11.06.1929, *Kudrjashev* (TASH). **I-4-b Karachatau Range:** 3–5 km south-east of the village Kursafar, 07.07.1937, *Makarchuk 574* (TASH).

994. *Phlomis thapsoides* Bunge, Beitr. Fl. Russl.: 264 (1852). Perennial, hemicryptophyte. Western Pamir-Alay. Desert, Shrubland, Grassland, Rocky areas. Plain, foothills, montane zone. Abundant. Native. **Occurrence records: I-4-a Nuratau Range:** Urganchi – Ak-Chap, *Iris* formation, 01.05.1913, *Korovin 150* (TASH); foothills of Koytash Mts., slopes near town Jizzakh, 28.05.1932, *Kasimenko 1534* (TASH); Mts. Koytash, west of the village Terakli, north-western slopes, 25.05.1940, *Gomolitsky, Dolgikh 1, 3, 11, 13* (TASH); Mts. Koytash, 3 km north-east of the village Kuvakiya, piedmonts of Mt. Piyazli, plain, fallow land, 24.04.1941, *Momotov 3* (TASH); Nuratau Range, Farish District, 15.05.1941, *Momotov* (TASH); foothills of Nuratau Range, Farish District, Kirov State Farm, 06.06.1943, *Vernik, Raykova 97* (TASH); 8 km north-west of Kirov State Farm, plain north of Nuratau, 1958, *unknown collector* (TASH); northern slope of Koytash Mts., Mt. Piyazli, 30.05.1976, *Pimenov, Kljuykov, Baranova, Vassiljeva 283* (MW); Nuratau Nature Reserve, Hayatsay, about 1200 m a.s.l., 09.08.1980, *Mukhina* (TASH); Hayatsay, 02.07.1991, *Maximova 91013* (herbarium of the Nuratau Nature Reserve, TASH); Hayatsay, 20.06.2006, *Beshko 06086, 06087* (herbarium of the Nuratau Nature Reserve); Jizzakh Region, Farish District, foothills of Nuratau, near the village Anamuna, 30.05.2011, *Beshko* (www.plantarium.ru); surroundings of Saurbel Pass, 28.06.2019, *Beshko* (www.plantarium.ru); Jizzakh Region, Farish District, 5 km south-west of town Yangikishlak, 01.06.2023, *Fateryga* (www.plantarium.ru). **I-4-b Aktau Range:** Koshrabad – Chuya, *Iris* formation, 06.05.1913, *Korovin 402* (TASH); 30 km south-east of the town Nurata, near the road to Dzhus, 01.06.1962, *Pryakhin* (TASH); Samarkand Region, Nurata District, near the village Kuray (south of Bakhiltai Mts.), foothills, 06.06.1964, *Pryakhin* (TASH). **I-4-b Khobduntau Range:** steppe near Kuropatkino railway station, 26.06.1925, *Androssov* (MW); plain between mountains Khobduntau and Karachatau, near Kuropatkino railway station, 08.06.1929, *Kudrjashev* (TASH); plain between Khobduntau and Karachatau Mts., 2 km west of Kuropatkino railway station, 13.06.1929, *Kudrjashev* (TASH); 0.5 km north of the village Gumsay, 28.06.1929, *Kudrjashev* (TASH); Gallaaral District, surroundings of Milyutinskaya Station, experimental station of cereal crops, 15.06.1934, *Toporova* (TASH); [same locality], 26.06.1934, *Toporova* (TASH); [same locality], 28.07.1934, *Toporova* (TASH).

Phlomoides Moench

995. *Phlomoides ambigua* (Popov ex Pazij & Vved.) Adylov, Kamelin & Makhm., Opred. Rast. Sred. Azii 9: 95 (1987). Perennial, hemicryptophyte. Nuratau, Kuhistan (subendemic). Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Koytash, northern slope, 28.06.1971, *Botschantzev, Kamelin* (LE); Mt. Hayatbashi, 00.06.1990, *Beshko, Yakovenko 90108* (herbarium of the Nuratau Nature Reserve); Mt. Hayatbashi, 06.06.1995, *Beshko 95052* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, upper reaches of Hayatsay, Alichak, 27.06.2012, *Beshko* (TASH); Nuratau Nature Reserve, watershed crest near the top of Mt. Hayatbashi, 30.05.2016, *Beshko* (www.plantarium.ru); Mt. Kichik Fazilman, near Fazilman Lake, 06.05.2020, *Akbarov, Turdiev, Juramurodov 6052020097* (TASH); Nuratau Nature Reserve, watershed crest near the top of Mt. Hayatbashi, 19.05.2021, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Mt. Hayatbashi, 1912

m a.s.l., 19.05.2021, *Beshko*, *Madaminov NB2021230*, *NB2021230-2* (TASH); Nuratau Nature Reserve, Mt. Hayatbashi, Hayat Pass, about 2100 m a.s.l. 40°29'40" N, 66°43'12" E, 05.06.2022, *Beshko* (TASH, www.plantarium.ru).

996. *Phlomoides anisochila* (Pazij & Vved.) Salmaki (*Paraeremostachys anisochila* (Pazij & Vved.) Adylov, Kamelin & Makhm.), Taxon 61: 175 (2012). Perennial, hemicryptophyte. Nuratau (endemic). Shrubland, Grassland, Rocky areas. Montane zone. Rare. Native. UzbRDB 2. **Occurrence records: I-4-a Nuratau Range:** Karysay, Pubsay, 16.05.1993, *Beshko 93030* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, upper reaches of Gurdara, 1700 m, 11.06.1993, *Beshko 93044* (TASH, herbarium of the Nuratau Nature Reserve); Nuratau Range, southern slope of Mt. Dushokh, 1800 m a.s.l., 07.06.1994, *Beshko 94044*, *94045* (TASH, herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, upper reaches of Bedarak, 07.06.1998, *Beshko 98053* (TASH); Hayatsay, Novi Khushk, 15.05.2007, *Beshko 07011*, *07012* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, watershed of Hayatsay and Madjumsay, 06.05.2010, *Beshko* (www.plantarium.ru); [same locality], 18.05.2011, *Beshko* (www.plantarium.ru); Nuratau Range, Madjumsay, upper reaches of Fargun, 1800 m a.s.l., 22.05.2011, *Beshko 44*, *45* (TASH); Nuratau Nature Reserve, watershed crest between valleys Hayat and Madjrum, 1820 m a.s.l., 16.06.2019, *Beshko* (TASH); Nuratau Nature Reserve, watershed of Hayatsay and Madjumsay, about 1850 m a.s.l., 19.05.2021, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, watershed Hayat-Madjrum, 1809 m a.s.l., 19.05.2021, *Beshko*, *Madaminov NB2021238* (TASH); Nuratau Nature Reserve, watershed Hayatsay and Madjumsay, about 1850 m a.s.l., 05.06.2022, *Beshko* (www.plantarium.ru).

997. *Phlomoides deserticola* Sennikov (*Phlomoides desertorum* (Regel) Salmaki), Memoranda Soc. Fauna Fl. Fenn. 89: 132 (2013). Perennial, hemicryptophyte. Turanian. Desert, Rocky areas. Plain, foothills. Rare. Native. **Occurrence records: I-4-b Karatau Range:** surroundings of town Kanimekh, 7 km north of the town, remnant mountains, 15.07.1934, *Tyshchenko 179* (TASH).

998. *Phlomoides eriocalyx* (Regel) Adylov, Kamelin & Makhm., Opred. Rast. Sred. Azii 9: 99 (1987). Perennial, hemicryptophyte. Western Tien Shan, Western Pamir-Alay. Desert, Shrubland, Grassland, Rocky areas. Foothills, montane zone. Abundant. Native. **Occurrence records: I-4-a Nuratau Range:** south-eastern slopes of Nuratau Mts., 31.03.1915, *Spiridonov 32* (TASH); surroundings of Jizzakh, eastern slopes above Irankishlak, 11.04.1915, *Fedtschenko 173* (TASH); foothills south-west of Jizzakh Station, near the railway bridge, on the left bank of river Sanzar, 02.05.1921, *Kultiasow 17* (TASH); mountains south-west of Jizzakh, 03.05.1921, *Kultiasow 144* (TASH); [same locality], 04.05.1921, *Kultiasow 145*, *162* (TASH); Nuratau Range, Farish District, 02.05.1941, *Momotov* (TASH); [same locality], 07.05.1941, *Momotov 161* (TASH); [same locality], 18.05.1941, *Momotov* (TASH); foothills of Nuratau Range, Farish District, Kirov State Farm, 29.04.1943, *Vernik*, *Raykova 19* (TASH); Gatchasay, 11.04.1954, *Zaprometova* (TASH); Ustuksay, 02.06.1954, *Burygin 317* (TASH); Farish District, Tulibaysay, 09.05.1956, *Zakirov 152*, *153* (TASH); Farish District, Ustakhan, 26.05.1956, *Panfilova 38* (TASH); 2 km north-east of the village Urtasay, Mt. Zargar, 11.05.1957, *Momotov*, *Li 228* (TASH); Gatchasay, 27.03.1958, *Zaprometova 160*, *163* (TASH); Ukansay, 02.04.1958, *Zaprometova 301* (TASH); near the pass Sentob, 10.05.1958, *Li*, *Zakirov 461* (TASH); 3 km south of village Midzhigan, 15.05.1958, *Li*, *Zakirov 581* (TASH); Karl Marx State Farm, eastern part of Nuratau Range, basin of Narvansay, 17.05.1967, *Perelygina* (TASH); Jizzakh Region, Farish District, clayey desert at piedmonts of Nuratau (Farish Steppe), 27.04.2007, *Beshko* (www.plantarium.ru); Jizzakh Region, Farish District, plain near piedmonts of Nuratau Range, 30.04.2011, *Beshko* (www.plantarium.ru); Jizzakh Region, Farish District, northern foothills of Nuratau, surroundings of the village Safarota, about 470 m a.s.l., 19.04.2012, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** the town Nurata, sagebrush steppe 7 verst of the town, near the well Pashat, 24.04.1913, *Korovin 37*, *38* (TASH); Nurata, 01.05.1913, *Korovin* (TASH); mountains

Aktau near the village Shamaly, 24.05.1925 *Popov* 376, 405 (TASH); 2–3 km south of the village Kokbulak, 01.07.1937, *Demurina* 374 (TASH); the spring Bitav, 18.04.1963, *Khaydarov* 817 (TASH); sources of river Bitau, 27.05.1964, *Zuckerwanik*, *Pazij* 286 (TASH). **I-4-b Karatau Range:** mountains Karakarga, near the pass Jizlan, 22.04.1913, *Korovin* 15 (TASH); mountains Karatau, 20.05.1936, *Kharchenko* 1029 (TASH). **I-4-b Khobduntau Range:** reported by Kudrjashev in “Vegetation of the Khobduntau and Karachatau Mountains” (1929, p. 65). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 08.04.1911, *Dimo*, *Sprygin*, *Shulga* 880 (TASH); Pistalitau, 07.04.1915, *Kultiasow* 45 (TASH); [same locality], 08.04.1915, *Kultiasow* 55 (TASH); mountains Pistalitau, 11.04.1915, *Spiridonov* 88 (TASH); plain between Nuratau and Balyklitau, 03.05.1928, *Sovetkina* 160 (TASH).

999. *Phlomoides kaufmanniana* (Regel) Adylov, Kamelin & Makhm., *Opred. Rast. Sred. Azii* 9: 92 (1987). Perennial, hemicryptophyte. Western Pamir-Alay. Shrubland, Grassland, Rocky areas. Montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** foothills south-west of Jizzakh Station, near the railway bridge, on the left bank of river Sanzar, 02.05.1921, *Kultiasow* 14, 18, 28 (TASH); mountains south-west of Jizzakh, 04.05.1921, *Kultiasow* 103, 109, 137, 140, 141, 165, 172, 175, 177 (TASH); mountains near Tamerlane’s Gate gorge, left bank of river Sanzar, 04.05.1921, *Kultiasow* 123 (TASH); Nuratau Range, Farish District, 29.04.1941, *Momotov* (TASH); [same locality], 05.05.1941, *Momotov* 116 (TASH); [same locality], 07.05.1941, *Momotov* 160 (TASH); 2 km north-east of the village Urtasay, Mt. Zargar, 11.05.1957, *Momotov*, *Li* 277 (TASH); upper reaches of Sentobsay, 10.05.1958, *Li*, *Zakirov* 473 (TASH); south-west of town Jizzakh, mountains near the river Sanzar (Tamerlane’s Gate), 06.05.1961, *Pryakhin* (TASH); Nakrutsay, middle reaches, 30.05.1964, *Zuckerwanik* 402 (TASH); Hayatsay gorge, 28.05.1969, *Mambetjumaev* 69, 75 (TASH); [same locality], 02.06.1969, *Mambetjumaev* 147 (TASH); Hayatsay, Zamezhak, 1200 m a.s.l., 10.05.1981, *Mukhina* (TASH); Hayatsay, Sangich, 30.05.1990, *Beshko*, *Yakovenko* 90111 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Bolosay, 1100 m a.s.l., 26.04.1992, *Beshko* 92089, 92090, 92097 (herbarium of the Nuratau Nature Reserve, TASH); Nuratau Nature Reserve, Hayatsay, 05.05.2006, *Beshko* (www.plantarium.ru); Hayatsay, Andebaraut, 22.05.2006, *Beshko* 06305 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 1200 m a.s.l., 06.05.2012, *Beshko* 001-2012 (TASH); surroundings of village Ukhum, Ukhumsay, 05.05.2020, *Akbarov*, *Turdiev*, *Juramurodov* 5052020079 (TASH); Nuratau Nature Reserve, Hayatsay, about 1470 m a.s.l., 19.05.2021, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** mountains Aktau near the village Andak, 04.05.1925, *Popov* 37 (TASH); near the village Shamaly, 24.05.1925 *Popov* 370 (TASH); Yangokly, Langar, 21.05.1941, *Zakirov* (TASH); mountains Aktau, Samarkand Region, 28.05.1963, *Khaydarov* 1498 (TASH); south-east of town Nurata, foothills of Bakhiltai Mts., 23.05.1964, *Pryakhin* (TASH). **I-4-b Karachatau Range:** 2.5–3 km north-east of the village Yukary-Kariya, 06.07.1937, *Demurina* 546 (TASH). **I-4-b Khobduntau Range:** reported by Kudrjashev in “Vegetation of the Khobduntau and Karachatau Mountains” (1929, p. 65).

1000. *Phlomoides labiosa* (Bunge) Adylov, Kamelin & Makhm. (*Phl. napuligera* (Franch.) Adylov, Kamelin & Makhm.), *Opred. Rast. Sred. Azii* 9: 92 (1987). Perennial, hemicryptophyte. Western Tien Shan, Western Pamir-Alay. Desert, Shrubland, Grassland, Rocky areas. Plain, foothills, montane zone. Abundant. Native. **Occurrence records:** **I-4-a Nuratau Range:** Urganchi – Ak-Chap, *Iris* formation, 01.05.1913, *Korovin* 178 (TASH); mountains near Tamerlane’s Gate gorge, left bank of river Sanzar, 02.05.1921, *Kultiasow* 37 (TASH); foothills south-west of Jizzakh Station, near the railway bridge, on the left bank of river Sanzar, 02.05.1921, *Kultiasow* 34, 35, 36 (TASH); mountains near Tamerlane’s Gate gorge, left bank of river Sanzar, 26.05.1921, *Kurbatov* 190 (TASH); Sanzar river valley, 2nd terrace, on the road to the village Yangi-chayanly, 31.05.1931, *Kasimenko* 1535 (TASH); Nuratau Range, Farish District, 1941, *Momotov* (TASH); foothills of Nuratau Range, Farish District, Kirov State Farm, 29.04.1943, *Vernik*, *Raykova* 24 (TASH); Nurata District, surroundings of Kyzylcha State Farm, 20.03.1951, *Zaprometova* (TASH); Nurata District, piedmont plain, 06.04.1952, *Zaprometova*

(TASH); surroundings of Kyzylcha State Farm, 06.04.1952, *Zaprometova* (TASH); nameless valley near Kyzylcha State Farm, 30.03.1958, *Zaprometova* 232, 233 (TASH); Alaysay, 30.03.1958, *Zaprometova* 255 (TASH); valley 2.5 km south-east of Kyzylcha State Farm, 27.04.1954, *Zaprometova* (TASH); Nuratau Range, northern piedmont plain, 12.05.1958, *Li, Zakirov* 516, 517, 518 (TASH); 3 km south of village Midzhigan, 15.05.1958, *Li, Zakirov* 591 (TASH); northern slope of Nuratau Range south-west of town Jizzakh, Tamerlane's Gate, 26.04.1979, *Pimenov, Kljuykov, Boryaev, Baranova, Vassiljeva* 39 (MW); Hayatsay, 30.04.1981, *Mukhina* (TASH); Navoi Region, Nurata District, Sanguzarsay, lower reaches, 07.05.1992, *Beshko* 92293, 92294 (TASH, herbarium of the Nuratau Nature Reserve, as *Phl. napuligera*); Madjrumsay, 06.05.1993, *Beshko* 93020, 93021 (TASH, herbarium of the Nuratau Nature Reserve, as *Phl. napuligera*); Jizzakh Region, Farish District, Nuratau Range, Yongoklisay, 27.04.2006, *Beshko* (www.plantarium.ru); Jizzakh Region, Farish District, northern piedmont plain of Nuratau Range (Farish Steppe), surroundings of the village Egiz-Bulak, about 400 m a.s.l., 19.04.2012, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, lower reaches of Madjrumsay, about 900 m a.s.l., 18.04.2019, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** Dzhush – Koshrabad, *Iris* steppe, 03.05.1913, *Korovin* (TASH); Koshrabad, *Iris* steppe, 06.05.1913, *Korovin* 11 (TASH); mountains Aktau, near the village Andak, 01.05.1925, *Popov* 19 (TASH); valley Chashma, 19.05.1962, *Khaydarov* 40 (TASH); the spring Bitav, 17.04.1963, *Khaydarov* 611 (TASH); [same locality], 18.04.1963, *Khaydarov* 725 (TASH); Aktau, 1964, *Khaydarov* 109 (TASH); south-east of the town Nurata, piedmonts of Bakhiltai Mts., 23.05.1964, *Pryakhin* (TASH); southern slope of Aktau Range 4 km downstream of the village Langar, 28.04.1979, *Pimenov, Kljuykov, Boryaev, Baranova, Vassiljeva* 143 (MW); northern slope of Aktau Range, Kattasay, 40.530231° N 66.0063° E, 07.05.2020, *Akbarov, Turdiev, Juramurodov* 7052020184 (TASH). **I-4-b Karatau Range:** 1 km north of ruins Sarmysh, 05.05.1955, *Momotov, Li* 174 (TASH); 2.5 km south-east of the village Aksakalata, 07.05.1955, *Momotov, Li* 215 (TASH); in Sarmyshsay, 26.04.1965, *Pryakhin* (TASH). **I-4-b Karachatau Range:** 2.5–3 km north-east of the village Yukary-Kariya, 06.07.1937, *Demurina* 530 (TASH); foothills 10 km east of the village Bulakbashi, 06.07.1937, *Demurina* 437 (TASH); Samarkand Region, 1.5 km west-north-west of the village Barlas, 25.04.1958, *Li, Zakirov* 51 (TASH). **I-4-b Khobduntai Range:** steppe near Kuropatkino railway station, 26.04.1916, *Androssov* (TASH); plain between mountains Khobduntai and Karachatau, surroundings of Kuropatkino railway station, 08.06.1929, *Kudrjashev* (TASH); Milyutinskaya Station, Gallaaral State Farm, 1 km west of the village Alyamli, 26.04.1930, *Tarasevich* 14 (TASH); Gallaaral District, experimental station of cereal crops, 29.06.1934, *Toporova* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitai, 07.04.1911, *Dimo, Sprygin, Shulga* 1051, 1198 (TASH); piedmont plain between Mt. Piyazli and Balykli, 24.04.1941, *Momotov* 32 (TASH); Uchkulach, 17.04.2012, *Batashov* 169 (TASH); piedmonts of remnant mountains Egarbelistag, near the Carbonat JSC quarry, 500 m a.s.l., 40.35118° N 67.50488° E, 03.05.2013, *Tojibaev, Beshko, Batashov, Azimova* (TASH); remnant mountains Pistalitai, 26.04.2020, *Beshko* (www.plantarium.ru).

1001. *Phlomoides sogdiana* (Pazij & Vved.) Salmaki, Taxon 61: 176 (2012). Perennial, hemicryptophyte. Western Pamir-Alay. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** Urganchi, *Iris* formation, 01.05.1913, *Korovin* 152 (TASH); mountains near Tamerlane's Gate gorge, left bank of river Sanzar, 26.05.1921, *Kurbatov* 188, 191, 196 (TASH); foothills of Nuratau Mts. on the latitude of town Jizzakh, 16.05.1928, *Sovetkina* 214 (TASH); on the way from Milyutinskaya to the village Yangi-chayanly, 31.05.1931, *Kasimenko* 1537 (TASH); foothills, 1.5 km north of the village Guzhum, 04.07.1937, *Makarchuk* 522 (TASH); Nuratau Range, Farish District, 05.05.1941, *Momotov* 125 (TASH); Ustuksay, 02.06.1954, *Burygin* 353, 354 (TASH); Sentobsay, 27.05.1956, *Zaprometova* (TASH); plateau 4 km west of Sentob Pass, 10.05.1958, *Li, Zakirov* 470 (TASH); west of the village Ustakhan, 25.05.1958, *Li, Zakirov* 777 (TASH); Mts. Koytash, watershed crest above the village Koytash, 12.07.1972, *Kamelin* 33 (LE);

Nuratau Nature Reserve, Mt. Dushokh, 1600 m a.s.l., 26.05.1982, *Mukhina* (TASH); Hayatsay, Novi Daroz, 12.06.1992, *Beshko* 92169 (herbarium of the Nuratau Nature Reserve); upper reaches of Karysay, Chashmi Mullo, 29.06.1992, *Beshko* 92389 (herbarium of the Nuratau Nature Reserve, TASH); Nuratau Nature Reserve, Hayatsay, about 1400 m a.s.l., 20.05.2009, *Beshko* (www.plantarium.ru); Talabaysay (left tributary of Kulbasay), 8 km south-west of district center Yangikishlak, 1100 m a.s.l., 27.05.2012, *Beshko* (TASH); Nuratau Nature Reserve, Hayatsay, about 1300 m a.s.l., 03.05.2014, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, Novi Khushk, 16.06.2019, *Beshko* (TASH); Nuratau Nature Reserve, Hayatsay, about 1400 m a.s.l., 15.05.2024, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** mountains Aktau near the village Shamaly, 24.05.1925 *Popov* 332 (TASH); Yangokly, 08.06.1926, *Popov*, *Adylov* (TASH, MW); 2–3 km south-east of the village Jangak, 30.06.1937, *Demurina* 322 (TASH); Aktau, near the village Langar, valley Yangokly, 21.05.1941, *Zakirov*, *Niyazov* (TASH); mountains Aktau, upper reaches of river Tutak, 05.06.1951, *Neustrujeva-Knorring*, *Cvetkova* 141 (LE); the spring Bitav, 18.04.1963, *Khaydarov* 904 (TASH); sources of river Bitau, 27.05.1964, *Zuckerwanik* 300 (TASH); near the village Chashma (south of Bakhiltai Mts.), 05.06.1964, *Pryakhin* (TASH); near the village Samak (south of Bakhiltai Mts.), foothills, 05.06.1964, *Pryakhin* (TASH). **I-4-b Karatau Range:** road Navoi-Nuratau, Karakarga Pass, 24.04.1987, *Pimenov*, *Vassiljeva* 61 (MW). **I-4-b Karachatau Range:** southern slope, 1 km north-east of the village Ingichka, 07.07.1937, *Demurina* 551 (TASH). **I-4-b Khobduntai Range:** mountain peak near the village Marjonbulak, 09.06.1929, *Kudrjashev* (TASH); plain near southern piedmonts of Khobduntai, near the village Bodbod, 19.06.1929, *Kudrjashev* (TASH); plain near southern piedmonts of Khobduntai, near the village Langar, 23.06.1929, *Kudrjashev* (TASH).

1002. *Phlomoides speciosa* (Rupr.) Adylov, Kamelin & Makhm., *Opred. Rast. Sred. Azii* 9: 95 (1987). Perennial, hemicryptophyte. Irano-Turanian. Shrubland, Grassland, Rocky areas. Montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** Nuratau Range, Farish District, 20.05.1941, *Momotov* (TASH); watershed of Hayatsay and Fargun, 08.05.1992, *Beshko* 92112 (herbarium of the Nuratau Nature Reserve); Hayatsay, Alichak, 1700 m a.s.l., 08.06.1992, *Beshko* 92111 (TASH); Sentobsay, 12.07.1992, *Beshko* 92333–335 (herbarium of the Nuratau Nature Reserve); Madjrumsay, upper reaches of Fargun, 22.05.2011, *Beshko* 11046 (TASH).

1003. *Phlomoides uniflora* (Regel) Adylov, Kamelin & Makhm., *Opred. Rast. Sred. Azii* 9: 100 (1987). Perennial, hemicryptophyte. Kyzylkum, Western Pamir-Alay. Desert, Shrubland, Grassland, Rocky areas. Plain, foothills, montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** northern piedmont plain of Nuratau Range (Farish Steppe), 26.03.2011, *Davkaev* (www.plantarium.ru); Jizzakh Region, Nuratau Range, main watershed, 1 km west of Saurbel Pass, 8 km south-west of Yangikishlak 40°21'34" N, 67°05'45" E, 1285 m a.s.l., 27.05.2012, *Beshko* (TASH). **I-4-b Aktau Range:** near the village Chashma (south of Bakhiltai Mts.), 05.06.1964, *Pryakhin* (TASH); northern piedmonts of Bakhiltai Mts., 23.05.1964, *Pryakhin* (TASH). **I-4-b Karatau Range:** south of the pass Jizlan, 26.05.1965, *Pryakhin* (TASH); road Navoi-Nuratau, Karakarga Pass, 24.04.1987, *Pimenov*, *Vassiljeva* 87 (MW); Bukhara Region, Gzhduvan District, Nuratau mountains, western part of Karatau Range, about 410 m a.s.l., 21.04.2024, *Beshko* (www.plantarium.ru). **I-4-c North-Nuratau insular low mountains:** Jizzakh Region, Farish District, piedmont of Pistalitai, near the railway, 15 km east of the village Yangiabab, 13.05.2012, *Beshko* (TASH, www.plantarium.ru).

Prunella L.

1004. *Prunella vulgaris* L., *Sp. Pl.*: 600 (1753). Perennial, hemicryptophyte. Circumtemperate. Wetlands (inland). Foothills, montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** Koytash, northern and southern slope, 28.06.1971, *Botschantzev*, *Kamelin* (LE); Hayatsay, field station of Nuratau Nature Reserve, 950 m a.s.l., 12.06.2008, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, gorge Bolosay, about 1500 m a.s.l., 01.07.2008, *Beshko* (www.plantarium.ru).

Salvia L.

1005. *Salvia aequidens* Botsch., Byull. Sredne-Aziatsk. Gosud. Univ. 22: 326 (1937). Subshrub, chamaephyte. Aktau, Kuhistan (subendemic). Shrubland, Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-b Aktau Range:** Aktau, slopes, 11.06.1984, *Makhmedov 17, 87* (TASH).

1006. *Salvia deserta* Schangin, Index Seminum (TU, Dorpatensis) 1824: 6 (1824). Perennial, hemicryptophyte. Siberian, Middle Asian, Dzungarian. Forest, Grassland. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Karysay, 1983, *Fominykh 83044* (herbarium of the Nuratau Nature Reserve); Karysay, 01.07.1992, *Beshko 92376–379* (herbarium of the Nuratau Nature Reserve).

1007. *Salvia karelinii* J.B.Walker (*Perovskia angustifolia* Kudrjasch.), Taxon 66: 140 (2017). Subshrub, chamaephyte. Western Tien Shan, Pamir-Alay. Shrubland, Grassland, Rocky areas, Wetlands (inland). Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** village Ukhum, 01.07.1931, *Kobranova 88* (TASH). **I-4-b Aktau Range:** near village Chuya, 01.08.1937, *Mironov 79* (TASH).

1008. *Salvia kudrjashevii* (Gorsch. & Pjataeva) Sytsma (*Perovskia kudrjashevii* Gorsch. & Pjataeva), Taxon 66: 140 (2017). Subshrub, chamaephyte. Western Tien Shan, Western Pamir-Alay. Shrubland, Rocky areas, Wetlands (inland). Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** reported in «Conspectus Florae Asiae Mediae», vol. 9, 1987, p. 154.

1009. *Salvia macrosiphon* Boiss., Diagn. Pl. Orient. 5: 11 (1844). Perennial, hemicryptophyte. Caucasian, Irano-Turanian. Shrubland, Grassland, Rocky areas, Artificial terrestrial. Foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** mountains near Tamerlane's Gate gorge, left bank of river Sanzar, 26.05.1921, *Kurbatov 201, 203* (TASH); Mts. Koytash, the village Osmansay, 01.06.1931, *Kobranova 461, 466* (TASH); Mts. Koytash, 3 km north-east of the village Kuvakiya, 24.04.1941, *Momotov 21* (TASH); foothills between the village Farish and Katta Ej, 27.05.1956, *Zaprometova* (TASH); piedmont plain 15 km west of Jizzakh Station, 14.06.1956, *Zaprometova, Vvedensky 227* (TASH); Sentob, near the village Yukary-Kurgan, 11.05.1958, *Li, Zakirov 488* (TASH); Nuratau Range, 1 km south of the village Savryuk, 22.05.1958, *Li, Zakirov 732* (TASH); northern slope of Nuratau, the village Kuvakiya, Mt. Piyazli, 18.05.1971, *Pimenov, Pimenova, Sdobnina, Baranova 310* (MW); Nuratau Nature Reserve, 19.05.1981, *Mukhina* (TASH); **I-4-b Aktau Range:** Dzhus – Koshabad, 03.05.1913, *Korovin 271, 272* (TASH); mountains Aktau near the village Shamaly, 24.05.1925, *Popov 344* (TASH); Aktau, near the village Langar, 21.05.1941, *Zakirov* (TASH); the town Nurata, 23.05.1964, *Pryakhin* (TASH); sources of river Bitau, 27.05.1964, *Zuckerwanik 325* (TASH). **I-4-b Karatau Range:** slopes of Karatau, 05.05.1955, *Momotov, Li 172, 173* (TASH). **I-4-b Khobduntau Range:** plain between mountains Khobduntau and Karachatau, 10.06.1929, *Kudrjashev* (TASH); Gallaaral District, experimental station of cereal crops, 29.06.1934, *Toporova* (TASH).

1010. *Salvia pobedimovae* J.G.González (*Perovskia botschantzevii* Kovalevsk. & Kocz.), Taxon 66: 141 (2017). Subshrub, chamaephyte. Western Tien Shan, Western Pamir-Alay. Shrubland, Rocky areas, Wetlands (inland). Foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** village Ukhum, 01.07.1931, *Kobranova 91* (TASH); north slopes of Nuratau Range, north-west of the village Deristan, 29.06.1973, *unknown collector* (TASH). **I-4-b Aktau Range:** near village Chuya, 01.08.1937, *Mironov 80* (TASH).

1011. *Salvia sarawschanica* Regel & Schmalh., Izv. Imp. Obshch. Lyubit. Estestv. Moskovsk. Univ. 34(2): 62 (1882). Perennial, hemicryptophyte. Western Pamir-Alay. Shrubland, Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-b Aktau Range:** Sangijuman, 25.05.1869, *O. Fedtschenko* (LE); the gorge Yangokly, 08.06.1926, *Popov 1320* (TASH, MW, P); 5 km west of

village Chuya, between mountains Aktau and Bakhiltau, 14.07.1932, *Knorring, Emme* 79 (MW); Aktau, near the village Langar, 19–21.05.1941, *Zakirov, Niyazov* (TASH); upper reaches of river Tutak, dry lateral gorge, 04.06.1951, *Neustrujeva-Knorring, Cvetkova* 85 (LE, MW); east of the spring Bitav, 29.07.1982, *Shermatov, Kazakbaev, Tagaev* 105 (TASH); Nuratau mountains, 30.07.1982, *Shermatov, Kazakbaev, Tagaev* 112 (TASH); northern slope of Aktau Range, west of the village Chuya, gorge Ashbarana, 28.04.1979, *Pimenov, Kljuykov, Boryaev, Baranova, Vassiljeva* 116 (MW); northern slope of Aktau Range, Ambarsay, about 800 m a.s.l., 10.06.2018, *Beshko* (www.plantarium.ru); surroundings of Mt. Takhku, upper reaches of Yangoklysay, about 1650 m a.s.l., 21.05.2022, *Turdiyev* (www.plantarium.ru); surroundings of Langar, roadside, 18.05.2024, *Beshko* (www.plantarium.ru); northern slope of Aktau Range, Ambarsay, about 900 m a.s.l., 18.05.2024, *Beshko* (www.plantarium.ru); [same locality], 18.05.2024, *Beshko, Volis, Azimov, Sindirov* (TASH).

1012. *Salvia sclarea* L., Sp. Pl.: 27 (1753). Perennial, monocarpic, hemicryptophyte. Euro-Siberian, Tethyan. Forest, Shrubland, Grassland, Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** 1–2 km east-north-east of Ukhum Pass, 29.07.1937, *Demurina* 805 (TASH); Hayatsay gorge, 02.07.1969, *Mambetjumaev* 185 (TASH); Nuratau Nature Reserve, Hayat, 31.07.1980, *Pjatina* (TASH); Hayatsay, 13.06.1990, *Beshko, Yakovenko* 90090 (herbarium of the Nuratau Nature Reserve); Hayatsay, field station of nature reserve, 03.06.2006, *Beshko* 06149 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, about 1160 m a.s.l., 16.06.2013, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 09.06.2020, *Ortikov, Pulatov, Turdiyev, Juramurodov, Makhmudjanov* 9062020689 (TASH); Hayatsay, about 1200 m a.s.l., 02.06.2022, *Turdiyev* (www.plantarium.ru); Jizzakh Region, Farish District, Hayatsay, 40.518333° N 66.75° E, 02.06.2022, *Selyutina* (www.inaturalist.org).

1013. *Salvia scrophulariifolia* (Bunge) B.T.Drew (*Perovskia scrophulariifolia* Bunge), Taxon 66: 141 (2017). Subshrub, chamaephyte. Western Tien Shan, Pamir-Alay. Forest, Shrubland, Grassland, Rocky areas, Wetlands (inland). Foothills, montane zone. Abundant. Native. **Occurrence records: I-4-a Nuratau Range:** Koshrabad, Mt. Mirishkar, 05.05.1913, *Korovin* (LE); north-west of the village Dzhus, 29.07.1937, *Mironov* 47 (TASH); near the village Ustakhan, 23.08.1937, *Titov* (TASH); Mekhayansay (middle reaches), south of the village Chalakarga, 22.07.1940, *Gomolitsky, Dolgikh, Arkhireev* 190 (TASH); Nuratau Nature Reserve, lower reaches of Madjumsay, about 750 m a.s.l., 31.08.2020, *Beshko* (www.plantarium.ru); Navoi Region, Nurata District, near the village Simbulak, 31.05.2023, *Fateryga* (www.plantarium.ru). **I-4-b Khobduntau Range:** Mts. Khobduntau, Gumsay, 11.06.1929, *Kudrjashev* (TASH); Mts. Khobduntau, north-western slopes, 30.07.1931, *Kobranova* 105 (TASH); Ingichkasay, 1275 m a.s.l., *Beshko* (www.plantarium.ru).

1014. *Salvia spinosa* L., Mant. Pl. 2: 511 (1771). Perennial, hemicryptophyte. Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Djizak, 00.05.1881, *Capus* 1063 (P); foothills of Nuratau Range, Farish District, Kirov State Farm, 06.06.1943, *Vernik, Raykova* 91 (TASH); Asrafsay, 04.06.1994, *Beshko* 94104–106 (herbarium of the Nuratau Nature Reserve); foothills of Nuratau, surroundings of Bogdon (Farish), top of the hill, about 800 m a.s.l., 16.05.2009, *Beshko* (www.plantarium.ru); Jizzakh Region, Farish District, foothills of Nuratau near Yangikishlak, 700 m a.s.l., 13.05.2012, *Beshko* (TASH). **I-4-b Aktau Range:** Dzhasman gorge, 02.05.1869, *Fedtschenko* (LE); valley Chashma, 13.06.1969, *Khaydarov* 181 (TASH). **I-4-b Karatau Range:** southern slope of Karatau Range, near Karakarga Pass, 04.05.2013, *Beshko* (www.plantarium.ru); [same locality], 04.05.2013, *Tojibaev, Beshko, Batashov, Azimova* (TASH). **I-4-b Khobduntau Range:** reported by Kudrjashev in “Vegetation of the Khobduntau and Karachatau Mountains” (1929, p. 65). **I-4-c North-Nuratau insular low mountains:** mountains Pistaltau, near the village Uchkulach, 30.04.2021,

Turdiev, Ortikov, Kurbaniyazova 300420210185 (TASH); mountains Pistalitau, 40.54684°N, 67.3923°E, 09.05.2024, *Beshko* (www.inaturalist.org).

1015. *Salvia submutica* Botsch. & Vved., Bot. Mater. Gerb. Inst. Bot. Akad. Nauk Uzbeksk. S.S.R. 14: 11 (1954). Perennial, hemicryptophyte. Nuratau (endemic). Shrubland, Grassland, Rocky areas. Montane zone. Occasional. Native. UzbRDB 2. **Occurrence records: I-4-a Nuratau Range:** 6–7 km west of the village Guzhum, 23.07.1937, *Demurina 722* (TASH); Nuratau Range, Farish District, 06.05.1941, *Momotov 126* (TASH); Ustuksay, 18.05.1954, *Zaprometova 373* (TASH); Ustuksay, 12.07.1956, *Vvedensky 110* (TASH); upper reaches of Ustuksay, 29.05.1964, *Zuckerwanik 379* (TASH); Mts. Koytash, watershed crests above the village Koytash, about 1650 m a.s.l., 13.07.1972, *Kamelin 38* (LE); Nuratau Nature Reserve, Zamezhaksay, 20.05.1981, *Mukhina* (TASH); Nuratau Nature Reserve, 04.08.1981, *Mukhina* (TASH); Mt. Parrandoz, 06.06.1984, *Petrochenko 94078* (herbarium of the Nuratau Nature Reserve); watershed between Hayatsay and Andygensay, 13.06.1990, *Beshko, Yakovenko 90091* (herbarium of the Nuratau Nature Reserve); Hayatsay, Khotunon, 11.06.1992, *Beshko 92121–123* (herbarium of the Nuratau Nature Reserve); Karysay, Guzhm, 28.06.1992, *Beshko 92504, 92505* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, Khotunon, 07.06.1998, *Beshko* (TASH); Nuratau Nature Reserve, Hayatsay, 31.05.2008, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 31.05.2012, *Beshko* (TASH); upper reaches of Ustuksay, about 1500 m a.s.l., 10.06.2013, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 1800 m a.s.l., 30.05.2016, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 1490 m a.s.l., 16.06.2019, *Beshko* (TASH); Nuratau Nature Reserve, Hayatsay, about 1850 m a.s.l., 16.06.2019, *Beshko* (www.plantarium.ru, www.inaturalist.org); Nuratau Nature Reserve, Hayatsay, 09.06.2020, *Ortikov, Pulatov, Turdiev, Juramurodov, Makhmudjanov 9062020678, 9062020679* (TASH); upper reaches of Madjrumsay, 08.05.2022, *Turdiбоеv, Madaminov, Kurbaniyazova 19, 20* (TASH); Nuratau Nature Reserve, watershed crest between Hayatsay and Madjrumsay, about 1700 m a.s.l., 05.06.2022, *Beshko* (www.plantarium.ru); watershed crest between Hayatsay and Madjrumsay, about 1850 m a.s.l., 05.06.2022, *Beshko* (www.plantarium.ru); watershed crest between Madjrum Pass and Mt. Hayatbashi, about 1980 m a.s.l., 25.05.2025, *Beshko* (TASH, www.plantarium.ru).

1016. *Salvia virgata* Jacq., Hort. Bot. Vindob. 1: 14 (1770). Perennial, hemicryptophyte. Euro-Siberian, Tethyan. Forest, Shrubland, Grassland. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** mountains Nuratau, 06.07.1963, *Khaydarov 1783* (TASH).

Scutellaria L.

1017. *Scutellaria botschantzevii* M.N.Abdull., Novosti Sist. Vyssh. Rast. 28: 133 (1991). Subshrub, chamaephyte. Nuratau, Kuhistan (subendemic). Shrubland, Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-b Aktau Range:** northern slope of Aktau Range, valley Ingichka 22 km east of the town Nurata, 26.06.1971, *Botschantzev, Kamelin 475* (LE).

1018. *Scutellaria comosa* Juz., Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk S.S.S.R. 14: 381 (1951). Subshrub, chamaephyte. Western Tien Shan, Western Pamir-Alay. Shrubland, Grassland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** south-eastern part of Koytash Mts., 26.05.1931, *Kasimenko 1891* (TASH); near the village Savryukbazar, 25.07.1931, *Kobranova* (LE); Balamansay, 30.07.1940, *Gomolitsky, Dolgikh, Arkhireev 224* (TASH); Nuratau, north-western slopes, 15.05.1955, *Zaprometova* (TASH); remnant mountain 3 km from Sentob, 26.05.1956, *Zaprometova* (TASH); Sentobsay, 27.05.1956, *Zaprometova* (TASH); south-west of town Jizzakh, Tamerlane's Gate, 07.05.1961, *Pryakhin* (TASH); valley Uchma, above the village, 01.06.1964, *Zuckerwanik 443* (TASH); Karysay, June 1991, *Maximova 01020* (herbarium of the Nuratau Nature Reserve); Hayatsay, Novi Mullo, 28.05.1998, *Beshko 98036, 98037* (herbarium of the Nuratau Nature Reserve, TASH); Hayatsay, 18.05.2000, *Beshko 00017, 00021* (herbarium of the Nuratau Nature Reserve); Hayatsay, 08.06.2006, *Beshko 06201, 06202* (herbarium of the Nuratau

Nature Reserve); surroundings of Saurbel Pass, 06.06.2009, *Beshko* (www.plantarium.ru); Saurbel Pass, 21.06.2010, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 40.513754° N 66.743058° E, 09.06.2020, *Ortikov, Pulatov, Turdiev, Juramurodov, Makhmudjanov 9062020611, 9062020612* (TASH). **I-4-b Aktau Range:** Dzhush – Koshrabad, 03.05.1913, *Korovin* (LE); Koshrabad, 03.05.1913, *Korovin* (LE).

1019. *Scutellaria galericulata* L., Sp. Pl.: 599 (1753). Perennial, hemicryptophyte. Euro-Siberian, Irano-Turanian. Wetlands (inland), Artificial aquatic. Foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Reported by Zakirov in «Vegetation cover of Nuratau Mountains» (1969, p. 38) and «Botanical geography of low mountains of Kyzylkum and Nuratau Range» (1971, p. 71).

1020. *Scutellaria glabrata* Vved., Fl. URSS 2: 124 (1954). Subshrub, chamaephyte. Western Pamir-Alay. Shrubland, Rocky areas. Montane zone. **Occurrence records: I-4-a Nuratau Range:** pass near the sources of Guzhumsay, 23.07.1937, *Demurina 675* (TASH); Hayat Pass, 03.08.1940, *Gomolitsky, Dolgikh, Arkhireev 242* (TASH); mountains 7 km south of the village Farish, 12.06.1962, *Karimov* (TASH); Hayatsay, Alichak, 16.07.1983, *Petrochenko 83064* (herbarium of the Nuratau Nature Reserve); Hayatsay, Khotunon, 11.06.1992, *Beshko 92124, 92125* (herbarium of the Nuratau Nature Reserve).

1021. *Scutellaria immaculata* Nevski ex Juz., Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk S.S.S.R. 14: 428 (1951). Subshrub, chamaephyte. Western Tien Shan, Western Pamir-Alay. Rocky areas. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, north slopes, 23.07.1931, *Kobranova 23* (TASH); Nuratau Range, Farish District, 18.05.1941, *Momotov* (TASH); remnant mountains between valleys Sentob and Katta Ej, 27.05.1956, *Zaprometova* (TASH); Farish District, the village Katta Bogdon, July 1956, *Ernazarov, Petrov 692* (TASH); Sentob, right side, above ruins Kurgan, 25.06.1983, *Bulgakova 77* (TASH); Mt. Karatash, 16.06.1996, *S. Michel 96047* (herbarium of the Nuratau Nature Reserve); Yongoklisay, 29.05.2010, *Beshko* (www.plantarium.ru); Sobsay, about 900 m a.s.l., 08.05.2013, *Beshko* (www.plantarium.ru); upper reaches of Ustuksay, about 1500 m a.s.l., 10.06.2013, *Beshko* (www.plantarium.ru); Farish District, near the village Amandara, 18.06.2016, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** Nuratau mountains, Aktau, near the village Shamaly, 02.05.1925, *Popov 371* (TASH); near the village Tikalik, 06.07.1932, *Knorring* (LE); south of well Uzunkuduk, 02.08.1937, *Mironov 94* (TASH); mountains Aktau, Samarkand Region, 28.05.1963, *Khaydarov 1535* (TASH); between Chuya and Langar, 19.07.1975, *Pimenov, Kljuykov, Baranova, Vassiljeva 736* (MW); northern slope of Aktau Range, mountains Bakhiltai, Charkhansay, 10.05.2013, *Beshko* (www.plantarium.ru).

1022. *Scutellaria intermedia* Popov, Byull. Sredne-Aziatsk. Gosud. Univ. 12(Suppl.): 16 (1926). Subshrub, chamaephyte. Western Tien Shan, Western Pamir-Alay. Shrubland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Ukhum Pass, 04.09.1932, *Knorring* (LE). **I-4-b Khobduntau Range:** Gumsay, 11.06.1929, *Kudrjashev* (TASH); Mts. Khobduntau, a peak near the village Bodbod, 16.06.1929, *Kudrjashev* (TASH); valley Bodbod, upper reaches of the river Bodbod, 20.06.1929, *Kudrjashev* (TASH); valley Langar, upper reaches, 24.06.1929, *Kudrjashev* (TASH); Khobduntau, watershed, 09.07.1937, *Demurina 465, 467, 469* (TASH).

1023. *Scutellaria oxystegia* Juz., Bot. Zhurn. S.S.S.R. 24: 431 (1939). Subshrub, chamaephyte. Western Tien Shan, Western Pamir-Alay. Shrubland, Grassland, Rocky areas. Montane zone. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, southern slope, 23.07.1931, *Kobranova 64* (TASH); Ustuksay, 11.07.1956, *Vvedensky 78* (TASH); north slopes of Nuratau Range, 2–3 km south-west of the village Kulbasay, foothills, 27.06.1973, *unknown collector* (TASH); Sentob, right side,

above ruins Kurgan, 25.06.1983, *Bulgakova 90, 94* (TASH). **I-4-b Aktau Range:** mountains Aktau, Samarkand Region, 29.05.1963, *Khaydarov 1610* (TASH).

1024. *Scutellaria ramosissima* Popov, Bot. Mater. Gerb. Glavn. Bot. Sada R.S.F.S.R. 5: 155 (1924). Subshrub, chamaephyte. Western Tien Shan, Western Pamir-Alay. Shrubland, Grassland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** watershed between Hayatsay and Andygensay, 18.07.1992, *Beshko 92126, 92127, 92158, 92159* (TASH, herbarium of the Nuratau Nature Reserve); Hayatsay, Andebaraut, 02.06.2006, *Beshko 06160–06163* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 1490 m a.s.l., 16.06.2019, *Beshko* (TASH); Nuratau Nature Reserve, Hayatsay, 40.513754° N 66.743058° E, 09.06.2020, *Ortikov, Pulatov, Turdiev, Juramurodov, Makhmudjanov 9062020613, 9062020614, 9062020615* (TASH).

Stachys L.

1025. *Stachys ilicifolius* (Schrenk ex Fisch. & C.A.Mey.) Sennikov (*Chamaesphacos ilicifolius* Schrenk ex Fisch. & C.A.Mey.), Checkl. Vasc. Pl. Tian-Shan: 351 (2021). Annual, therophyte. Irano-Turanian. Desert. Plain. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Kyzylcha State Farm, 06.07.1951, *Zaprometova* (TASH). **I-4-b Aktau Range:** Nurata, 29.04.1913, *Korovin 143* (TASH).

1026. *Stachys setifera* C.A.Mey., Verz. Pfl. Casp. Meer.: 94 (1831). Perennial, hemicryptophyte. Irano-Turanian. Wetlands (inland). Foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, south-west of the village Savryuk, 20.07.1937, *Kobranova 158* (TASH); near the stream between the village Aktash and gorge Ustuk, 02.07.1956, *Vvedensky 75* (TASH); Madjrumsay, 19.06.1994, *Beshko 94032, 94033* (herbarium of the Nuratau Nature Reserve); upper reaches of Hayatsay, 20.07.2007, *Beshko 07076* (herbarium of the Nuratau Nature Reserve, TASH); Nuratau Nature Reserve, gorge Bolosay, about 1500 m a.s.l., 01.07.2008, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, upper reaches of Hayatsay, Alichak, 1500 m a.s.l., 27.06.2012, *Beshko* (TASH).

1027. *Stachys turkestanica* (Regel) Popov ex Knorring, Fl. URSS 21: 209 (1954). Perennial, hemicryptophyte. Western Tien Shan, Western Pamir-Alay. Wetlands (inland). Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Gurdara, 23.06.1971, *Botschantzev, Kamelin* (LE); Sentob, 24.06.1971, *Botschantzev, Kamelin* (LE).

Thymus L.

1028. *Thymus seravschanicus* Klovov, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk S.S.S.R. 16: 312 (1954). Subshrub, chamaephyte. Mountain Middle Asian. Shrubland, Grassland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, 00.07.1991, *Maximova 91006, 91007* (herbarium of the Nuratau Nature Reserve); Madjrum Pass, 23.09.1991, *Beshko 91011* (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** valley Petyr, 14.07.1972, *Kamelin 96, 99* (LE).

1029. *Thymus subnervosus* Vved., Nabiev & Tulyag., Opred. Rast. Sred. Azii 9: 361 (1987). Subshrub, chamaephyte. Nuratau, Aktau (endemic). Shrubland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Range, Farish District, 19.05.1941, *Momotov* (TASH); northern slope Mts. Koytash, south of Kirov State Farm, 20.06.1971, *Botschantzev, Kamelin 258* (LE); Mt. Dushokh, 1500 m a.s.l., 21.04.1982, *Mukhina* (TASH); Bolosay, 1800 m a.s.l., 25.05.1982, *Mukhina 82036, 82037* (herbarium of the Nuratau Nature Reserve, TASH); Nuratau Nature Reserve, Karysay, Pubsay, rocky massif Parrandoz, 20.06.2009, *Beshko* (TASH); Tykchasay, rocky massif Parrandoz, 40.48703 N, 66.77572 E, 1410 m a.s.l., 11.05.2010, *Beshko* (TASH). **I-4-b Aktau Range:** north of the village Khodzha-Kolishan, gorge Yangokly, 08.06.1926, *Popov* (TASH);

northern slope of Aktau Range, valley Ingichka 22 km east of the town Nurata, 26.06.1971, *Botschantzev, Kamelin 459a* (LE).

Ziziphora L.

1030. *Ziziphora clinopodioides* Lam., Tabl. Encycl. 1: 63 (1791). Subshrub, chamaephyte. Caucasian, Irano-Turanian, Siberian. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Abundant. Native. **Occurrence records: I-4-a Nuratau Range:** Koshrabad, Mt. Mirishkar, 05.05.1913, *Korovin 302, 345* (TASH); Nuratau mountains, north-western slopes, 20.07.1931, *Kobranova 26* (TASH); Mts. Koytash, southern slope, 23.07.1931, *Kobranova 40, 62, 73* (TASH); Mts. Koytash, north-western slopes, 23.07.1931, *Kobranova 49* (TASH); the pass Saukbulak, 16.06.1931, *Vasilkovskaya 712* (TASH); [same locality], 02.08.1931, *Vvedensky 1510* (TASH); foothills, 1.5 km north of the village Guzhum, 04.07.1937, *Makarchuk 518* (TASH); Mts. Koytash, 3 km west of village Tutli, 29.05.1940, *Gomolitsky, Dolgikh 72* (TASH); Hayatsay gorge, 28.05.1969, *Mambetjumaev 71* (TASH); north slopes of Nuratau Range, south of the village Deristan, 29.06.1973, *unknown collector* (TASH); Hayatsay, Alichak, 15.07.1983, *Baskakova, Penkova 83045, 83046* (herbarium of the Nuratau Nature Reserve); Hayatsay, Khotunon, 13.06.1990, *Beshko, Yakovenko 90109, 90110* (herbarium of the Nuratau Nature Reserve); Hayatsay, Andebaraut, 22.05.2006, *Beshko 06324* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, watershed crest between Hayatsay and Madjrumsay, about 1900 m a.s.l., 16.06.2019, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** north slope of Mt. Takhkuta, 07.05.1913, *Korovin 453* (TASH); near the village Angudan, 10.06.1928, *Yakimova* (LE); 5 km south-south-east of the village Chuya, 13.07.1932, *Knorring, Emme 65* (MW); Aktau, south of well Uzunkuduk, 02.08.1937, *Mironov 99* (TASH); the spring Bitav, 18.04.1963, *Khaydarov 865* (TASH); mountains Aktau, Samarkand Region, 29.05.1963, *Khaydarov 1574* (TASH). **I-4-b Khobduntau Range:** Mts. Khobduntau, near the village Gumsay, 02.06.1929, *Kudrjashev* (TASH).

1031. *Ziziphora pamiroalaica* Juz., Fl. URSS 21: 668 (1954). Subshrub, chamaephyte. Mountain Middle Asian. Shrubland, Grassland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Ustuksay, 12.07.1956, *Vvedensky 109* (TASH).

1032. *Ziziphora tenuior* L., Sp. Pl.: 21 (1753). Annual, therophyte. Euro-Siberian, Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Gallaaral District, Karakuduk, 03.06.1934, *Rybakov* (TASH); northern spurs of Nuratau Mts., south of the spring Yangaly, 06.05.1939, *Popova, Mikhaylova* (TASH); Nuratau Range, Farish District, 25.04.1941, *Momotov 46* (TASH); [same locality], 01.05.1941, *Momotov 8* (TASH); between Sharaus and Alaysay, 30.05.1954, *Zaprometova* (TASH); Asrafsay, 15.06.1956, *Zaprometova 255* (LE); Alaysay, 16.05.1957, *Zaprometova* (TASH); Ukansay, 02.04.1958, *Zaprometova 297* (LE); gorge Alichaksay, 27.05.1969, *Mambetjumaev 78* (TASH); Hayatsay, 1991, *Maximova 91017* (herbarium of the Nuratau Nature Reserve); Mt. Dushokh, 17.05.1995, *Beshko 95084* (herbarium of the Nuratau Nature Reserve); Hayatsay, Zamezhak, 03.05.2020, *Beshko 00002* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 07.05.2006, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** Dzhizman, 01.05.1969, *Fedtschenko* (LE); Nurata, sagebrush steppe near the well Pashat, 24.04.1913, *Korovin 35* (TASH); between well Pashat and Kara-Yuzgan, 25.04.1913, *Korovin* (TASH); Aktau, south of well Uzunkuduk, 02.08.1937, *Mironov 82* (TASH); the spring Bitav, 17.04.1963, *Khaydarov 665* (TASH); valley Chashma, 13.06.1963, *Khaydarov 1708* (TASH); Navoi Region, Nuratau mountains, northern slope of Aktau Range, Charkhansay, 40.46478° N, 65.80228° E, 17.05.2024, *Beshko* (www.inaturalist.org). **I-4-b Karatau Range:** south of the pass Jizlan, 26.05.1964, *Pryakhin* (TASH). **I-4-b Khobduntau Range:** plain between mountains Khobduntau and Karachatau, surroundings of Kuropatkino railway station, 08.06.1929, *Kudrjashev* (TASH); southern piedmont plain of

Khobduntau, near the village Kyrk, 19.06.1929, *Kudrjashev* (TASH); surroundings of Milyutinskaya Station, 01.05.1930, *Tarasevich 51* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistaltau, 07.06.1911, *Dimo, Sprygin, Shulga 1057* (TASH); plain between mountains Koytash and Balyklitau, 23.05.1931, *Kobranova 406* (TASH); the crest of remnant range Pistaltau, 26.04.2020, *Beshko* (www.plantarium.ru); Jizzakh Region, Farish District, Pistaltau, 40.46142° N, 67.5524° E, 25.04.2024, *Yusupov* (www.inaturalist.org).

Mazaceae Reveal

Dodartia L.

1033. *Dodartia orientalis* L., Sp. Pl.: 633 (1753). Perennial, hemicryptophyte. Euro-Siberian, Irano-Turanian. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, the village Osmansay, 01.06.1931, *Kobranova 475* (TASH); Mts. Koytash, southern slope, 23.07.1931, *Kobranova 65* (TASH); northern spurs of Nuratau Mts., plain north of the spring Yangaly, experimental plot of Nurata State Farm, 09.05.1939, *Mikhaylova, Popova* (TASH); Nuratau Range, Farish District, 20.05.1941, *Momotov* (TASH); Ustuksay, 17.05.1956, *Korotkova 5177, 8777* (TASH); Mt. Zargar, 3 km NE of the village Urtasay, 11.05.1957, *Momotov, Li 282, 283* (TASH); 1 km south of the village Savryuk, piedmonts of Koytash Mts., 22.05.1958, *Li, Zakirov 724* (TASH); mountains Nuratau, 04.05.1963, *Khaydarov 1199* (TASH); Hayatsay gorge, 28.05.1969, *Mambetjumaev 74* (TASH); Hayatsay, 10.06.1983, *Petrochenko 83053* (herbarium of the Nuratau Nature Reserve); Hayatsay, 13.07.1983, *Petrochenko 83066* (herbarium of the Nuratau Nature Reserve); Hayatsay, Novi Khushk, 30.05.1990, *Beshko, Yakovenko 90117* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, about 1100 m a.s.l., 20.05.2006, *Beshko* (www.plantarium.ru); 35 km from city Nurata (Nurota), Koshrabad town, Nuratau range, Karamola mts., 520 m.s.l., 40°42'57" N 66°03'52" E, 16.05.2013, *Lyskov* (MW); Jizzakh Region, Farish District, Madjrumsay, 40.583713° N, 66.727707° E, 13.04.2016, *Beshko* (www.inaturalist.org). **I-4-b Aktau Range:** Dzhusk – Koshrabad, *Iris steppe*, 03.05.1913, *Korovin 266, 270* (TASH). **I-4-b Karachatau Range:** 2.5–3 km north-east of the village Yukary-Kariya, 06.07.1937, *Demurina 540* (TASH). **I-4-b Khobduntau Range:** valley Langar, 24.06.1929, *Kudrjashev* (TASH); Gallaaral District, surroundings of Milyutinskaya Station, experimental station of cereal crops, 04.06.1934, *Toporova* (TASH).

Orobanchaceae Vent.

Leptorhabdos Schrenk ex Fisch. et C.A.Mey.

1034. *Leptorhabdos parviflora* (Benth.) Benth., A.P.de Candolle, Prodr. 10: 510 (1846). Annual, therophyte. Caucasian, Irano-Turanian. Shrubland, Grassland, Rocky areas, Wetlands (inland). Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, 1900 m a.s.l., 20.08.1977, *Levichev* (TASH); Nuratau Nature Reserve, Hayatsay, Alichak, 25.06.2006, *Beshko 06246* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, about 1800 m a.s.l., 01.07.2008, *Beshko* (www.plantarium.ru).

Orobanche L.

1035. *Orobanche aegyptiaca* Pers. (*Phelipanche aegyptiaca* (Pers.) Pom.), Syn. Pl. 2: 181 (1806). Perennial, hemicryptophyte, parasite. Tethyan. Artificial terrestrial. Host plants are mainly agricultural crops, rarely wild plants. Plain, foothills, montane zone. Rare. Probably alien. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, the village Osmansay, 25.05.1931, *Kobranova* (TASH); Mts.

Koytash, the village Mikhin, 28.07.1931, *Kobranova* 79 (TASH); Hayatsay, field station of nature reserve, 10.07.2006, *Beshko* 06266 (herbarium of the Nuratau Nature Reserve, TASH); Hayat village, kitchen-garden, among tomatoes, 09.09.2019, *König, Rilke, Beshko* (TASH). **I-4-b Khobduntau Range:** valley Langar, 24.06.1929, *Kudrjashev* (TASH); Gallaaral District, surroundings of Milyutinskaya Station, experimental station of cereal crops, 1934, *Toporova* (TASH).

1036. *Orobancha amoena* C.A.Mey., C.F.von Ledebour, Fl. Altaic. 2: 457 (1830). Perennial, hemicryptophyte, parasite. Euro-Siberian, Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Host plants are species of the genera *Artemisia* and *Alhagi*. Plain, foothills, montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** Sentob, 24.06.1971, *Botschantzev, Kamelin* (LE); lower reaches of the river Hayat, 1000 m a.s.l., 25.05.1978, *Korshunov* (TASH); piedmont plain, lower reaches of Ukhumsay, 25.05.1993, *Beshko* 93074 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, Khotunon, 1200 m a.s.l., 22.05.2008, *Beshko* 80026 (TASH); Sobsay, middle reaches, 900 m a.s.l., 07.06.2013, *Beshko* (TASH); Nuratau Nature Reserve, Hayatsay, 09.06.2020, *Ortikov, Pulatov, Turdiev, Juramurodov, Makhmudjanov* 9062020970 (TASH). **I-4-b Khobduntau Range:** southern slope, valley Bodbod, upper reaches, 20.06.1929, *Kudrjashev* (TASH).

1037. *Orobancha cernua* Loefl., Iter Hispan.: 152 (1758). Perennial, hemicryptophyte, parasite. Euro-Siberian, Tethyan. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Host plants are species of the genera *Artemisia*, *Lactuca*, *Scariola*, *Cousinia*, *Carthamus*, sunflower, species of Solanaceae. Plain, foothills, montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** Hayatsay, 17.07.1996, *Beshko* 96050 (herbarium of the Nuratau Nature Reserve); Hayatsay, lower reaches, 850 m a.s.l., 01.06.2009, *Beshko* 09022 (herbarium of the Nuratau Nature Reserve, TASH); Nuratau Nature Reserve, Hayatsay, 1100 m a.s.l., 27.06.2012, *Beshko* (TASH). **I-4-c North-Nuratau insular low mountains:** saline meadow at the piedmonts of Balyklitau, south of the village Chimkurgan, 31.05.1958, *Vvedensky, Nabiev* (TASH).

1038. *Orobancha gigantea* (Beck) Gontsch., Trudy Bot. Inst. Akad. Nauk S.S.S.R., Ser. 1, Fl. Sist. Vyssh. Rast. 1: 55 (1933). Perennial, hemicryptophyte, parasite. Mountain Middle Asian. Shrubland, Rocky areas. Host plants are species of Apiaceae family (*Ferula*, *Schrenkia*, etc.). Montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** Hayatsay, Novi Khushk, 07.06.2006, *Beshko* 06176, 06177 (herbarium of the Nuratau Nature Reserve);

1039. *Orobancha hansii* A.Kern, Ber. Naturwiss.-Med. Vereins Innsbruck 1: 111 (1870). Perennial, hemicryptophyte, parasite. Irano-Turanian. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Host plants are species of Asteraceae family (*Artemisia*, *Cousinia*, etc.). Plain, foothills, montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** Mts. Koytash, above the village Koytash, 13.07.1972, *Kamelin* (LE); Hayatsay, Andebaraut, 20.06.2007, *Beshko* 07026 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, watershed Hayatsay and Madjrumsay, 1800 m a.s.l., 06.06.2011, *Beshko* 2011/053 (TASH). **I-4-b Aktau Range:** near the village Langar, Yangokly, 19–21.05.1941, *Zakirov, Niyazov* 7 (TASH). **I-4-b Khobduntau Range:** upper reaches of river Bodbod, 20.06.1929, *Kudrjashev* (TASH). **I-4-c North-Nuratau insular low mountains:** mountains Balyklitau, 23.05.1931, *Kobranova* 432 (TASH).

1040. *Orobancha kotschyi* Reut., A.P.de Candolle, Prodr. 11: 33 (1847). Perennial, hemicryptophyte, parasite. Caucasian, Irano-Turanian. Shrubland, Grassland, Rocky areas. Host plants are species of Apiaceae family (*Prangos*). Montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** valley Uchma, above the village, 01.06.1964, *Zuckerwanik* 456 (TASH).

1041. *Orobancha orientalis* Beck (*Phelipanche orientalis* (Beck) Soják), Monogr. Orobanchae 1: 110 (1890). Perennial, hemicryptophyte, parasite. Irano-Turanian. Shrubland, Rocky areas. Host plants are

wild almonds (*Prunus bucharica*, *P. spinosissima*). Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** the pass near Kyzylcha State Farm, 26.04.1958, *Zaprometova* (TASH); Mt. Parrandoz, 19.05.1983, *Fominykh* 83069 (herbarium of the Nuratau Nature Reserve).

1042. *Orobancha pallens* F.W.Schultz (*Phelipanche pallens* (Bunge) Soják), Flora 23: 128 (1840). Perennial, hemicryptophyte, parasite. Hyrcanian, Mountain Middle Asian. Host plants are species of *Artemisia*. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Andygensay, Sukhta, 05.06.2006, *Beshko* 06131 (herbarium of the Nuratau Nature Reserve).

Parentucellia Viv.

1043. *Parentucellia flaviflora* (Boiss.) Nevski, Trudy Bot. Inst. Akad. Nauk S.S.S.R., Ser. 1, Fl. Sist. Vyssh. Rast. 4: 321 (1937). Annual, therophyte. Irano-Turanian. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** northern slope of Nuratau Range south-west of town Jizzakh, Sanzar river gorge, 26.04.1979, *Pimenov, Kljuykov, Boryaev, Baranova, Vassiljeva* 24 (MW); Nuratau Nature Reserve, Hayatsay, 05.05.2006, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 1100 m a.s.l., 22.04.2010, *Beshko* (TASH); Jizzakh Region, Farish District, surroundings of village Chuprak, 40.33975° N, 67.25287° E, 19.05.2013, *lougrou* (www.inaturalist.org).

Pedicularis L.

1044. *Pedicularis olgae* Regel, Trudy Imp. S.-Peterburgsk. Bot. Sada, prepr. 6: 349 (1879). Perennial, hemicryptophyte. Mountain Middle Asian. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Koshrabad, Mt. Mirishkar, 05.05.1913, *Korovin* 312, 328 (TASH); Nuratau Range, Farish District, 07.05.1941, *Momotov* 184 (TASH); 3 km south-east of the village Yukary Ukhum, 29.04.1958, *Li, Zakirov* 230, 231 (TASH); south-east of village Hayat, 30.04.1958, *Li, Zakirov* 272 (TASH); Hayatsay gorge, 30.05.1969, *Mambetjumaev* 118 (TASH); watershed of Hayat and Kachaksay, about 1900 m a.s.l., 20.08.1977, *Levichev* (TASH); southern slope of Mt. Zargar, 27.04.1979, *Pimenov, Kljuykov, Boryaev, Baranova, Vassiljeva* 99 (MW); Nuratau Nature Reserve, Hayatsay, 1300 m a.s.l., 06.05.2012, *Beshko* (TASH); Nuratau Nature Reserve, Mt. Hayatbashi, 2145 m a.s.l., 19.05.2021, *Beshko, Madaminov* NB2021224 (TASH, www.plantarium.ru, www.inaturalist.org); Jizzakh Region, Farish District, Hayatsay, 40.51888° N, 66.74833° E, 02.06.2022, *Selyutina* (www.inaturalist.org). **I-4-b Aktau Range:** Mt. Takhkutau, 07.05.1913, *Korovin* (LE); Aktau, 21.05.1941, *Zakirov, Niyazov* (SAM).

Asteraceae Bercht. & J.Presl (Compositae Giseke)

Acanthocephalus Kar. & Kir.

1045. *Acanthocephalus amplexifolius* Kar. & Kir., Bull. Soc. Imp. Naturalistes Moscou 15: 128 (1842). Annual, therophyte. Irano-Turanian. Forest, Shrubland, Rocky areas, Wetlands (inland). Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Alaysay, 27.04.1958, *Zaprometova* (TASH); Sharaussay, 28.05.1956, *Zaprometova* (TASH). **I-4-b Aktau Range:** northern slope of Aktau Range, west of the village Chuya, gorge Ashbarana, 28.04.1979, *Pimenov, Kljuykov, Boryaev, Baranova, Vassiljeva* 132 (MW).

1046. *Acanthocephalus benthamianus* Regel, Izv. Imp. Obshch. Lyubit. Estestv. Moskovsk. Univ. 34(2): 47 (1882). Annual, therophyte. Irano-Turanian. Forest, Shrubland, Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, 16.05.1984, *Petrochenko* 84079, 84080 (herbarium of the Nuratau Nature Reserve); Karysay, Pubsay, 16.05.1993, *Beshko* 93025 (herbarium of

the Nuratau Nature Reserve). **I-4-b Aktau Range:** mountains Aktau near the village Shamaly, 24.05.1925, *Popov* 388 (TASH); near the village Langar, valley Yangokly, 21.05.1941, *Zakirov, Niyazov* (TASH).

Achillea L.

1047. *Achillea arabica* Kotschy (*Achillea biebersteinii* Afan.), Sitzungsber. Kaiserl. Akad. Wiss., Math.-Naturwiss. Cl. 52(Abth. 1): 255 (1866). Perennial, hemicryptophyte. Pontic, Caucasian, Irano-Turanian. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, the village Osmansay, 01.06.1931, *Kobranova* 476 (TASH); Kyzylcha, 28.05.1963, *Khaydarov* 1364 (TASH); Karl Marx State Farm, eastern part of Nuratau Range, basin of Narvansay, 20.05.1967, *Pereyginina* (TASH); Karysay, 23.05.1984, *Petrochenko* 84067 (herbarium of the Nuratau Nature Reserve); the village Garasha, 01.06.1995, *Yuldashev* (TASH); Hayatsay, 08.06.1992, *Beshko* 92134, 92135 (herbarium of the Nuratau Nature Reserve); Hayatsay, 20.05.2006, *Beshko* 06104 (herbarium of the Nuratau Nature Reserve); Hayatsay, Andebaraut, 22.05.2006, *Beshko* 06327 (herbarium of the Nuratau Nature Reserve); Hayatsay, Khotunon 08.06.2006, *Beshko* 06199 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, about 1000 m a.s.l., 02.06.2009, *Beshko* (www.plantarium.ru); surroundings of village Ukhum, Ukhumsay, 05.05.2020, *Akbarov, Turdiev, Juramurodov* 5052020011 (TASH); Nuratau Nature Reserve, Hayatsay, 09.06.2020, *Ortikov, Pulatov, Turdiev, Juramurodov, Makhmudjanov* 9062020632 (TASH); upper reaches of Osmansay above the Zangori Olov summer camp, 28.04.2020, 02.07.2020, 24.09.2020, *Beshko, Shomurodov, Adilov, Abduraimov* (plant community description); upper reaches of right tributary of Uchmasay, upstream of the village Jakak, 30.04.2020, 02.07.2020, *Beshko, Shomurodov, Adilov, Abduraimov* (plant community description); Nuratau Nature Reserve, Pubsay, Mt. Parrandoz, 40.48666° N 66.80478° E, 28.05.2023, *Beshko* (www.inaturalist.org). **I-4-b Aktau Range:** Gazgan, 16.06.1963, *Khaydarov* 1754 (TASH); downstream of the village Langar, 1200-1300 m a.s.l., 08.06.1983, *Rusanovich* (MW); near the village Dekhibaland, 01.07.1985, *Yuldashev* (TASH); mountains Aktau, near the village Chashma, 01.06.1998, *Yuldashev* (TASH). **I-4-b Khobduntau Range:** plain between mountains Khobduntau and Karachatau, near the village Gumsay, 11.06.1929, *Kudrjashev* (TASH); near the village Khodzha-Kabud, 15.06.1929, *Kudrjashev* (TASH); Gallaaral District, experimental station of cereal crops, 14.05.1934, *Toporova* (TASH); Gallaaral District, surroundings of Milyutinskaya Station, experimental station of cereal crops, 25.05.1934, *Toporova* (TASH).

1048. *Achillea filipendulina* Lam., Encycl. Meth. 1: 27 (1783). Perennial, hemicryptophyte. Pontic, Caucasian, Irano-Turanian. Forest, Shrubland, Grassland, Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, the village Mikhin-Bogdon, 26.07.1931, *Kobranova* 80 (TASH); Hayatsay, 14.06.1984, *Petrochenko* 84068, 84069 (herbarium of the Nuratau Nature Reserve); Hayatsay, field station of nature reserve, 03.06.2006, *Beshko* 06145 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, about 1000 m a.s.l., 12.06.2008, *Beshko* (www.plantarium.ru); upper reaches of Osmansay, upstream of the village Baland Osman, 28.04.2020, 02.07.2020, 24.09.2020, *Beshko, Adilov* (plant community description); Jizzakh Region, Farish District, upstream of the village Baland Osman, 40.32202° N, 67.29183° E, 02.07.2020, *Beshko* (www.inaturalist.org).

1049. *Achillea karatavica* Kamelin, Opred. Rast. Sred. Azii 10: 634 (1993). Perennial, hemicryptophyte. Western Tien Shan, Nuratau (subendemic). Grassland, Artificial terrestrial. Foothills. Rare. Native. **I-4-b Khobduntau Range:** Gallaaral District, surroundings of Milyutinskaya Station, experimental station of cereal crops, 25.05.1934, *Toporova* (TASH).

1050. *Achillea wilhelmsii* K.Koch (*Achillea kermanica* Gand., *Achillea santolinoides* subsp. *wilhelmsii* (K. Koch) Greuter), Linnaea 24: 328 (1851). Perennial, hemicryptophyte. Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** Jizzakh District, Karakuduk, 15.05.1928, *Sovetkina* 204 (TASH); Mts. Koytash, the village Osmansay, June 1931, *Kobranova* 464 (TASH); Gallaaral District, Karakuduk, 07.06.1934, *Rybakov* (TASH); Mts. Koytash, west of the village Terakli, 25.05.1940, *Gomolitsky* 17 (TASH); Nuratau Range, Farish District, 01.05.1941, *Momotov* (TASH); [same locality], 19.05.1941, *Momotov* (TASH); foothills of Nuratau Range, Farish District, Kirov State Farm, 23.05.1943, *Vernik* 82 (TASH); Jingildysay, 12.04.1952, *Zaprometova* (TASH); Farish District, piedmont plain, 17.04.1952, *Novikova* (TASH); piedmont plain north of Nuratau Range, near Kyzylcha State Farm, 01.05.1954, *Zaprometova* (TASH); [same locality], 08.05.1957, *Zaprometova* (TASH); mountains Nuratau, north-east of district center Nurata, 13.05.1964, *Markova* (TASH); Hayatsay, July 1990, *Beshko*, *Yakovenko* 90098 (herbarium of the Nuratau Nature Reserve); Jizzakh Region, Farish District, village Nurak, 27.04.2008, *Tillaev* (www.plantarium.ru); Jizzakh Region, northern piedmont plain of Nuratau Range (Farish Steppe), about 500 m a.s.l., 15.05.2009, *Beshko* (www.plantarium.ru); foothills of Nuratau near district center Farish, 13.05.2012, *Beshko* (TASH). **I-4-b Aktau Range:** Nurata, Koshrabad – Chuya, *Iris* formation, 06.05.1913, *Korovin* (TASH); piedmont plain near district center Nurata, 08.05.1963, *Markova* (TASH); near the village Chashma, Bakhiltau Mts., foothills, 05.06.1964, *Pryakhin* (TASH). **I-4-b Karachatau Range:** 5 km south of the mine Dzhenichke [Ingichka], foothills, 06.05.1957, *Momotov* 86 (TASH). **I-4-b Khobduntau Range:** plain between mountains Khobduntau and Karachatau, near the village Gumsay, 11.06.1929, *Kudrjashev* (TASH); Gallaaral District, experimental station of cereal crops, 01.06.1934, *Toporova* (TASH). **I-4-c North-Nuratau insular low mountains:** piedmont plain at the foot of remnant range Uchkulach, 5–6 km east of the village Uzunkuduk, 26.04.2020, *Beshko*, *Shomurodov*, *Adilov* (plant community description); proluvial plain 7 km east of village Yangiabad, rainfed arable land, 26.04.2020, *Beshko*, *Shomurodov*, *Adilov* (plant community description); outskirts of town Band, private garden, 30.06.2020, *Beshko*, *Shomurodov*, *Adilov* (plant community description).

Amberboa (Pers.) Less.

1051. *Amberboa turanica* Iljin, Izv. Bot. Sada Akad. Nauk S.S.S.R. 30: 110 (1931 publ. 1932). Annual, therophyte. Turanian. Desert, Shrubland, Rocky areas, Artificial terrestrial. Plain, foothills. Rare. Native. **Occurrence records:** **I-4-b Karatau Range:** 12 km north-west of Yangikuduk well, 28.05.1957, *Momotov*, *Li* 409 (TASH); surroundings of the well Karim, 21.04.1965, *Pryakhin* (TASH).

Arctium L.

1052. *Arctium aureum* (C.Winkl.) Kuntze (*Cousinia aurea* C.Winkl.), Revis. Gen. Pl. 1: 307 (1891). Perennial, hemicryptophyte. Western Pamir-Alay. Shrubland, Rocky areas. Montane zone. Rare. Native. **Occurrence records:** **I-4-c North-Nuratau insular low mountains:** Pistalitau, southern slope, 25.05.1956, *Zaprometova* (TASH); Balyklitau, northern slope, 26.05.1956, *Zaprometova* (TASH).

1053. *Arctium chloranthum* (Kult.) S.López, Romasch., Susanna & N.Garcia (*Cousinia chlorantha* Kult.), Taxon 60: 550 (2011). Perennial, hemicryptophyte. Nuratau, Kuhistan (subendemic). Shrubland, Rocky areas. Foothills, montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** Mts. Koytash, 25.05.1914, *Mikhelson* (LE).

1054. *Arctium haesitabundum* (Juz.) S.López, Romasch., Susanna & N.Garcia (*Cousinia haesitabunda* Juz.), Taxon 60: 550 (2011). Perennial, hemicryptophyte. Nuratau, Kuhistan (subendemic). Shrubland, Rocky areas. Montane zone. Rare. Native. UzbrDB 1. **Occurrence records:** **I-4-a Nuratau Range:** Mts. Koytash, near the village Koytash, 1913, *Mikhelson* (LE); Mts. Koytash, near the village Karatash, 1931, *Kobranova* (LE); Deristan, 23.06.1971, *Botschantzev*, *Kamelin* (LE).

1055. *Arctium horrescens* (Juz.) S.López, Romasch., Susanna & N.Garcia (*Cousinia horridula* Juz.), Taxon 60: 551 (2011). Perennial, hemicryptophyte. Western Tien Shan, Western Pamir-Alay. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Koytash, northern and southern slope, 28.06.1971, *Botschantzev, Kamelin* (LE).

1056. *Arctium karatavicum* (Regel & Schmalh.) Kuntze (*Cousinia karatavica* Regel & Schmalh.), Revis. Gen. Pl. 1: 308 (1891). Perennial, hemicryptophyte. Mountain Middle Asian, Dzungarian. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** surroundings of town Jizzakh, 23.05.1914, *Mikhelson* (MW); Ustuksay, 17.05.1956, *Korotkova 5773* (TASH); 1.5 km south-west of Saurbel Pass, 27.04.1958, *Li, Zakirov 196* (TASH); 3 km north of Saurbel Pass, 27.04.1958, *Li, Zakirov 118* (TASH); 5 km north-east of the village Narvan, 21.05.1958, *Li, Zakirov 692* (TASH); 7 km north-east of the village Narvan, 21.05.1958, *Li, Zakirov 702* (TASH); 3 km south of the village Ustakhan, 25.05.1958, *Li, Zakirov 809* (TASH); Talabaysay (left tributary of Kulbasay), 8 km south-west of Yangikishlak, 900 m a.s.l., 27.05.2012, *Beshko* (TASH, www.plantarium.ru); surroundings of Saurbel Pass, about 1200 m a.s.l., 28.06.2019, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** the village Pichet, 04.05.1913, *Korovin* (TASH); north of the village Avessay, 24.07.1928, *Lepeschkin* (TASH); near the village Langar, valley Yangokly, 19–21.05.1941, *Zakirov, Niyazov* (TASH).

1057. *Arctium korolkowii* (Regel & Schmalh.) Kuntze (*Cousinia korolkowii* Regel & Schmalh.), Revis. Gen. Pl. 1: 308 (1891). Perennial, hemicryptophyte. Nuratau, Kyzylkum Relic Mountains (subendemic). Shrubland, Grassland, Rocky areas. Foothills, montane zone. Abundant. Native. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, near the village Bogdon, 25.05.1914, *Mikhelson* (LE); Karasay Pass, 10.06.1928, *Lepeschkin, Yakimova* (LE); pass near the sources of Guzhumsay, 23.07.1937, *Demurina 686* (TASH); Nuratau Range, Farish District, 18.05.1941, *Momotov* (TASH); Koblatysay, 20.05.1951, *Zaprometova* (TASH); near Kyzylcha State Farm, 23.05.1951, *Novikova* (TASH); Gatchasay, 31.05.1954, *Zaprometova 127* (TASH); Sharaussay, 28.05.1956, *Zaprometova* (TASH); 4 km north-east of the village Zulum, 29.05.1956, *Zakirov 265* (TASH); Gatchasay, 16.06.1956, *Zaprometova* (TASH); piedmont plain 3 km west of Kyzylcha State Farm, 25.04.1957, *Zaprometova* (TASH); Karasay, 12.04.1958, *Zaprometova 420* (TASH); 5 km south-east of the village Yukary Ukhum, near Ukhum Pass, south-south-east of village Hayat, 30.06.1958, *Li, Zakirov 248, 273* (TASH); Kyzylcha State Farm, 1.5 km north-east of Gilagan well, foothills, 27.05.1963, *Makarchuk* (TASH); Hayatsay gorge, 02.06.1969, *Mambetjumaev 148* (TASH); surroundings of village Sentob, 24.06.1971, *Botschantzev, Kamelin 427* (LE); Nuratau Nature Reserve, Hayat, 1000 m a.s.l., 29.05.1978, *Korshunov* (TASH); Nuratau Nature Reserve, Hayat, Alichak, 08.08.1980, *Mukhina* (TASH); Ukhumsay, 25.06.1978, *Bulgakova 97* (TASH); Sentob, near ruins Kurgan, 23.06.1983, *Bulgakova 10* (TASH); Hayatsay, 06.07.1990, *Beshko, Yakovenko 90127* (herbarium of the Nuratau Nature Reserve); Hayatsay, Novi Khushk, 07.06.2006, *Beshko 06175* (herbarium of the Nuratau Nature Reserve); Hayatsay, Khotunon 08.06.2006, *Beshko 06200* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, upper reaches of Hayatsay, Alichak, 1400 m a.s.l., 27.06.2012, *Beshko* (TASH); Nuratau Nature Reserve, Hayatsay, about 1300 m a.s.l., 15.06.2014, *Beshko* (www.plantarium.ru); Madjrumsay, 25.03.2016, *Usmonov* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, about 1300 m a.s.l., 16.06.2019, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 09.06.2020, *Ortikov, Pulatov, Turdiev, Juramurodov, Makhmudjanov 9062020695* (TASH); Nuratau Nature Reserve, Hayatsay, about 1400 m a.s.l., 05.06.2022, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** mountains Aktau near the village Shamaly, 24.05.1925, *Popov 379* (TASH); 5 km south-south-east of village Chuya, mountains Aktau, 13.07.1932, *Knorring, Emme 63* (MW); near the village Langar, valley Yangokly, 19–21.05.1941, *Zakirov, Niyazov* (TASH); mountains Aktau, Samarkand Region, 28.05.1963, *Khaydarov 1529* (TASH); sources of river Bitau, 27.05.1964, *Zuckerwanik*

(TASH); stony foothills near the village Chashma (south of Bakhiltau Mts.), 05.06.1964, *Pryakhin* (TASH).

1058. *Arctium leiospermum* Juz. & Ye.V.Serg., Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk S.S.S.R. 18: 299 (1957). Biennial, hemicryptophyte. Siberian, Middle Asian. Forest, Shrubland, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, field station of nature reserve, 07.07.2006, *Beshko 06213* (herbarium of the Nuratau Nature Reserve); Hayatsay, field station of Nuratau Nature Reserve, 19.07.2006, *Beshko* (www.plantarium.ru).

1059. *Arctium medians* (Juz.) S.López, Romasch., Susanna & N.Garcia (*Cousinia medians* Juz.), Taxon 60: 550 (2011). Perennial, hemicryptophyte. Western Pamir-Alay. Shrubland, Rocky areas. Foothills, montane zone. Rare. Native. **Occurrence records: I-4-b Karatau Range:** hilltop east of ruins Sarmysh, 26.04.1965, *Pryakhin* (TASH).

1060. *Arctium pallidivirens* (Kult.) S.Lopez, Romanschenko, Susanna & N.Garcia (*Anura pallidivirens* (Kult.) Tscherneva), Taxon 60: 548 (2011). Perennial, hemicryptophyte. Nuratau, Aktau (endemic). Shrubland, Grassland, Rocky areas. Foothills, montane zone. Occasional. Native. UzBRDB 2. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, above the village Shurkundi, 25.05.1938, *Botschantzev 8* (TASH); Ustuksay, 18.07.1953, *Zaprometova 381, 382, 383, 384* (TASH); Mts. Koytash, the top, 07.05.1954, *Ernazarov et al. 514* (TASH); north-east of village Koytash, northern slope, 30.04.1956, *Zakirov 97* (TASH); left side of the river Ustuksay, 17.05.1956, *Korotkova 5782* (TASH); Ustuksay, 11.07.1956, *Vvedensky 76* (TASH); 7 km north-east of the village Narvan, 21.05.1958, *Li, Zakirov 707* (TASH); 3 km north of Saurbel Pass, 27.06.1958, *Li, Zakirov 165* (TASH); Karysay, Ukhum Pass, 1700 m a.s.l., 19.06.1992, *Beshko 92318, 92319* (herbarium of the Nuratau Nature Reserve, TASH); Nuratau Nature Reserve, Karysay, Guzhm, 1500 m a.s.l., 28.06.1992, *Beshko 92507, 92508* (herbarium of the Nuratau Nature Reserve, TASH); Nuratau Nature Reserve, Hayatsay, 20.06.2007, *Beshko* (www.plantarium.ru); near Saurbel Pass, 1100 m a.s.l., 27.05.2012, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, Andebaraut, 1470 m a.s.l., 16.06.2019, *Beshko* (TASH); upper reaches of Osmansay above the Zangori Olov summer camp, 28.04.2020, 02.07.2020, *Beshko, Shomurodov, Adilov, Abduraimov* (plant community description); watershed of Nuratau Range, about 2 km east of Saurbel Pass, 02.07.2020, *Beshko, Shomurodov, Adilov, Abduraimov* (plant community description); Nuratau Nature Reserve, Hayatsay, about 1500 m a.s.l., 05.06.2022, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** mountains Aktau, near the village Shamaly, 24.05.1925, *Popov* (TASH); mountains Aktau, north of the village Hojakolishan, 08.06.1926, *Popov* (TASH).

1061. *Arctium umbrosum* (Bunge) Kuntze (*Cousinia umbrosa* Bunge), Revis. Gen. Pl. 1: 308 (1891). Perennial, hemicryptophyte. Irano-Turanian. Forest, Shrubland, Wetlands (inland), Artificial terrestrial. Foothills, montane zone. Abundant. Native. **Occurrence records: I-4-a Nuratau Range:** Sharaussay, 28.05.1956, *Zaprometova* (TASH); Sentobsay, 06.08.1957, *Zaprometova 47* (TASH); Tykchasay (3–7 km south of village Ukhum), 02.05.1958, *Li, Zakirov 287* (TASH); Hayatsay gorge, 08.06.1969, *Mambetjumaev 155* (TASH); Gurdara, 23.06.1971, *Botschantzev, Kamelin* (LE); Nuratau Nature Reserve, Hayatsay, about 1000 m a.s.l., 27.05.2006, *Beshko* (www.plantarium.ru); Hayatsay, field station of nature reserve, 03.06.2006, *Beshko 06148* (herbarium of the Nuratau Nature Reserve); upper reaches of Osmansay, upstream of the village Baland Osman, 05.04.2019, 26.06.2019, 26.09.2019, 28.04.2020, 02.07.2020, 24.09.2020, *Beshko, Adilov* (plant community description). **I-4-b Khobduntau Range:** Khobdun State Farm, 15.06.1990, *Islamov* (TASH).

Artemisia L.

1062. *Artemisia absinthium* L., Sp. Pl.: 848 (1753). Perennial, hemicryptophyte. Euro-Siberian, Irano-Turanian. Shrubland, Grassland, Artificial terrestrial. Foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** reported in «Conspectus Florae Asiae Mediae», vol. 10, 1993, p. 557.

1063. *Artemisia annua* L., Sp. Pl.: 847 (1753). Annual, therophyte. Palearctic. Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Reported by Zakirov in «Botanical geography of low mountains of Kyzylkum and Nuratau Range» (1971, p. 73).

1064. *Artemisia diffusa* Krasch. ex Poljakov, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk S.S.S.R. 16: 399 (1954). Subshrub, chamaephyte. Turanian. Desert, Shrubland, Rocky areas, Artificial terrestrial. Plain, foothills. Dominant. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau, 26.08.1915, *Spiridonov* (TASH); 4 km north of Kyzylcha State Farm, piedmont plain, 11.04.1952, *Zaprometova* (TASH); Koshrabad District, piedmonts of Nuratau, 19.08.1954, *Krasnopolin et al.* 114 (TASH); 2 km east of the village Sarymsakli, piedmonts of Koytash Mts., 24.05.1958, *Zakirov* 763 (TASH); piedmont plain 8 km north of Kyzylcha State Farm, 29.09.1958, *Li, Zakirov* 936, 937, 938, 958 (TASH); piedmont plain of Nuratau 2 km east of Nurata State Farm, 30.09.1958, *Li, Zakirov* 959, 960 (TASH); plain north of Nuratau, 1.5 km south of Arbab well, 01.10.1958, *Li, Zakirov* 961 (TASH); 2 km west of Eski Farish, 01.10.1958, *Li, Zakirov* 975 (TASH); 2 km north-east of the village Quyi Uchma, northern piedmonts of Nuratau Mts., 01.10.1958, *Li, Zakirov* 977 (TASH). **I-4-b Aktau Range:** near the village Dekhibaland, 28.05.1936, *Kharchenko* 1123 (TASH); valley Chashma, 13.06.1962, *Khaydarov* 176 (TASH). **I-4-b Karatau Range:** 2.5 km north-west of the village Dekhibaland, hilly north-western part of Karatau Mts., 28.09.1958, *Li, Zakirov* 934, 935 (TASH). **I-4-b Mt. Kokcha:** Kanimekh District, 6 km south of the village Kokcha, 27.05.1964, *Pryakhin, Nikitin* (TASH). **I-4-b Karachatau Range:** 10 km south of Koshrabad, north-western slope, 04.10.1958, *Li, Zakirov* 1000, 1001 (TASH); **I-4-c North-Nuratau insular low mountains:** plain near piedmonts of Pistalitau, 30.09.1941, *Korovin* 13, 27 (TASH); 2.5 km north-west of the village Ment [Band], plain near piedmonts of Uchkulach, 02.10.1958, *Li, Zakirov* 978, 979 (TASH); northern piedmonts of Pistalitau, 24.04.2020, 30.06.2020, 23.09.2020, *Beshko, Shomurodov, Adilov* (plant community description); pass on the remnant range Pistalitau, 25.04.2020, 02.07.2020, 23.09.2020, *Beshko, Shomurodov, Adilov* (plant community description); 5 km north of town Band, between two dumps of the Uchkulach open pit, 26.04.2020, 01.07.2020, 23.09.2020, *Beshko, Shomurodov, Adilov* (plant community description); northern piedmonts of remnant mountains Uchkulach, 26.04.2020, 01.07.2020, 23.09.2020, *Beshko, Shomurodov, Adilov* (plant community description); surroundings of Uchkulach, piedmonts of remnant mountains Pistalitau, 25.04.2020, 30.06.2020, 23.09.2020, *Beshko, Shomurodov, Adilov* (plant community description); southern piedmonts of remnant mountains Pistalitau, about 7 km east of the villages Yangiabad and Uchkulach, 26.04.2020, 02.07.2020, 23.09.2020, *Beshko, Shomurodov, Adilov* (plant community description).

1065. *Artemisia eremophila* Krasch. & Butkov, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk S.S.S.R. 16: 400 (1954). Subshrub, chamaephyte. Western Tien Shan, Western Pamir-Alay. Desert, Shrubland, Grassland, Rocky areas. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** upper reaches of Sentobsay, near the pass, 02.08.1940, *Gomolitsky, Dolgikh*, 258, 259, 269, 270 (TASH); Nuratau Range, Farish District, 02.05.1941, *Momotov* 11, 12 (TASH).

1066. *Artemisia ferganensis* Krasch. ex Poljakov, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk S.S.S.R. 16: 409 (1954). Subshrub, chamaephyte. Middle Asian. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Gallaaral District, Karakuduk, 05.06.1934, *Rybakov* 50 (TASH);

Koblatysay, 27.10.1953, *Zaprometova* 369 (TASH); upper reaches of Sentobsay, 10.05.1958, *Li, Zakirov* 471 (TASH); Navoi Region, Nurata District, Temirqovusay, 19.06.2002, *Beshko* 02072, 02076, 02113 (herbarium of the Nuratau Nature Reserve). **I-4-c North-Nuratau insular low mountains:** Pistalitau, piedmont plain, 30.09.1941, *Korovin* 15, 23 (TASH).

1067. *Artemisia glanduligera* Krasch. ex Poljakov, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk S.S.S.R. 16: 402 (1954). Subshrub, chamaephyte. Western Tien Shan, Pamir-Alay. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** reported in «Conspectus Florae Asiae Mediae», vol. 10, 1993, p. 574–575.

1068. *Artemisia glaucina* Krasch. ex Poljakov, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk S.S.S.R. 16: 412 (1954). Subshrub, chamaephyte. Western Tien Shan, Pamir-Alay. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** watershed in upper reaches of Sentobsay, 27.07.1937, *Demurina* 791 (TASH).

1069. *Artemisia juncea* Kar. & Kir., Bull. Soc. Imp. Naturalistes Moscou 15: 383 (1842). Subshrub, chamaephyte. Middle Asian. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** near Ukhum Pass, 15.07.1914, *Mikhelson* (TASH); the pass from Madjrumsay to the village Sentob, 05.09.1932, *Knorring, Emme* 165 (MW); upper reaches of Sentobsay, near the pass, 02.08.1940, *Gomolitsky, Dolgikh* 265 (TASH); Ustuksay, 02.06.1954, *Burygin* 344, 348 (TASH); on the way from Ustuksay to Fazilman Lake, 2 km south of lake, 11.05.1956, *Korotkova* 5099 (TASH); Ustuksay, 17.05.1956, *Korotkova* 5176 (TASH); Ustuksay, 12.07.1956, *Vvedensky* 103 (TASH); Hayatsay, 1200 m a.s.l., 20.08.1977, *Levichev* (TASH); Hayat, 1300 m a.s.l., 04.08.1978, *unknown collector* (TASH); Hayat, 1400 m a.s.l., dry lateral valley, 16.08.1978, *unknown collector* 69 (TASH); Mt. Hayatbashi, 12.08.1980, *unknown collector* 79 (TASH); Hayatsay, Alichak, 25.06.2006, *Beshko* 06240 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, about 1800 m a.s.l. 05.06.2022, *Beshko* (www.plantarium.ru).

1070. *Artemisia leucodes* Schrenk, Bull. Cl. Phys.-Math. Acad. Imp. Sci. Saint-Petersbourg 3: 106 (1845). Biennial, therophyte. Middle Asian. Desert, Shrubland, Grassland, Artificial terrestrial. Plain, foothills, montane zone. **Occurrence records: I-4-a Nuratau Range:** the road to Saukbulak through Nuratau Range, Temirqovuq, 02.08.1931, *Kobranova* (TASH); [same locality], 02.08.1931, *Kasimenko* 2341 (TASH); near the village Chuya, 17.07.1932, *Knorring, Emme* (LE); 8–9 km west of the village Temirqovuq, 26.07.1937, *Demurina* 776 (TASH); Nuratau, piedmonts, 3 km from the village Farish, 01.08.1940, *Gomolitsky, Dolgikh* 254 (TASH); Karasay, 30.05.1954, *Zaprometova* (TASH); piedmont plain 8 km north of Kyzylcha State Farm, 29.09.1958, *Li, Zakirov* 939, 940, 941 (TASH). **I-4-b Aktau Range:** 2–3 km south of the village Kokbulak, 01.07.1937, *Demurina* 359, 371 (TASH); near village Chuya, 01.08.1937, *Mironov* 73, 74 (TASH); near the village Akkula, 03.08.1937, *Mironov* 107 (TASH); near the village Gazgan, 16.06.1963, *Khaydarov* (TASH); upper reaches of river Bitau, surroundings of the village, 26.05.1964, *Zuckerwanik* 247 (TASH); upper reaches of river Bitau, 27.05.1964, *Zuckerwanik* 324 (TASH). **I-4-b Karachatau Range:** 10 km south of Koshrabad, western part of Karachatau, 04.10.1958, *Li, Zakirov* 996 (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 22.08.1913, *Popov* 194, 203 (TASH); piedmont plain of Pistalitau, 07.08.1954, *Krasnopolin, Ernazarov, Petrovich* 63 (TASH); 4 km north-west of the village Tashkuduk, plain north of Balyklitau, 28.05.1958, *Li, Zakirov* 841 (TASH); Balyklitau, south of the village Chimkurgan, 31.05.1958, *Vvedensky, Nabiev* (TASH); 2.5 km north-west of the village Ment [Band], piedmont plain of Uchkulach Mts., 02.10.1958, *Li, Zakirov* 980 (TASH); piedmonts of Balyklitau, 03.09.2011, *Beshko* (TASH); Pistalitau, about 300 m a.s.l., 23.09.2020, *Beshko* (www.plantarium.ru).

1071. *Artemisia oliveriana* J.Gay ex Besser (*Artemisia serotina* Bunge, *Artemisia sogdiana* Bunge), A.P.de Candolle, Prodr. 6: 101 (1838). Subshrub, chamaephyte. Irano-Turanian. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Dominant.

Native. **Occurrence records: I-4-a Nuratau Range:** Payaryk District, 2 km north-west of the village Ugat, 21.07.1931, *Kobranova* 191, 192 (TASH); between the villages Sarymsak and Chirlauk, 30.07.1931, *Kobranova* 226 (TASH); near the village Karakuduk, 21.07.1937, *Mironov* 23 (TASH); foothills 5–6 km north-west of the village Urganchi, 25.07.1937, *Demurina* 774 (TASH); 8–9 km west of the village Temirqovuq, 26.07.1937, *Demurina* 783, 786 (TASH); near the village Ustakhan, 22.08.1937, *Titov* (TASH); Nuratau Range, Farish District, 1941, *Momotov* 16 (TASH); Kyzylcha State Farm, Nuratau Range, northern slope, 04.04.1951, *Novikova* (TASH); Gatchasay, 25.01.1955, *Zaprometova* (TASH); north slopes of Nuratau Range, between valleys Karchigay and Sentob, near mountains Fazilmantau, 11.05.1956, *Korotkova* 5425 (TASH); Nuratau Range, Akbel, 17.06.1962, *Khaydarov* 98 (TASH); north slopes of Nuratau Range, 2.5 km south-west of Yangikishlak, foothills, 27.06.1973, *unknown collector* (TASH); Andebaraut, 25.02.1978, *unknown collector* (TASH); Hayatsay, 16.08.1978, *unknown collector* 69 (TASH); Mt. Dushokh, 21.08.1978, *unknown collector* 162 (TASH); piedmont plain, lower reaches of Ukhumsay, September 1978, *Korshunov* 78039 (herbarium of the Nuratau Nature Reserve); Mt. Hayatbashi, 12.08.1980, *unknown collector* 80 (TASH); Navoi Region, Nurata District, Temirqovuqsay, 19.06.2002, *Beshko* 02077 (herbarium of the Nuratau Nature Reserve); Navoi Region, Nurata District, Temirqovuqsay, 19.06.2002, *Beshko* 02075 (herbarium of the Nuratau Nature Reserve); Hayatsay, Novi Daroz, 12.06.2006, *Beshko* 06195 (herbarium of the Nuratau Nature Reserve); Hayatsay, Novi Daroz, 30.07.2006, *Beshko* 06295 (herbarium of the Nuratau Nature Reserve); piedmont plain between the villages Uchma and Safarota, 28.06.2019, 26.09.2019, *Beshko, Shomurodov, Adilov* (plant community description); northern foothills of Nuratau, between the villages Ilonchi and Osmansay, foothills south of the road P-36, N 40°23'27" E 67°15'45", 26.06.2019, 26.09.2019, *Beshko, Shomurodov, Adilov* (plant community description); foothills of Nuratau between the villages Egiz-Bulak and Amandara, 28.06.2019, 26.09.2019, *Beshko, Shomurodov, Adilov, Abduraimov* (plant community description); piedmont plain of Nuratau Range 6 km east of the village Karatash, 28.06.2019, 26.09.2019, *Beshko, Shomurodov, Adilov, Abduraimov* (plant community description); piedmonts of Mt. Karatash, 28.06.2019, 26.09.2019, *Beshko, Shomurodov, Adilov* (plant community description); upper reaches of Osmansay above the Zangori Olov summer camp, 28.06.2019, 26.09.2019, *Beshko, Shomurodov, Adilov, Abduraimov* (plant community description); upper reaches of Savryuksay, upstream of the village Koytash, 28.06.2019, 27.09.2019, *Beshko, Abduraimov* (plant community description). **I-4-b Aktau Range:** the hill Uchbash, 27.04.1913, *Korovin* 4 (TASH); foothills, near 3rd farmstead of Narpay State Farm, 29.09.1931, *Gomolitsky* 766 (TASH); near village Chuya, 01.08.1937, *Mironov* 68, 69 (TASH); 30 south-east of town Nurata, along the road to Dzhus, 01.06.1962, *Pryakhin* (TASH); upper reaches of Bitausay in surroundings of the village, 26.05.1964, *Zuckerwanik* 242 (TASH); sources of Bitausay, 27.05.1964, *Zuckerwanik* 293 (TASH). **I-4-b Karatau Range:** mountains Karakarga, near the pass Jizlan, 22.04.1913, *Korovin* 718 (TASH); mountains Karatau, 3 km north of the well Karim-kuduk, 25.10.1956, *Momotov, Poljakov* 530 (TASH); foothills east of Sarmysh, near the hilltop, 26.04.1965, *Pryakhin* (TASH). **I-4-b Khobduntau Range:** near Milyutinskaya Station, 26.07.1912, *Androssov* (LE). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 07.04.1911, *Dimo, Sprygin, Shulga* 1093 (TASH); the crest of Egarbelistag, 1.5 km west of the Carbonat JSC quarry, 25.03.2019, 26.06.2019, 26.09.2019, *Beshko, Shomurodov, Adilov* (plant community description); plain between remnant ranges Egarbelistag and Pistalitau, between Karaman well and 5th farmstead of Bogdon State Farm, N 40°23'45" E 67°29'27", 28.06.2019, 27.09.2019, *Beshko, Shomurodov, Adilov* (plant community description).

1072. *Artemisia porrecta* Krasch. ex Poljakov, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk S.S.S.R. 16: 410 (1954). Subshrub, chamaephyte. Western Tien Shan, Pamir-Alay. Desert, Shrubland, Grassland, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau mountains, north-western slopes, 20.07.1931, *Kobranova* 225

(TASH); between the villages Sarymsak and Chirlauk, 30.07.1931, *Kobranova* 229 (TASH); north slopes of Ukansay, 26.08.1953, *Zaprometova* (TASH); 7 km north-east of Yangikishlak, piedmont plain between Nuratau and Uchkulach, 28.05.1958, *Li, Zakirov* 831, 832 (TASH); north slopes of Nuratau Range, north-west of the village Deristan, foothills, 26.06.1973, *unknown collector* (TASH); 2 km north-west of Yangikishlak, piedmont plain, 27.06.1973, *unknown collector* (TASH). **I-4-b Aktau Range:** village Chuya, slopes of Aktau Mts., 12.08.1944, *Paroyskaya, Li* (TASH).

1073. *Artemisia rutifolia* Stephan ex Spreng., Syst. Veg., ed. 16. 3: 488 (1826). Subshrub, chamaephyte. Irano-Turanian. Shrubland, Rocky areas. Montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** Koytash, northern slope, 28.06.1971, *Botschantzev, Kamelin* (LE).

1074. *Artemisia scoparia* Waldst. & Kitam., Descr. Icon. Pl. Hung. 1: 66 (1802). Annual, biennial, therophyte. Palearctic. Desert, Forest, Shrubland, Grassland, Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** Urganchi, 01.05.1913, *Korovin* (TASH); Balamansay, 30.07.1940, *Gomolitsky, Dolgikh* 229 (TASH); Kyzylcha State Farm, piedmont plain, 1951, *Novikova* (TASH); mountains Nuratau, May 1963, *Khaydarov* (TASH). **I-4-b Aktau Range:** Nurata, mountain slopes between Nurata and well Pashat, 24.04.1913, *Korovin* 57 (TASH); the hill Uch-bash, 27.04.1913, *Korovin* 121 (TASH); mountains Aktau, foothills (Mitan District), 10.08.1931, *Kobranova* 496 (TASH); 2–3 km south of the village Kokbulak, 01.07.1937, *Demurina* 353 (TASH). **I-4-b Karachatau Range:** foothills 1.5–2 km east of the village Kursafar, 08.07.1937, *Demurina* 456 (TASH). **I-4-b Khobduntau Range:** Gallaaral District, surroundings of Milyutinskaya Station, experimental station of cereal crops, 25.05.1934, *Toporova* (TASH). **I-4-c North-Nuratau insular low mountains:** plain between mountains Koytash and Balyklitau, 23.05.1931, *Kobranova* 419 (TASH); piedmonts of Balyklitau, 03.09.2010, *Beshko* 10035 (herbarium of the Nuratau Nature Reserve); northern piedmonts of Pistalitau, 25.09.2019, *Beshko, Shomurodov, Adilov* (plant community description).

1075. *Artemisia subsalsa* Filatova, Novosti Sist. Vyssh. Rast. 18: 222 (1981). Subshrub, chamaephyte. Turanian. Desert, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** 8–9 km west of the village Temirqovuq, 26.07.1937, *Demurina* 778 (TASH); Mikhinsay (middle reaches) south of the village Yangikishlak, 22.07.1940, *Gomolitsky, Dolgikh* 192 (TASH); Mts. Koytash, 3 km north-east of the village Kuvakiya, piedmonts of Mt. Piyazli, 24.04.1941, *Momotov* 1 (TASH); Jingildysay, 21.09.1952, *Zaprometova* 403 (TASH); Koblatysay, 19.10.1953, *Zaprometova* 366 (TASH); Gatchasay, 24.01.1955, *Zaprometova* (TASH); [same locality], 26.01.1955, *Zaprometova* (TASH). **I-4-b Aktau Range:** Nurata experimental plot, 02.08.1937, *Morozova* (TASH); Nurata District, on the way from Nurata, 02.10.1941, *Korovin* 65, 67 (TASH). **I-4-b Karatau Range:** Kanimekh District, 16 km north-east of town Kanimekh, piedmont plain of karatau, 14.10.1955, *Momotov* 504 (TASH). **I-4-c North-Nuratau insular low mountains:** sagebrush steppe between Pistalitau and river Kly, 25.08.1913, *Popov* (TASH); Pistalitau, near Biresik, 01.08.1937, *Demurina* 1330, 1332 (TASH); piedmont plain of Pistalitau, 30.09.1940, *Korovin* 23 (TASH).

1076. *Artemisia tenuisecta* Nevski, Trudy Bot. Inst. Akad. Nauk S.S.S.R., Ser. 1, Fl. Sist. Vyssh. Rast. 4: 284 (1937). Subshrub, chamaephyte. Mountain Middle Asian. Shrubland, Grassland, Rocky areas. Montane zone. Dominant. Native. **Occurrence records:** **I-4-a Nuratau Range:** valley Bereshek, 19.07.1931, *Kobranova* 11 (TASH); Nuratau mountains, north-western slopes, 20.07.1931, *Kobranova* 15 (TASH); Mts. Koytash, northern and southern slopes, 23.07.1931, *Kobranova* 39, 59 (TASH); the pass through Nuratau Range to the village Saukbulak, 02.08.1931, *Kasimenko* 2337 (TASH); pass near the sources of Guzhumay, 23.07.1937, *Demurina* 661 (TASH); watershed in upper reaches of Sentobsay, 27.07.1937, *Demurina* 795 (TASH); near the village Ustuk, 29.07.1937, *Mironov* 36 (TASH); near the village Ustakhan, 22.08.1937, *Titov* (TASH); Mts. Koytash, west of the village

Terakli, 25.05.1940, *Gomolitsky, Dolgikh 15* (TASH); Mikhinsay (middle reaches) south of the village Yangikishlak, 22.07.1940, *Gomolitsky, Dolgikh 197* (TASH); upper reaches of Sentobsay, near the pass, 02.08.1940, *Gomolitsky, Dolgikh 258, 266* (TASH); Nuratau Range, Farish District, 10.05.1941, *Momotov 197* (TASH); [same locality], 15.05.1941, *Momotov* (TASH); Alaysay, 27.10.1953, *Zaprometova 389* (TASH); north slopes of Nuratau Range, between valleys Karchigay and Sentob, near mountains Fazilmantau, 11.05.1956, *Korotkova 5125* (TASH); Ustuksay, 12.07.1956, *Vvedensky 104* (TASH); 1.5 km south-west of Saurbel Pass, 27.04.1958, *Li, Zakirov 124, 125* (TASH); 3.5 km west of 1st department of Nurata State Farm, 06.05.1958, *Li, Zakirov 394* (TASH); southern slope, 1 km east of the pass through Pistalisay, 08.05.1958, *Li, Zakirov 435, 436, 437* (TASH); 5 km north-west of the village Khukala, 17.05.1958, *Li, Zakirov 631, 632* (TASH); 2 km east of the village Sarymsakly, piedmonts of Koytash Mts., 24.05.1958, *Li, Zakirov 762* (TASH); 8 km south of Yangikishlak, 02.10.1958, *Li, Zakirov 983* (TASH); 4 km west of the village Karabdal, foothills, 03.10.1958, *Li, Zakirov 924* (TASH); upper reaches of Ustuksay, surroundings of Fazilman Lake, 28.05.1964, *Zuckerwanik 348* (TASH); Novi Khushk, 30.06.1976, *unknown collector 5* (TASH); upper reaches of Hayatsay, 20.08.1977, *Levichev* (TASH); Hayat, 30.07.1978, *unknown collector* (TASH); Hayat, 16.08.1978, *unknown collector 69, 264* (TASH); Hayat, 16.08.1978, *unknown collector* (TASH); Hayatsay, July 1991, *Maximova 91019, 91014* (herbarium of the Nuratau Nature Reserve); village Upper Hayat, about 1000 m a.s.l., 40.3150° N, 66.4618° E, 09.09.2019, *Beshko* (TASH); upper reaches of Osmansay above the Zangori Olov summer camp, 28.06.2019, 26.09.2019, *Beshko, Shomurodov, Adilov, Abduraimov* (plant community description); crest of Nuratau Range, near Saurbel Pass, 06.04.2019, 28.06.2019, 27.09.2019, *Beshko, Shomurodov, Adilov* (plant community description); upper reaches of right tributary of Uchmasay, upstream of the village Jakak, 28.06.2019, 28.06.2019, 27.09.2019, *Beshko, Shomurodov, Adilov, Abduraimov* (plant community description); watershed of Nuratau Range, about 2 km east of Saurbel Pass, 06.04.2019, 28.06.2019, 27.09.2019, *Beshko, Shomurodov, Adilov* (plant community description); upper reaches of Osmansay, upstream of the village Baland Osman, 05.04.2019, 26.06.2019, 26.09.2019, *Beshko, Shomurodov, Adilov* (plant community description); surroundings of Saurbel Pass, 1240 m a.s.l., 24.09.2020, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** between well Pashat and Kara-Yuzgan, 25.04.1913, *Korovin 86* (TASH); 2–3 km south of the village Kokbulak, 01.07.1937, *Demurina 373* (TASH); near the village Karakisa, 30.07.1937, *Mironov 52, 54* (TASH); Aktau, south of well Uzunkuduk, 02.08.1937, *Mironov 83* (TASH); Nuratau mountains, on the way from Nurata to Karatau, 02.10.1941, *Korovin 69, 70, 71, 72, 73* (TASH); the spring Bitav, 18.09.1963, *Khaydarov 838* (TASH). **I-4-b Karatau Range:** 0.5 km east of Karakarga Pass, 28.09.1958, *Li, Zakirov 227, 228, 229, 230, 931, 932* (TASH); 30 south-east of town Nurata, along the road to Dzhus, 01.06.1962, *Pryakhin* (TASH). **I-4-b Karachatau Range:** southern foothills, near the village Ingichka, 07.07.1937, *Demurina* (TASH); foothills 1.5–2 km east of the village Kursafar, 08.07.1937, *Demurina 463* (TASH). **I-4-b Khobduntau Range:** near the village Gumsay, 24.09.1940, *Gomolitsky, Dolgikh 344* (TASH); 3 km north of the village Gum, foothills, 14.05.1958, *Li, Zakirov 570, 571* (TASH). **I-4-c North-Nuratau insular low mountains:** mountains Balyklitau south of the village Chimkurgan, 30.05.1958, *Vvedensky, Nabiev* (TASH).

1077. *Artemisia terrae-albae* Krasch., Otchet Rabotakh Pocv.-Bot. Otryada Kazakhstansk. Eksped. Akad. Nauk S.S.S.R. 4(2): 269 (1930). Subshrub, chamaephyte. Turanian. Desert. Plain, foothills. Rare. Native. **Occurrence records:** **I-4-b Aktau Range:** near the village Dekhibaland 23.05.1936, *Kharchenko 1129* (TASH).

1078. *Artemisia tournefortiana* Rchb., Iconogr. Bot. Exot. 1: 6 (1824). Annual, biennial, therophyte. Irano-Turanian. Forest, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** Hayatsay, 20.08.1977, *Levichev* (TASH); Khotunonsay, 10.08.1980, *unknown collector 16* (TASH); Hayatsay, Novi Daroz,

30.07.2006, *Beshko 06296* (herbarium of the Nuratau Nature Reserve); Hayatsay, field station of nature reserve, 22.09.2010, *Beshko 10022* (herbarium of the Nuratau Nature Reserve).

1079. *Artemisia turanica* Krasch., Ochet Rabotakh Pochv.-Bot. Otryada Kazakhstansk. Eksped. Akad. Nauk S.S.S.R. 4(2): 270 (1930). Subshrub, chamaephyte. Turanian. Desert, Shrubland, Rocky areas. Plain, foothills. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** near the well Ernazar, 04.05.1913, *Teplov* (TASH); Nuratau Range, the village Kara, 15.05.1963, *Khaydarov 1279* (TASH). **I-4-b Aktau Range:** Kanimekhchul, 3 km south-west of the spring Warajan, 08.06.1956, *Li 336* (TASH). **I-4-b Karatau Range:** surroundings of town Kanimekh, 5 km north of town, plain, 15.07.1934, *Tyshchenko 72* (TASH).

1080. *Artemisia vulgaris* L., Sp. Pl.: 848 (1753). Perennial, hemicryptophyte. Circumtemperate. Forest, Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Bolosay, 15.07.2010, *Beshko 10037* (herbarium of the Nuratau Nature Reserve).

Aster L.

1081. *Aster altaicus* var. *canescens* (Nees) Serg. (*Heteropappus canescens* (Nees) Novopokr., *Aster canescens* (Nees) Fisjun), P.N.Krylov, Fl. Zapadnoï Sibiri 11: 2664 (1949). Perennial, hemicryptophyte. Siberian, Middle Asian. Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** town Jizzakh, railway embankment, 05.08.1921, *Vvedensky 1719* (MW); Mts. Koytash, upper reaches of the stream 5 km north-east of the village Narvan, 19.07.1937, *Demurina 612* (TASH); Akbel, 09.06.1962, *Khaydarov 122* (TASH); Nuratau Nature Reserve, at the foot of Parrandoz rocks, 19.08.1980, *Mukhina 72* (TASH); Mt. Dushokh, 25.07.1990, *Beshko, Yakovenko 90106* (herbarium of the Nuratau Nature Reserve); Mt. Parrandoz, 22.07.1992, *Beshko 92252* (herbarium of the Nuratau Nature Reserve); Mt. Beshbarmak, 15.07.1993, *Beshko 93088* (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** at the latitude of the village Besh-Bulak, 03.07.1937, *Demurina 403* (TASH). **I-4-b Karachatau Range:** 2.5–3 km north-east of the village Yukary-Kariya, 06.07.1937, *Demurina 534* (TASH); foothills 10 km east of the village Bulakbashi, 06.07.1937, *Demurina 424* (TASH); piedmont plain 2 km north-east of the village Kaunchi, 07.07.1937, *Demurina 447* (TASH). **I-4-b Khobduntau Range:** Gumsay, 10.06.1929, *Kudrjashev* (TASH); near the village Khodzha-Kabud, 10.06.1929, *Kudrjashev* (TASH); [same locality], 16.06.1929, *Kudrjashev* (TASH); [same locality], 15.06.1929, *Kudrjashev* (TASH).

1082. *Aster popovii* Botsch. (*Rhinactinidia popovii* (Botsch.) Botsch.), Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk S.S.S.R. 16: 381 (1954). Perennial, hemicryptophyte. Western Tien Shan, Pamir-Alay. Shrubland, Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Gurdara, 23.06.1971, *Botschantzev, Kamelin* (LE); Mt. Hayatbashi, 24.07.1993, *Beshko 93082* (herbarium of the Nuratau Nature Reserve).

Carduus L.

1083. *Carduus nutans* L., Sp. Pl.: 821 (1753). Biennial, perennial, hemicryptophyte. Euro-Siberian, Irano-Turanian. Wetlands (inland), Artificial terrestrial. Foothills, montane zone. Rare. Native. **Occurrence records: I-4-b Khobduntau Range:** Gumsay, 3 km south of the village Gumsay, 27.06.1929, *Kudrjashev* (TASH).

1084. *Carduus pycnocephalus* subsp. *albidus* (M.Bieb.) Kazmi (*Carduus albidus* M.Bieb.), Mitt. Bot. Staatssamml. München 5: 446 (1964). Annual, therophyte. Euro-Siberian, Tethyan. Desert, Forest, Shrubland, Grassland, Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Alaysay, 18.04.1956, *Zaprometova 216* (TASH); mountains Nuratau, 20.04.1963, *Khaydarov 1017* (TASH);

Sanguzarsay, 07.05.1992, *Beshko*, 92450, 92451 (herbarium of the Nuratau Nature Reserve); surroundings of Yangikishlak, 13.05.2012, *Beshko* (TASH); Nuratau Nature Reserve, lower reaches of Madjrumsay, about 750 m a.s.l., 13.04.2016, *Beshko* (www.plantarium.ru, www.inaturalist.org).

Carthamus L.

1085. *Carthamus lanatus* subsp. *turkestanicus* (Popov) Hanelt (*Carthamus turkestanicus* Popov), Feddes Repert. Spec. Nov. Regni Veg. 67: 148 (1963). Annual, therophyte. Caucasian, Irano-Turanian. Forest, Shrubland, Grassland, Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, Novi Daroz, 10.07.2006, *Beshko* 06235, 06236 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, about 1100 m a.s.l., 14.07.2006, *Beshko* (www.plantarium.ru). **I-4-b Khobduntau Range:** near the village Khodzha-Kabud, 15.06.1929, *Kudrjashev* (TASH); Gallaaral District, surroundings of Milyutinskaya Station, experimental station of cereal crops, 24.07.1934, *Toporova* (TASH).

1086. *Carthamus oxyacanthus* M.Bieb., Tabl. Prov. Mer Casp.: 118 (1798). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** 7 km north-east of Yangikishlak, piedmont plain between Nuratau and Uchkulach, 28.05.1958, *Li, Zakirov* 833 (TASH); Nurata District, Kyzylcha State Farm, piedmont plain, 01.05.1960, *Galkina* (TASH); Nuratau Nature Reserve, the road from Hayat to Karysay, 19.08.1978, *unknown collector* 2 (TASH); Hayatsay, Novi Daroz, 30.07.2006, *Beshko* 06344 (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** 1 km from the village Murdash in direction to the pass Tikalik, 09.07.1932, *Knorring, Emme* 4 (MW); near the village Keriz, 11.07.1932, *Knorring, Emme* 53 (MW). **I-4-b Khobduntau Range:** reported by Kudrjashev in "Vegetation of the Khobduntau and Karachatau Mountains" (1929, p. 67). **I-4-c North-Nuratau insular low mountains:** Jizzakh Region, Farish District, southern piedmont plain of Pistalitau, 350 m a.s.l., 12.07.2010, *Beshko* (www.plantarium.ru).

1087. *Carthamus tinctorius* L., Sp. Pl.: 830 (1753). Annual, therophyte. Native to Turkey and Iran. Artificial terrestrial, Plain, foothills, montane zone. Rare. Alien. **Occurrence records: I-4-a Nuratau Range:** Jizzakh Region, Gallaaral District, southern foothills of Nuratau, surroundings of the village Karakchi, 600 m a.s.l., 15.07.2023, *Beshko* (www.plantarium.ru).

Centaurea L.

1088. *Centaurea benedicta* (L.) L. (*Cnicus benedictus* L.), Sp. Pl., ed. 2.: 1296 (1763). European, Tethyan. Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Bolosay, Yailok, 10.06.1996, *Beshko* 96141 (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** surroundings of Nurata, 40.57414° N, 65.69246° E, 17.05.2024, *Beshko* (www.inaturalist.org).

1089. *Centaurea bruguierana* subsp. *belangeriana* (DC.) Bornm. (*Centaurea belangeriana* (DC.) Stapf), Beih. Bot. Centralbl. 60B: 214 (1939). Annual, therophyte. Caucasian, Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Jizzakh Region, Gallaaral District, southern foothills of Nuratau, surroundings of the village Karakchi, 600 m a.s.l., 40.06727° N 67.569436° E, 15.07.2023, *Beshko* (www.plantarium.ru, www.inaturalist.org). **I-4-b Aktau Range:** variegated foothills near Karakishlak, 17.05.1941, *Popov* (TASH); Navoi Region, Nurata District, Nurata valley, near the village Papanay, 40°27'16" N, 66°09'50" E, 670 m a.s.l., 20.07.2012, *Beshko* (TASH). **I-4-b Khobduntau Range:** Gallaaral District, experimental station of cereal crops, 29.07.1934, *Toporova* (TASH). **I-4-c North-Nuratau insular low mountains:** Jizzakh Region, Farish District, southern piedmont plain of Pistalitau, 350 m a.s.l., 12.07.2010, *Beshko* (www.plantarium.ru); outskirts of the village Biresik, proluvial plain near the

western part of Pistalitau, N 40°33'51", E 67°19'58", 25.09.2019, 30.06.2020, *Beshko, Shomurodov, Adilov, Abduraimov* (plant community description); northern piedmonts of Pistalitau, 30.06.2020, *Beshko, Shomurodov, Adilov* (plant community description); 5 km north of town Band, between two dumps of the Uchkulach open pit, 01.07.2020, *Beshko, Shomurodov, Adilov* (plant community description); southern outskirts of the town Band, private garden, 30.06.2020, *Beshko, Shomurodov, Adilov* (plant community description); Jizzakh Region, Farish District, plain near the western part of Pistalitau, 250 m a.s.l., 01.07.2020, *Beshko* (www.plantarium.ru).

1090. *Centaurea cyanus* L. (*Cyanus segetum* Hill.), Sp. Pl.: 911 (1753). Annual, therophyte. Pluriregional. Artificial terrestrial. Plain, foothills, montane zone. Rare. Alien. **Occurrence records: I-4-a Nuratau Range:** Djizak, May 1881, *Capus* 689 (P); southern slopes of Nuratau, Ustuksay, 02.06.1954, *Burygin* 345 (TASH).

1091. *Centaurea depressa* M.Bieb. (*Cyanus depressus* (M.Bieb.) Soják), Fl. Taur.-Caucas. 2: 346 (1808). Annual, therophyte. Euro-Siberian, Tethyan. Forest, Shrubland, Grassland, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, field station of Nuratau Nature Reserve, 12.05.2007, *Beshko* (www.plantarium.ru, www.inaturalist.org); mountains south of the village Kyzylcha, 10.05.2016, *Usmonov* (www.plantarium.ru). **I-4-b Aktau Range:** Koshrabad, mountains, 04.05.1913, *Korovin* 282 (TASH). **I-4-b Khobduntau Range:** Gallaaral District, experimental station of cereal crops, 10.06.1934, *Toporova* (TASH).

1092. *Centaurea iberica* Trevir. ex Spreng., Syst. Veg., ed. 16. 3: 406 (1826). Biennial, perennial, hemicryptophyte. Euro-Siberian, Tethyan. Desert, Forest, Shrubland, Grassland, Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Nurata valley, near the village Ak-Chap, Nurata District, 03.08.1931, *Kasimenko* 1262 (TASH); Nuratau Nature Reserve, Hayatsay, about 1300 m a.s.l., 16.08.1978, *Korshunov* (TASH); Nuratau Nature Reserve, Hayatsay, about 1300 m a.s.l., 10.08.1980, *Mukhina* (TASH); Nuratau Nature Reserve, Bolosay, about 1500 m a.s.l., 01.07.2008, *Beshko* (www.plantarium.ru); Jizzakh Region, Farish District, surroundings of village Chuprak, 40.34025° N, 67.25293° E, 19.05.2013, *lougarou* (www.inaturalist.org); Jizzakh Region, Gallaaral District, southern foothills of Nuratau, surroundings of the village Karakchi, about 580 m a.s.l., 15.07.2023, *Beshko* (www.plantarium.ru, www.inaturalist.org); Jizzakh Region, Farish District, surroundings of village Ukhum, 40.51571° N, 66.78761° E, 12.05.2024, *langli* (www.inaturalist.org); Samarkand Region, Koshrabad District, near Fazilman Lake, 40.55493° N, 66.5627° E, 06.07.2024, *Beshko* (www.inaturalist.org). **I-4-b Aktau Range:** Khanbandy – Chuya, 02.05.1913, *Korovin* (TASH); Navoi Region, Khatyrchi District, surroundings of the pass Langar, 40.3421° N, 66.01318° E, 18.05.2024, *Beshko* (www.inaturalist.org).

1093. *Centaurea pulchella* Ledeb. (*Hyalea pulchella* (Ledeb.) Koch), Icon. Pl. Fl. Ross. 1: t. 93 (1829). Annual, therophyte. Caucasian, Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills. Occasional. Native. **Occurrence records: I-4-b Aktau Range:** Nurata, 09.05.1913, *Korovin* (TASH).

1094. *Centaurea solstitialis* L., Sp. Pl.: 917 (1753). Biennial, hemicryptophyte. European, Tethyan. Shrubland, Grassland, Artificial terrestrial. Plain, foothills, montane zone. Rare. Probably alien. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, 10.07.2007, *Beshko* 07041–07043 (herbarium of the Nuratau Nature Reserve, www.plantarium.ru); Jizzakh Region, Farish District, 4 km south-west of town Yangikishlak, 02.06.2023, *Fateryga* (www.plantarium.ru). **I-4-b Khobduntau Range:** Jizzakh Region, Gallaaral District, between town Gallaaral and the village Moltop, 39.98837° N 67.532556° E, 15.07.2023, *Beshko* (www.plantarium.ru, www.inaturalist.org).

1095. *Centaurea virgata* subsp. *squarrosa* (Boiss.) Gugler (*Centaurea squarrosa* Willd.), Ann. Hist.-Nat. Mus. Natl. Hung. 6: 248 (1907). Perennial, hemicryptophyte. Euro-Siberian, Tethyan. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Abundant. Native. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, the village Osmansay, June 1931, *Kobranova* 469 (TASH); valley Bereshek, 19.07.1931, *Kobranova* (TASH); Nuratau mountains, north-western slopes, 20.07.1931, *Kobranova* 224 (TASH); Mts. Koytash, southern slope, 23.07.1931, *Kobranova* 73 (TASH); Nuratau Nature Reserve, Hayatsay, 20.08.1977, *Levichev* (TASH); Nuratau Nature Reserve, Karysay, slopes, about 1500 m a.s.l., 15.08.1980, *Pjatina, Mukhina* (TASH); Karysay, 23.06.1984, *Petrochenko* 84070 (herbarium of the Nuratau Nature Reserve); Hayatsay, Novi Khushk, 01.06.1990, *Beshko, Yakovenko* 90125 (herbarium of the Nuratau Nature Reserve); Hayatsay, Novi Khushk, 07.06.2006, *Beshko* 06178, 06179 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 21.07.2007, *Beshko* (www.plantarium.ru); Navoi Region, Nurata District, Sobsay, 40.60014° N, 66.62497° E, 04.07.2024, *Beshko* (www.inaturalist.org). **I-4-b Aktau Range:** the town Nurata, north slopes of Nuratau Mts., 23.04.1913, *Korovin* (TASH); Khatyrchi District, the village Turk, June 1928, *Lepeschkin* (TASH). **I-4-b Khobduntau Range:** near the village Khodjarabat, 15.06.1929, *Kudrjashev* (TASH); near the village Khobdun, 12.06.1929, *Kudrjashev* (TASH).

Chardinia Desf.

1096. *Chardinia orientalis* (L.) Kuntze, Trudy Imp. S.-Peterburgsk. Bot. Sada 10: 201 (1887). Annual, therophyte. Pontic, Caucasian, Irano-Turanian. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Gallaaral District, Gallaaral State Farm, Karakuduk, 08.06.1934, *Rybakov* (TASH); Mts. Koytash, 3 km north-east of the village Kuvakiya, piedmonts of Mt. Piyazli, 24.04.1941, *Momotov* 19 (TASH); piedmont plain between Mt. Piyazli and Balykli, 24.04.1941, *Momotov* 33 (TASH); Nuratau Range, Farish District, 02.05.1941, *Momotov* (TASH); [same locality], 14.05.1941, *Momotov* (TASH); piedmont plain near Sentob, 10.05.1956, *Zaprometova* (TASH); 2 km west of Kyzylcha State Farm, 17.05.1955, *Zaprometova* (TASH); Gatchasay, 14.04.1958, *Zaprometova* (TASH); valley near Kyzylcha State Farm, 14.04.1958, *Galkina* (TASH); 2 km west of village Shurcha, southern slope, 25.04.1958, *Li, Zakirov* 63 (TASH); Koblatysay, 26.04.1958, *Zaprometova* (TASH); 3 km north of Saurbel Pass, 27.04.1958, *Li, Zakirov* 170 (TASH); Farish District, 4 km north-east of the village Deristan, 28.04.1958, *Li, Zakirov* 215 (TASH); 1 km east of Ukhumsay, piedmont plain of Nuratau Mts., 1958, *Li, Zakirov* 537 (TASH); 2 km north-west of the village Khukala, 17.05.1958, *Li, Zakirov* 616 (TASH); mountains Nuratau, 04.05.1963, *Khaydarov* 1172 (TASH); Hayatsay gorge, 02.06.1969, *Mambetjumaev* 149 (TASH); Nuratau Nature Reserve, Hayatsay, 15.05.2024, *Beshko* (www.plantarium.ru, www.inaturalist.org). **I-4-b Aktau Range:** Khanbandy – Chuya, surroundings of Koshrabad, 02.05.1913, *Korovin* 22 (TASH); near Koshrabad, 03.05.1913, *Korovin* (TASH); Dzhus – Koshrabad, *Iris* steppe, 03.05.1913, *Korovin* 246 (TASH); upper reaches of river Bitau, 26.05.1964, *Zuckerwanik* (TASH). **I-4-b Khobduntau Range:** surroundings of Kuropatkino railway station, 08.06.1929, *Kudrjashev* (TASH); Gallaaral District, surroundings of Milyutinskaya Station, experimental station of cereal crops, 07.05.1934, *Toporova* (TASH); [same locality], 14.05.1934, *Toporova* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 09.04.1915, *Popov* 68 (TASH).

Chondrilla L.

1097. *Chondrilla aspera* Poir., J.B.A.M.de Lamarck, Encycl., Suppl. 2: 329 (1811). Biennial, perennial, hemicryptophyte. Siberian, Middle Asian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, upper reaches of the stream 5 km north-east of the village Narvan, 19.07.1937, *Demurina* 618 (TASH); Hayatsay gorge, 02.06.1969, *Mambetjumaev* 146 (TASH); Nuratau Nature

Reserve, Hayatsay, 1000 m a.s.l., 29.05.1978, *unknown collector* (TASH); Nuratau Nature Reserve, Hayatsay, 1300 m a.s.l., 16.08.1978, *unknown collector* (TASH); Nuratau Nature Reserve, Hayatsay, 26.08.1980, *Mukhina 158* (TASH). **I-4-b Aktau Range:** mountains Aktau, the village Kosh-Khauz, 10.09.1928, *Lepeschkin* (TASH). **I-4-b Karachatau Range:** 3–5 km south-east of the village Kursafar, 07.07.1937, *Makarchuk 574* (TASH);

1098. *Chondrilla leiosperma* Kar. & Kir., Bull. Soc. Imp. Naturalistes Moscou 14: 456. (1841). Perennial, hemicryptophyte. Middle Asian. Forest, Shrubland, Grassland, Rocky areas. Foothills, montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** Ustuksay, 11.07.1956, *Vvedensky 77* (TASH); Nuratau Nature Reserve, Alichak, 08.08.1980, *Mukhina 22* (TASH); Karysay, 19.07.1990, *Beshko, Yakovenko 90099* (herbarium of the Nuratau Nature Reserve); Hayatsay, Andebaraut, 14.07.2006, *Beshko 06351* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, Andebaraut, 1300 m a.s.l., 25.06.2012, *Beshko* (TASH). **I-4-b Aktau Range:** mountains Aktau, the village Kosh-Khauz, 10.09.1928, *Lepeschkin* (TASH); Nuratau valley, between the villages Koshrabad and Dzhush, 11.07.1956, *Vvedensky 73* (TASH); between Chuya and Langar, 19.07.1975, *Pimenov, Kljuykov, Baranova, Vassiljeva 754* (MW).

Cichorium L.

1099. *Cichorium intybus* L., Sp. Pl.: 813 (1753). Perennial, hemicryptophyte. Pluriregional. Forest, Shrubland, Grassland, Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** Mts. Koytash, southern slope, 23.07.1931, *Kobranova 75* (TASH); mountains Nuratau, 12.06.1963, *Khaydarov 1704* (TASH); Hayatsay, field station of nature reserve, 07.07.2006, *Beshko 06234* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, lower reaches of Madjrumsay, about 800 m a.s.l., 16.09.2023, *Beshko* (www.plantarium.ru, www.inaturalist.org); Samarkand Region, Koshrabad District, near Fazilman Lake, 40.54841° N, 66.58815° E, 05.07.2024, *Beshko* (www.inaturalist.org); Samarkand Region, Koshrabad District, Ustuksay, 40.53892° N, 66.54043° E, 06.07.2024, *Beshko* (www.inaturalist.org). **I-4-b Khobduntau Range:** Mts. Khobduntau, valley Kipchak-su, 30.07.1931, *Kobranova* (TASH); Gallaaral District, experimental station of cereal crops, 03.08.1934, *Toporova* (TASH).

Cirsium Mill.

1100. *Cirsium arvense* (L.) Scop. (*Cirsium ochrolepidium* Juz.), Fl. Carniol., ed. 2, 2: 126 (1771). Perennial, hemicryptophyte. Palearctic. Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** Jizzakh Region, Farish District, Madjrumsay, 40.583509° N, 66.727107° E, 01.09.2018, *Beshko* (www.inaturalist.org); Samarkand Region, Koshrabad District, Ustuksay, 40.5548° N, 66.56313° E, 06.07.2024, *Beshko* (www.inaturalist.org). **I-4-b Khobduntau Range:** reported by Kudrjashev in “Vegetation of the Khobduntau and Karachatau Mountains” (1929, p. 67).

1101. *Cirsium turkestanicum* (Regel) Petr., Oesterr. Bot. Z. 60: 355 (1910). Perennial, hemicryptophyte. Hyrcanian, Mountain Middle Asian. Shrubland, Grassland, Rocky areas. Montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** reported in «Conspectus Florae Asiae Mediae», vol. 10, 1993, p. 254–255.

1102. *Cirsium vulgare* (Savi) Ten., Fl. Napol. 5: 209 (1836). Biennial, hemicryptophyte. Euro-Siberian, Irano-Turanian. Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** Mts. Koytash, south-west of the village Savryuk, 20.07.1931, *Kobranova 155* (TASH); Nuratau Nature Reserve, Bolosay, about 1500 m a.s.l., 23.07.2010, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, upper reaches of Hayatsay, about 1500 m a.s.l., 13.08.2010, *Beshko* (www.plantarium.ru, www.inaturalist.org); Nuratau

Nature Reserve, upper reaches of Hayatsay, Alichak, 1500 m a.s.l., 08.09.2010, *Beshko* (TASH). **I-4-b Khobduntau Range:** Gallaaral District, surroundings of Marjonbulak, 39.92027° N, 67.51363° E, 02.07.2021, *Beshko* (www.inaturalist.org).

Cousinia L.

1103. *Cousinia ambigens* Juz., Trans. Rubber Guttap. Inst. U.S.S.R. 4: 17 (1932). Perennial, hemicryptophyte. Middle Asian. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Range, Akbel, 10.05.1962, *Khaydarov* 49, 49a (TASH).

1104. *Cousinia botschantzevii* Juz. ex Tscherneva, Bot. Mater. Gerb. Inst. Bot. Akad. Nauk Uzbeksk. S.S.R. 17: 93 (1962). Biennial, hemicryptophyte. Nuratau, Aktau (endemic). Shrubland, Grassland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, above the village Shurkundi, 25.05.1938, *Botschantzev* 12 (TASH); Hayat Pass, 03.08.1940, *Gomolitsky* 251 (TASH); Nuratau Range, Farish District, 06.05.1941, *Momotov* 129 (TASH); [same locality], 07.05.1941, *Momotov* 178 (TASH); [same locality], 20.05.1941, *Momotov* (TASH); Mts. Koytash, 28.05.1941, *Lepeschkin* (TASH); Koblatysay, 29.05.1951, *Zaprometova* (TASH); near Kyzylcha State Farm, 29.05.1951, *Novikova* (TASH); Ukansay, 29.05.1951, *Novikova* (TASH); Ustuksay, 03.06.1954, *Burygin* 309 (TASH); surroundings of Fazilman Lake, 05.07.1955, *Ernazarov* (TASH); between valleys Karchigay and Sentob, near Mt. Fazilmantau, 11.05.1956, *Korotkova* 5121 (TASH); Ustuksay, 17.05.1956, *Korotkova* 5775 (TASH); on the ridge opposite the village Kyrk-aul, 22.05.1956, *Zakirov* 255 (TASH); Ustuksay, 12.07.1956, *Vvedensky* 108 (TASH); valley 4 km from Kyzylkum State Farm, 09.05.1957, *unknown collector* (TASH); Jingildysay, 22.05.1957, *Zaprometova* (TASH); Sharaussay, 05.04.1958, *Zaprometova* 319 (TASH); Koblatysay, 04.05.1958, *Zaprometova* 451 (TASH); 1 km east of the pass through Pistalisay, 08.05.1958, *Li, Zakirov* 430 (TASH); plateau 4 km south-west of Sentob Pass, west of the lake, 10.05.1958, *Li, Zakirov* 469 (TASH); 7 km north-east of the village Narvan, 21.05.1958, *Li, Zakirov* 695 (TASH); 2 km south of the village Ustakhan, 25.05.1958, *Li, Zakirov* 803 (TASH); Alaysay, 15.05.1960, *Zaprometova* 73 (TASH); Ambulatory valley, the pass, 20.05.1960, *Zaprometova* 156 (TASH); mountains 7 km south of the village Farish, 22.06.1962, *Karimov* (TASH); Uruskuduk, 25.04.1963, *Khaydarov* 1113 (TASH); upper reaches of Ustuksay, surroundings of Fazilman Lake, 28.05.1964, *Zuckerwanik* 336 (TASH); Sentob, plateau between the pass and the lake Sentobkul [Fazilman], 26.06.1983, *Bulgakova* (TASH); watershed between Hayatsay and Andygensay, 08.06.1992, *Beshko* 92128, 92160 (herbarium of the Nuratau Nature Reserve); Andygensay, Sukhta, 05.06.2006, *Beshko* 06118 (herbarium of the Nuratau Nature Reserve); Mt. Hayatbashi, 06.06.2011, *Beshko* 2011/055, 2011/056 (herbarium of the Nuratau Nature Reserve, TASH); main watershed 2 km west of Saurbel Pass, 1200 m a.s.l., 27.05.2012, *Beshko* (TASH); Nuratau Nature Reserve, watershed between Hayatsay and Madjrumsay, 15.05.2024, *Beshko* (TASH). **I-4-b Aktau Range:** 35–40 km north of Katta-Kurgan, 23–25.05.1927, *Merkulovich* (TASH); Aktau Range, 7–8 km south-east of the village Maulyan, 03.07.1937, *Demurina* 407 (TASH); near village Chuya, 01.08.1937, *Mironov* 65, 66 (TASH); the spring Bitav, 18.04.1963, *Khaydarov* 777, 843, 892 (TASH); mountains Aktau, Samarkand Region, 28.05.1963, *Khaydarov* 1542 (TASH); upper reaches of river Bitau, surroundings of the village, 26.05.1964, *Zuckerwanik* 238 (TASH); Bakhiltai Mts., Charkhansay, 750 m a.s.l., 10.05.2013, *Beshko* (TASH, www.plantarium.ru). **I-4-b Khobduntau Range:** northern slope of Khobduntau Range, 3 km south of the village Gumsay, 1200–1400 m a.s.l., 11.06.1929, *Kudrjashev* (TASH).

1105. *Cousinia coronata* Franch., Ann. Sci. Nat., Bot., sér. 6, 16: 321 (1883). Biennial, hemicryptophyte. Western Pamir-Alay. Shrubland, Grassland, Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-b Karachatau Range:** northern slope, 2.5–3 km north-east of the village Yukary-Kariya, 06.07.1937, *Demurina* 546 (TASH).

1106. *Cousinia dissectifolia* Kult., Trudy Turkestansk. Nauchn. Obshch. 1: 111 (1923). Biennial, hemicryptophyte. Nuratau, Kuhistan (subendemic). Shrubland, Grassland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Karysay, Guzhm, 28.06.1992, *Beshko* 92506 (herbarium of the Nuratau Nature Reserve); upper reaches of Uchmasay, 08.06.1994, *Beshko* 94046–048 (herbarium of the Nuratau Nature Reserve).

1107. *Cousinia dshisakensis* Kult., Bull. Inst. Pedol. & Geobot. Univ. As. Centr. 1: 115 (1925). Biennial, hemicryptophyte. Nuratau, Kuhistan (subendemic). Shrubland, Grassland, Rocky areas. Montane zone. Rare. Native. UzbRDB 3. **Occurrence records: I-4-a Nuratau Range:** foothills south-west of Jizzakh Station, near railway bridge, on the left bank of river Sanzar, 17.05.1921, *Kultiasow* 128 (TASH); Sob Pass, mountain peaks, 04.08.1940, *Gomolitsky, Dolgikh* 272 (TASH); Nuratau Range, Farish District, 19.05.1941, *Momotov* (TASH); Ustusay, 02.06.1954, *Burygin* 308 (TASH); foothills between the villages Farish and Katta Ej, 27.05.1956, *Zaprometova* (TASH); Kichiksay, 08.08.1957, *Zaprometova* 825 (TASH); Talabaysay (left tributary of Kulbasay), 8 km south-west of Yangikishlak, 1100 m a.s.l., 27.05.2012, *Beshko* (TASH, www.plantarium.ru); Ukhumsay, 05.05.2020, *Akbarov, Turdiev, Juramurodov* 5052020057 (TASH). **I-4-b Khobduntau Range:** Gumsay, 10.06.1929, *Kudrjashev* (TASH); Gumsay, 12.06.1929, *Kudrjashev* (TASH).

1108. *Cousinia dubia* Popov, Rast. Zapovedn. Guralash i Zaaminsk. Lesnich.: 37 (1936). Biennial, hemicryptophyte. Nuratau, Kuhistan (subendemic). Shrubland, Grassland, Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, watershed, upper reaches of Narvansay, 19.07.1937, *Demurina* 690 (TASH).

1109. *Cousinia eriotricha* Juz., Trudy Bot. Inst. Akad. Nauk S.S.S.R., Ser. 1, Fl. Sist. Vyssh. Rast. 3: 321 (1937). Perennial, hemicryptophyte. Western Pamir-Alay. Shrubland, Grassland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Hayat Pass, 03.08.1940, *Gomolitsky, Dolgikh* 304 (TASH); Nuratau Nature Reserve, Alichak, 15.08.1980, *Mukhina* 107 (TASH); Mt. Hayatbashi, 18.07.1992, *Beshko* 92186, 92187 (herbarium of the Nuratau Nature Reserve, TASH); Nuratau Nature Reserve, Mt. Hayatbashi, northern slope, 1800 m a.s.l., 27.06.2012, *Beshko* (TASH); Nuratau Nature Reserve, watershed crest near Hayat Pass, 2135 m a.s.l., 21.06.2011, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 23.07.2014, *Beshko* (www.plantarium.ru).

1110. *Cousinia hamadae* Juz., Trudy Tadzhikistansk. Bazy 8: 523 (1940). Perennial, hemicryptophyte. Middle Asian. Desert, Shrubland, Grassland, Rocky areas. Plain, foothills. Frequent. Native. **Occurrence records: I-4-b Aktau Range:** northern slope of Nuratau Mts., 23.04.1913, *Korovin* (TASH). **I-4-b Karatau Range:** surroundings of town Kanimekh, 7 km north of town 7 km, remnant mountains, 15.07.1934, *Tyshchenko* 181 (TASH); Narpay State Farm, foothills of Nuratau, 29.09.1931, *Gomolitsky* 764 (TASH); low mountains Karatau, north of the village Akkul, 07.10.1954, *Krasnopolin et al.* 513 (TASH); Bukhara Region, Gizhduvan District, Nuratau mountains, western part of Karatau Range, 25.05.2024, *Beshko* (www.plantarium.ru).

1111. *Cousinia horridula* Juz., Trans. Rubber Guttap. Inst. U.S.S.R. 4: 30 (1932). Perennial, hemicryptophyte. Western Pamir-Alay. Shrubland, Grassland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** surroundings of Fazilman Lake, Mt. Kichik Fazilman, 05.07.2024, *Beshko* (www.plantarium.ru).

1112. *Cousinia integrifolia* Franch., Ann. Sci. Nat., Bot., sér. 6, 16: 322 (1883). Biennial, hemicryptophyte. Pamir-Alay. Shrubland, Grassland, Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Koytash, southern slope, 28.06.1971, *Botschantzev, Kamelin* (LE).

1113. *Cousinia microcarpa* Boiss., Diagn. Pl. Orient., ser. 2, 3: 59 (1856). Perennial, hemicryptophyte. Irano-Turanian. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau, 10.05.1915, *Spiridonov* (TASH); Mts. Koytash, west of the village Terakli, 25.05.1940, *Gomolitsky, Dolgikh* 5, 6 (TASH); Sharaussay, 04.06.1957, *Zaprometova* (TASH); 1 km south of the village Savryuk, piedmont plain of Koytash Mts., 22.05.1958, *Li, Zakirov* 733 (TASH); 2 km north-west of the village Arvaten, 24.05.1958, *Li, Zakirov* 759 (TASH); Gallaaral State Farm, southern slope of Koytash Mts., 12.05.1967, *unknown collector* (TASH); Sentob, near ruins Kurgan, 23.06.1983, *Bulgakova* (TASH); Hayatsay, July 1990, *Beshko, Yakovenko* 90128 (herbarium of the Nuratau Nature Reserve); watershed between Hayatsay and Andygensay, 12.06.1992, *Beshko* 92165, 92166 (herbarium of the Nuratau Nature Reserve); Hayatsay, Novi Daroz, 23.05.2006, *Beshko* 06132 (herbarium of the Nuratau Nature Reserve); Hayatsay, surroundings of the village Upper Hayat, about 1000 m a.s.l., 23.05.2006, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Madjrumsay, about 900 m a.s.l., 20.05.2017, *Beshko* (www.plantarium.ru); Navoi Region, Nurata District, near the village Simbulak, 31.05.2023, *Fateryga* (www.plantarium.ru). **I-4-b Aktau Range:** 3 km south-west of Yarkuduk well, foothills, 06.05.1957, *Momotov, Li* 83 (TASH); Uzunkuduk, 28.05.1963, *Khaydarov* 1447 (TASH); the village Raimbay, 28.05.1963, *Khaydarov* 1465 (TASH); Mts. Aktau, Samarkand Region, 29.05.1963, *Khaydarov* 1670 (TASH); Kadak, 16.06.1963, *Khaydarov* 1769 (TASH); Aktau, 1964, *Khaydarov* 11 (TASH); Aktau Range, downstream of Langar, 1200–1300 m a.s.l., 08.06.1983, *Rusanovich* (MW). **I-4-b Karatau Range:** Sarmysh. 05.06.1957, *Pryakhin* 162 (TASH). **I-4-b Khobduntau Range:** plain between Khobduntau and Karachatau, surroundings of Kuropatkino railway station, 07.06.1929, *Kudrjashev* (TASH); Milyutinskaya Station, Gallaaral State Farm, 1–1.5 km east of the railway junction, April 1930, *Tarasova* 41, 109 (TASH).

1114. *Cousinia mollis* Schrenk, Bull. Cl. Phys.-Math. Acad. Imp. Sci. Saint-Pétersbourg 3: 108 (1845). Biennial, hemicryptophyte. Turanian. Desert, Artificial terrestrial. Plain, foothills. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** piedmont plain, fallow land south of 1st farmstead of Nurata State Farm, 02.06.2003, *Beshko* 03015 (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** foothills between town Nurata and the village Gazgan, 25.05.1964, *Pryakhin* (TASH).

1115. *Cousinia olgae* Regel & Schmalh., Izv. Imp. Obshch. Lyubit. Estestv. Moskovsk. Univ. 34(2): 48 (1882). Biennial, hemicryptophyte. Hyrcanian, Mountain Middle Asian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Urganchi, 01.05.1913, *Korovin* (TASH); Karakuduk, 03.06.1934, *Rybakov* (TASH); 8–9 km west of the village Temirqovuq, 26.07.1937, *Demurina* 775 (TASH); Mts. Koytash, 2 km west of village Tutli, gorge, 28.05.1940, *Gomolitsky, Dolgikh* 70 (TASH); Alaysay, 26.05.1956, *Zaprometova* (TASH); 0.5 km west of the village Tegirmanaul, foothills, 16.05.1958, *Li, Zakirov* 605 (TASH); Akbel, 10.05.1962, *Khaydarov* 48 (TASH); Uruskuduk, 25.04.1963, *Khaydarov* 1110 (TASH); Jizzakh Region, Gallaaral District, southern foothills of Nuratau, surroundings of the village Alamli, 615 m a.s.l., 03.07.2021, *Beshko* (www.plantarium.ru); Jizzakh Region, Gallaaral District, southern foothills of Nuratau, surroundings of the village Karakchi, 600 m a.s.l., 15.07.2023, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** Koshrabad – Chuya, *Iris* formation, 06.05.1913, *Korovin* (TASH); northern slope of Aktau Mts., near Tikalik Pass, 06.07.1932, *Knorring, Emme* 20 (MW); 1 km from the village Murdash to the Tikalik Pass, 09.07.1932, *Knorring, Emme* 2 (MW); valley Chashma, 02.06.1962, *Khaydarov* 125 (TASH); near the village Chashma (south of Bakhiltau Mts.), 05.06.1964, *Pryakhin* (TASH); Navoi Region, Nurata District, western part of the range Aktau, between town Nurata and the village Dekhibaland, 40°32'41" N 65°38'59" E, 600 m a.s.l., 15.09.2012, *Tojibaev, Beshko, Batashov, Karimov* (TASH). **I-4-b Karachatau Range:** southern slope, 1 km south of the village Ingichka, 07.07.1937, *Demurina* 551 (TASH). **I-4-b Khobduntau Range:** foothills in

western part of Khobduntau, 07.09.1928, *Yakimova, Moskvina 1418* (TASH); southern piedmonts of Khobduntau, north of Rostovtsevo Station, 17.06.1929, *Kudrjashev* (TASH).

1116. *Cousinia platylepis* Fisch., C.A. Mey. & Avé-Lall., Index Seminum (LE, Petropolitanus) 9(Suppl.): 10 (1844). Biennial, therophyte. Middle Asian. Desert, Artificial terrestrial. Plain, foothills. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Reported by Zakirov in «Vegetation cover of Nuratau Mountains» (1969, p. 41) and «Botanical geography of low mountains of Kyzylkum and Nuratau Range» (1971, p. 71). **I-4-c North-Nuratau insular low mountains:** Reported by Zakirov in «Botanical geography of low mountains of Kyzylkum and Nuratau Range» (1971, p. 71).

1117. *Cousinia polytimetica* Tscherneva, Bot. Mater. Gerb. Inst. Bot. Akad. Nauk Uzbeksk. S.S.R. 17: 103 (1962). Annual, therophyte. Nuratau, Kuhistan (subendemic). Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills. Rare. Native. **Occurrence records: I-4-a Nuratau Range: I-4-b Aktau Range:** mountains Aktau, Tutaksay, 15.06.1951, *Knorring, Cvetkova* (LE).

1118. *Cousinia prolifera* Jaub. & Spach., Ill. Pl. Orient. 2(14-16): 74 (1845). Annual, therophyte. Irano-Turanian. Desert, Artificial terrestrial. Plain, foothills. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** reported in «Conspectus Florae Asiae Mediae», vol. 10, 1993, p. 346. **I-4-b Aktau Range:** Nuratau, 09.05.1913, *Korovin* (TASH); surroundings of town Nuratau, piedmonts of Aktau Range, 17.05.2024, *Beshko* (www.plantarium.ru).

1119. *Cousinia pseudodshizakensis* Tschern. & Vved., Bot. Mater. Gerb. Inst. Bot. Zool. Akad. Nauk Uzbeksk. S.S.R. 16: 59 (1961). Biennial, hemicryptophyte. Nuratau, Kuhistan (subendemic). Shrubland, Grassland, Rocky areas. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** foothills between the villages Farish and Katta Ej, 27.05.1956, *Zaprometova* (TASH); 3 km north of Saurbel Pass, 22.04.1958, *Li, Zakirov 195* (TASH); Sentob, 0.5 km south of the village Yukary-Kurgan, 11.05.1958, *Li, Zakirov 499* (TASH); Sentob, near ruins Kurgan, 24.06.1983, *Bulgakova* (TASH); Hayatsay, Zamezhak, 09.06.1992, *Beshko 92136–138* (herbarium of the Nuratau Nature Reserve); Ukhum Pass, 19.06.1992, *Beshko 92326–330* (herbarium of the Nuratau Nature Reserve); Madjumsay, 22.05.1994, *Beshko 94077* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, about 1400 m a.s.l., 22.05.2007, *Beshko* (www.plantarium.ru). **I-4-b Karatau Range:** Navoi Region, southern slope of Karatau Range, valley Karakarga, 720 m a.s.l., 15.09.2012, *Tojibaev, Beshko, Batashov, Karimov* (TASH).

1120. *Cousinia pseudolanata* Popov ex Tscherneva, Bot. Mater. Gerb. Inst. Bot. Akad. Nauk Uzbeksk. S.S.R. 17: 104 (1962). Perennial, hemicryptophyte. Aktau (endemic). Shrubland, Rocky areas. Montane zone. Rare. Native. UzbRDB 1. **I-4-b Aktau Range:** northern slope of Mt. Takhkuta, near the top, 07.05.1913, *Korovin* (TASH); Mt. Takhkuta, 07.05.1913, *Korovin* (TASH); valley Yangokly near the village Langar, 19–20.05.1941, *Zakirov* (TASH); Langar, 1800–2000 m a.s.l., TV tower, 30.07.1982, *Shermatov, Kazakbaev, Levichev, Tagaev 110* (TASH); Aktau, 1800–1900 m a.s.l., 30.07.1982, *Shermatov, Kazakbaev, Levichev, Tagaev 110* (TASH); the village Langar, 1800–2000 m, TV tower, 10.08.1988, *Buriev* (TASH); Navoi Region, Khatyrchi District, Aktau Range, surroundings of Langar, 1520 m a.s.l., 01.05.2019, *Rakhimova, Sharipova* (plant community description); Navoi Region, Khatyrchi District, Aktau Range, surroundings of Langar, 01.05.2019, *Rakhimova, Sharipova* (plant community description).

1121. *Cousinia radians* Bunge, Index Seminum (TU, Dorpatensis) 1845: 3 (1845). Biennial, hemicryptophyte. Western Tien Shan, Pamir-Alay. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** mountains Nuratau opposite town Jizzakh, 10.05.1915, *Spiridonov 195* (LE, MW); mountains near Tamerlane's Gate gorge, left bank of the river Sanzar, 03.05.1921, *Kultiasow* (TASH); south of Sentob plateau, 31.07.1928, *Yakimova, Moskvina 1113* (TASH); Nuratau mountains, north-

western slope, 20.07.1931, *Kobranova 16* (TASH); Payaryk District, 2 km north-west of the village Ugat, 21.07.1931, *Kobranova 188* (TASH); Mts. Koytash, north-western slope, 23.07.1931, *Kobranova 54* (TASH); near the village Ustuk, 29.07.1937, *Mironov 33* (TASH); Mts. Koytash, 3 km south-west of the village Jizzakly, 28.05.1940, *Gomolitsky, Dolgikh, Arkhireev 58* (TASH); Nuratau Range, Farish District, 14.05.1941, *Momotov* (TASH); Farish District, Kirov State Farm, 06.06.1943, *Vernik, Raykova 95* (TASH); Mt. Zargar, 2 km NE of the village Urtasay, 11.05.1957, *Momotov, Li 229* (TASH); Farish District, 4 km north-east of the village Deristan, 28.04.1958, *Li, Zakirov 225* (TASH); 1 km east of Ukhumsay, piedmont plain of Nuratau Mts., 12.05.1958, *Li, Zakirov 528* (TASH); Karl Marx State Farm, basin of Narvansay, 24.05.1967, *Perelygina* (TASH); northern slope of Koytash Mts., Mt. Piyazli, 30.05.1976, *Pimenov, Kljuykov, Baranova, Vassiljeva 282* (MW); gorge Sob, 01.07.1968, *Mambetjumaev 6* (TASH); Yangikishlak, near the office of Nuratau Nature Reserve, 23.06.1992, *Beshko 92512* (herbarium of the Nuratau Nature Reserve); Hayatsay, Andebaraut, 02.08.2006, *Beshko 06265* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, about 1600 m a.s.l., 21.07.2007, *Beshko* (www.plantarium.ru); Hayatsay gorge, 27.03.2011, *Davkaev* (www.plantarium.ru); Madjrumsay, 25.03.2016, *Usmonov* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 09.06.2020, *Ortikov, Pulatov, Turdiev, Juramurodov, Makhmudjanov* (TASH); Jizzakh Region, Farish District, 4 km south-west of town Yangikishlak, 02.06.2023, *Fateryga* (www.plantarium.ru). **I-4-b Aktau Range:** 8 km east of the village Tikalik, foothills, 08.07.1932, *Knorring, Emme 36* (LE, MW); near the village Chuya, 15.07.1932, *Knorring, Emme 91* (LE, MW). **I-4-b Karachatau Range:** foothills near the village Sarybulak, 09.06.1929, *Kudrjashev* (TASH); piedmont plain 2 km north-east of the village Kaunchi, 07.07.1937, *Demurina 440* (TASH). **I-4-b Khobduntau Range:** north of the village Bodbod, 19.06.1929, *Kudrjashev* (TASH); Khobduntau Range, watershed, 09.07.1937, *Demurina 471* (TASH).

1122. *Cousinia regelii* C.Winkl., Trudy Imp. S.-Peterburgsk. Bot. Sada 14: 229 (1897), nom. nud. Biennial, hemicryptophyte. Western Tien Shan, Western Pamir-Alay. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** Reported by Zakirov in «Vegetation cover of Nuratau Mountains» (1969, p. 41) and «Botanical geography of low mountains of Kyzylkum and Nuratau Range» (1971, p. 71). **I-4-b Aktau Range:** the village Raimbay, 28.05.1963, *Khaydarov 1464* (TASH); the village Maybulak, 2 km west of the village Andak, plain, 27.05.1965, *Perelygina* (TASH). **I-4-b Karachatau Range:** northern slope 2.5-3 km north-east of the village Yukary-Kariya, 06.07.1937, *Demurina 533* (TASH).

1123. *Cousinia resinosa* Juz., Trans. Rubber Guttap. Inst. U.S.S.R. 4: 24 (1932). Perennial, hemicryptophyte. Western Tien Shan, Western Pamir-Alay. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** foothills of Koytash Mts., northern slope, surroundings of town Jizzakh, 26.05.1931, *Kasimenko* (TASH); Hayatsay, Novi Daroz, 20.06.2006, *Beshko 06089, 06090* (herbarium of the Nuratau Nature Reserve); **I-4-b Aktau Range:** sagebrush steppe 7 verst from the well Pashat, 24.04.1913, *Korovin H36* (TASH). **I-4-b Karachatau Range:** foothills near the village Saray, 09.06.1929, *Kudrjashev* (TASH). **I-4-b Khobduntau Range:** southern piedmont plain of Khobduntau, near the village Besh-kutan, 19.06.1929, *Kudrjashev 223* (MW). **I-4-c North-Nuratau insular low mountains:** mountains Pistaltau, 08.04.1914, *Kultiasow 18* (TASH).

1123a. *Cousinia resinosa* Juz. x *Cousinia maracandica* Juz. **Occurrence records:** **I-4-a Nuratau Range:** 30 km west of Farish, 30.06.1983, *Bulgakova* (TASH). **I-4-b Aktau Range:** near the pass Tikalik, 3 km south of village Sarygul, 12.05.1957, *Momotov, Li 288* (TASH).

1124. *Cousinia schtschurowskiana* Regel & Schmalh., Izv. Imp. Obshch. Lyubit. Estestv. Moskovsk. Univ. 34(2): 50 (1882). Biennial, hemicryptophyte. Nuratau, Kuhistan (subendemic). Shrubland, Grassland, Rocky areas. Foothills, montane zone. Occasional. Native. **Occurrence records:** **I-4-a**

Nuratau Range: Mt. Mirishkar, 03.05.1913, *Korovin H300* (TASH); northern slope of Nuratau Mts. opposite Atakurgan, 14.06.1915, *Spiridonov 92* (LE, MW); near the top of Mt. Fazilmantau, 12.05.1956, *Korotkova 5147* (TASH); Nuratau Range, 1961, *Gringof* (TASH); Hayatsay gorge, 28.05.1969, *Mambetjumaev 81* (TASH); Mt. Dushokh, 25.05.1982, *Mukhina 82032* (herbarium of the Nuratau Nature Reserve); Madjrumsay, 06.05.1993, *Beshko 93014* (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** mountains in surroundings of Koshrabad, 04.05.1913, *Korovin H334* (TASH); Mt. Takhkuta, 07.05.1913, *Korovin H448* (TASH); near the village Shamaly, 24.05.1925, *Popov 353* (TASH); north of the village Hojakolishan, valley Yangokly, 08.06.1926, *Popov 3/106* (TASH); mountains Aktau, 2 km north of the village Khalbashi, 05.07.1932, *Knorring, Emme 12* (MW); near the village Kariz, 11.07.1932, *Knorring, Emme 50* (MW); south of well Uzunkuduk, 02.08.1937, *Mironov 96* (TASH); surroundings of Koshrabad, foothills of Aktau, 19.05.1956, *Korotkova 5204* (TASH); near the pass Tikalik, 3 km south of village Sarygul, northern slope, 12.05.1957, *Momotov, Li 330* (TASH); valley Chashma, 10.04.1962, *Khaydarov 63* (TASH); the spring Bitav, 18.04.1963, *Khaydarov 709* (TASH); near the town Nurata, 13.05.1963, *Markova* (TASH); the village Raimbay, 28.05.1963, *Khaydarov 1461* (TASH); south-east of the town Nurata, piedmonts of Bakhiltai Mts., 23.05.1964, *Pryakhin* (TASH); near the village Upper Bubak (south of Bakhiltai Mts.), 07.06.1964, *Pryakhin* (TASH); village Shamaly, 23.06.1974, *Baranova 285* (MW); 18 km from the town Nurata, Ingichkasay, 21.04.1981, *Safraleeva* (TASH); Navoi Region, Nurata District, northern slope Aktau Range, mountains Bakhiltai, Charkhansay, about 830 m a.s.l., 40.45248° N 65.83653° E, 10.05.2013, *Beshko* (TASH, www.plantarium.ru). **I-4-b Karatau Range:** mountains Karakarga, 11.05.1913, *Korovin H493* (TASH); southern slope of Karatau, near Karakarga Pass, about 700 m a.s.l., 11.05.2014, *Beshko* (www.plantarium.ru). **I-4-b Khobduntau Range:** Gumsay, 12.06.1929, *Kudrjashev* (TASH); near the village Gumsay, 24.09.1940, *Gomolitsky, Dolgikh 345* (TASH); Bulungur District, the village Mechetli, southern slope of Khobduntau, 29.06.1954, *Krasnopolin 506* (TASH).

1125. *Cousinia simulatrix* C.Winkl., Trudy Imp. S.-Peterburgsk. Bot. Sada 10: 573 (1887). Biennial, hemicryptophyte. Pamir-Alay. Shrubland, Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Range, Farish District, 23.05.1941, *Momotov* (TASH).

1126. *Cousinia sogdiana* Bornm., Beih. Bot. Centralbl. 34(2): 154 (1916). Biennial, hemicryptophyte. Kyzylkum. Plain, foothills. Desert, Shrubland, Rocky areas. Rare. Native. **I-4-b Karatau Range:** Dzhazman, 02.05.1869, *Fedtschenko* (LE).

1127. *Cousinia spiridonowii* Juz., Trans. Rubber Guttap. Inst. U.S.S.R. 4: 12 (1932). Perennial, hemicryptophyte. Mirzachul, Nuratau Mts. (subendemic). Desert, Shrubland, Grassland, Artificial terrestrial. Plain, foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Koytash, southern slope, 28.06.1971, *Botschantzev, Kamelin* (LE). **I-4-c North-Nuratau insular low mountains:** mountains Balyklitau, south of the village Chimbkurgan, 31.05.1958, *Vvedensky, Nabiev* (TASH).

1128. *Cousinia tenella* Fisch. & C.A.Mey., Index Seminum (LE, Petropolitanus) 1: 25 (1835). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Grassland, Artificial terrestrial. Plain, foothills. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** 3 km south-east of the village Karatepa, plain between Karatepa and Koytash, 29.05.1958, *Li, Zakirov 856* (TASH); **I-4-b Karatau Range:** variegated foothills near the village Ijant, 17.05.1941, *Popov* (TASH). **I-4-b Khobduntau Range:** surroundings of Milyutinskaya Station, May 1930, *Tarasevich 46* (TASH).

Crepis L.

1129. *Crepis kotschyana* (Boiss.) Boiss. (*Barkhausia kotschyana* Boiss.), Fl. Orient. 3: 852 (1875). Annual, therophyte. Irano-Turanian. Shrubland, Rocky areas. Foothills, montane zone. Occasional.

Native. **Occurrence records: I-4-a Nuratau Range:** Koytash, near the village Bogdon, 25.05.1914, *Mikhelson* (LE); eastern part of Koytash Mts., northern slope, 27.05.1931, *Kasimenko* (TASH); eastern part of Koytash Mts., northern slope, surroundings of town Jizzakh, 27.05.1931, *Kasimenko 1181* (TASH); Nuratau Range, Farish District, 19.05.1941, *Momotov* (TASH); 8 km north-west of Kirov State Farm, 4.5 km north-east of the village Kuvakiya, 24.05.1958, *Li, Zakirov 766* (TASH); Nuratau Range, Kyzylcha, 27.05.1963, *Khaydarov 1352* (TASH). **I-4-b Aktau Range:** mountains Aktau, Samarkand Region, 28.05.1963, *Khaydarov 1514* (TASH); Aktau, 1964, *Khaydarov 102* (TASH); northern slope of Aktau Range, Charkhansay, about 700 m a.s.l., 17.05.2024, *Beshko* (www.plantarium.ru, www.inaturalist.org). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 25.05.1956, *Zaprometova* (TASH); remnant mountains north of Nuratau (60 km west of Jizzakh), 26.05.1956, *Zaprometova* (TASH); Chimkurgan State Farm, 5–6 km north-west of the village Kurgantyube, 341 m a.s.l., 25.07.1964, *Makarchuk* (TASH); Jizzakh Region, Farish District, northern slope of remnant range Pistalitau, 09.05.2024, *Beshko* (www.plantarium.ru).

1130. *Crepis pulchra* L. (*Phaecasium pulchrum* (L.) Reich.f.), Sp. Pl.: 806 (1753). Annual, therophyte. European, Tethyan. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Gatchasay, 13.04.1958, *Zaprometova 437* (TASH); Alaysay, 25.04.1958, *Zaprometova* (TASH); near the pass through Pistalisay, 07.05.1958, *Li, Zakirov 403* (TASH); Pistalisay, near the pass, 08.05.1958, *Li, Zakirov 442, 443* (TASH); 6 km north-west of the village Khukala, 17.05.1958, *Li, Zakirov 653* (TASH); 2 km south of the village Ustakhan, 25.05.1958, *Li, Zakirov 818* (TASH); 3 km south-east of the village Karatepa, plain between Karatepa and Koytash, 29.05.1958, *Li, Zakirov 859* (TASH); northern slope of Nuratau Range south-west of town Jizzakh, Tamerlane's Gate, 26.04.1979, *Pimenov, Kljuykov, Boryaev, Baranova, Vassiljeva 56* (MW); Hayatsay, 1991, *Maximova 91026* (herbarium of the Nuratau Nature Reserve); Jizzakh Region, Farish District, Nuratau Range, Yongoklisay, about 900 m a.s.l., 16.05.2009, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** Ambarsay, 18.05.2024, *Beshko, Volis et al.* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 07.04.1915, *Kultiasow 11* (TASH); Pistalitau, 08.04.1915, *Kultiasow 62* (TASH); Jizzakh Region, Farish District, northern slope of Pistalitau, 40.54815° N, 67.39196° E, 09.05.2024, *Beshko* (www.inaturalist.org).

Crupina Cass.

1131. *Crupina vulgaris* Pers. ex Cass. (*Crupina oligantha* Tscherneva), G.-F.Cuvier, Dict. Sci. Nat., ed. 2. 12: 68 (1819). Annual, therophyte. European, Tethyan. Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, Zamezhak, 06.05.2000, *Beshko 00010, 00011* (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** gorge Sangijuman, 25.05.1869, *O.Fedtschenko* (LE).

Echinops L.

1132. *Echinops dasyanthus* Regel & Schmalh., Izv. Imp. Obsheh. Lyubit. Estestv. Moskovsk. Univ. 34(2): 47 (1882). Perennial, hemicryptophyte. Mountain Middle Asian. Shrubland, Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-b Aktau Range:** valley Ingichka 22 km east of the town Nurata, 26.06.1971, *Botschantzev, Kamelin* (LE).

1133. *Echinops leucographus* Bunge, Bull. Acad. Imp. Sci. Saint-Petersbourg, sér. 3, 6: 406 (1863). Perennial, hemicryptophyte. Hyrcanian, Mountain Middle Asian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** 1 km from the village Dzhush, southern slope of Nuratau Mts., 11.07.1932, *Knorring, Emme 58* (MW). **I-4-b Aktau Range:** variegated foothills near the village Uchtut, 17.05.1941, *Zakirov* (TASH). **I-4-b Mt. Kokcha:** mountains Kokcha, 17.08.1934, *Sakhabutdinov, Neumina 838, 839* (TASH); **I-4-c North-Nuratau insular low mountains:** Jizzakh Region, Farish District, northern

piedmonts of Uchkulach Range, 26.04.2020, *Beshko* (www.plantarium.ru); Jizzakh Region, Farish District, 4 km north-north-east of the village Uchkulach, 26.05.2023, *Fateryga* (www.plantarium.ru); Jizzakh Region, Farish District, northern slope of Pistalitau, 09.05.2024, *Beshko* (www.plantarium.ru).

1134. *Echinops maracandicus* Bunge, Mém. Acad. Imp. Sci. St.-Pétersbourg Divers Savans 7: 351 (1851). Perennial, hemicryptophyte. Western Tien Shan, Pamir-Alay. Shrubland, Grassland, Rocky areas, Artificial terrestrial. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Koytash, 15.07.1914, *Mikhelson* (LE); lower reaches of Hayatsay, outskirts of the village Lower Hayat, about 850 m a.s.l., 22.06.2009, *Beshko* (www.plantarium.ru).

1135. *Echinops nuratavicus* A.D.Li, Novosti Sist. Vyssh. Rast. 24: 201 (1987). Perennial, hemicryptophyte. Western Pamir-Alay. Shrubland, Grassland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Ukhum Pass, 28.07.1937, *Demurina* 756 (TASH); the village Ustakhan, 23.08.1937, *Titov* (TASH); Tykchabel Pass, 02.08.1940, *Gomolitsky, Dolgikh* 236 (TASH); upper reaches of Sentobsay, near the pass, 02.08.1940, *Gomolitsky, Dolgikh* 257 (TASH); Hayatsay, Yellow Stone, 08.08.2003, *Beshko* 03026 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, about 1500 m a.s.l., 13.07.2006, *Beshko* (www.plantarium.ru).

Epilasia (Bunge) Benth. & Hook. f.

1136. *Epilasia acrolasia* (Bunge) C.B.Clarke, Compos. Ind.: 279 (1876). Annual, therophyte. Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills. Rare. Native. **Occurrence records: I-4-b Aktau Range:** Nurata, 19.04.1913, *Korovin* (TASH); mountains Aktau, Khatyrchi District, 15.05.1928, *Lepeschkin* (TASH); **I-4-c North-Nuratau insular low mountains:** on the way from Pistalitau to the lake Tuzkan, 09.04.1911, *Dimo, Sprygin, Shulga* 1006 (TASH).

1137. *Epilasia hemilasia* (Bunge) C.B.Clarke, Compos. Ind.: 279 (1876). Annual, therophyte. Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Gatchasay, 21.04.1958, *Zaprometova* (TASH). **I-4-b Mt. Kokcha:** surroundings of Kokcha, 24.04.1987, *Pimenov, Vassiljeva* 41 (MW).

Erigeron L.

1138. *Erigeron acris* L., Sp. Pl.: 863 (1753). Biennial, therophyte. Circumtemperate. Forest, Shrubland, Grassland, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** upper reaches of Gurdara, 30.06.1992, *Beshko* 92492 (herbarium of the Nuratau Nature Reserve); Hayatsay, field station of nature reserve, 10.07.2006, *Beshko* 06342, 06343 (herbarium of the Nuratau Nature Reserve).

1139. *Erigeron canadensis* L. (*Conyza canadensis* (L.) Cronquist), Sp. Pl.: 863 (1753). Annual, therophyte. Pluriregional (native to America). Forest, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Alien. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, field station of nature reserve, 10.07.2006, *Beshko* 06346 (herbarium of the Nuratau Nature Reserve).

Filago L.

1140. *Filago arvensis* L., Sp. Pl.: 856 (1753). Annual, therophyte. Euro-Siberian, Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, north-western slope, 23.07.1931, *Kobranova* (TASH); Payaryk District, between the village Alma-suvan and Savryuk, 23.07.1931, *Kobranova* 219 (TASH); Kichiksay, 16.06.1956, *Zaprometova* 233 (TASH). **I-4-b Aktau Range:** mountains Aktau near the village Shamaly, 28.05.1925, *Popov* 372 (TASH). **I-4-b Khobduntau Range:** plain between mountains Khobduntau and Karachatau, near the village Gumsay,

11.06.1929, *Kudrjashev* (TASH); Mts. Khobduntau, north-western slopes, 30.07.1931, *Kobranova 114* (TASH).

1141. *Filago germanica* (L.) Huds. (*Filago vulgaris* Lam.), Fl. Angl.: 328 (1763). Annual, therophyte. European, Tethyan. Desert, Shrubland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** reported in «Conspectus Florae Asiae Mediae», vol. 10, 1993, p. 475.

1142. *Filago griffithii* (A.Gray) Andrés-Sánchez & Galbany (*Cymbolaena griffithii* (A.Gray) Wagenitz), Taxon 59: 1689 (2010). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** mountain slopes near the village Khanbandy-chu, 1913, *Korovin 197* (TASH); foothills south-west of Jizzakh Station, near the railway bridge, on the left bank of river Sanzar, 02.05.1921, *Kultiasow 10* (TASH); Hayatsay, 1991, *Maximova 91015* (herbarium of the Nuratau Nature Reserve); Hayatsay, Novi Daroz, 01.06.2009, *Beshko 09023* (herbarium of the Nuratau Nature Reserve, TASH). **I-4-b Karatau Range:** valley Bakachinak, 05.05.1955, *Momotov, Li 128* (TASH). **I-4-b Khobduntau Range:** plain between mountains Khobduntau and Karachatau, surroundings of Kuropatkino railway station, 07.06.1929, *Kudrjashev* (TASH); Mts. Khobduntau, 15.06.1929, *Kudrjashev* (TASH); southern piedmont plain of Khobduntau, near the village Kyrk, 19.06.1929, *Kudrjashev* (TASH); Gallaaral District, surroundings of Milyutinskaya Station, experimental station of cereal crops, 08.06.1934, *Toporova 8963* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitu, 08.04.1914, *Kultiasow* (TASH); Pistalitu, 09.04.1914, *Kultiasow* (TASH).

1143. *Filago pyramidata* L. (*Filago spathulata* C.Presl), Sp. Pl.: 1199 (1753). Annual, therophyte. Euro-Siberian, Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Koytash, 25.05.1914, *Mikhelson* (LE); Jizzakh Region, Farish District, northern piedmont plain of Nuratau Range (Farish Steppe), between the villages Ok-tom and Egiz-Bulak, 330 m a.s.l., 19.05.2010, *Beshko* (www.plantarium.ru, www.inaturalist.org); Jizzakh Region, Farish District, Hayatsay, 40.52472° N, 66.7569° E, 23.04.2025, *Beshko* (www.inaturalist.org).

Galatella Cass.

1144. *Galatella grimmii* (Regel & Schmalh.) Sennikov (*Pseudolinosyris grimmii* (Regel & Schmalh.) Novopokr.), Ann. Bot. Fenn. 57: 371 (2020). Subshrub, chamaephyte. Western Tien Shan, Western Pamir-Alay. Shrubland, Grassland, Rocky areas. Montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, southern slopes, upper reaches of Garashasay, 20.07.1937, *Demurina 638* (TASH); 6–7 km west of the village Guzhum, 23.07.1937, *Demurina 733* (TASH); valley Sentob, 10.09.1952, *Zaprometova* (TASH); Nuratau Nature Reserve, slopes of Hayatsay, 20.08.1977, *Levichev* (TASH); Sentob, opposite ruins Kurgan, northern slope, 29.06.1983, *Bulgakova 155* (TASH); Mt. Dushokh, 25.07.1990, *Beshko, Yakovenko 90106* (herbarium of the Nuratau Nature Reserve); Hayatsay, Andebaraut, 14.07.2006, *Beshko 06275, 06276* (herbarium of the Nuratau Nature Reserve).

Galinsoga Ruiz & Pav.

1145. *Galinsoga parviflora* Cav., Icon. 3: 41 (1795). Annual, therophyte. Pluriregional (native to America). Artificial terrestrial. Plain, foothills, montane zone. Rare. Alien. **Occurrence records: I-4-a Nuratau Range:** the village Upper Hayat, rural garden, 09.09.2019, *Beshko* (TASH).

Garhadiolus Jaub. & Spach

1146. *Garhadiolus hedypnois* Jaub. & Spach (*Garhadiolus angulosus* Jaub. & Spach), Ill. Pl. Orient. 3(29): 119 (1850). Annual, therophyte. Eastern Tethyan. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Range, Farish District, 20.05.1941, *Momotov* (TASH); Farish District, 4 km north-east of the village Deristan, 28.04.1958, *Li, Zakirov 217* (TASH); 3 km east of Narvan, 29.04.1958, *Li, Zakirov 711* (TASH); 2 km east of the village Sarymsakli, piedmonts of Koytash Mts., 24.05.1958, *Li, Zakirov 764* (TASH).

1147. *Garhadiolus papposus* Boiss. & Buhse, Nouv. Mém. Soc. Imp. Naturalistes Moscou 12: 135 (1860). Annual, therophyte. Caucasian, Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** 1 km south of the village Saukbulak, southern slope, western part of Nuratau Mts., 14.05.1958, *Li, Zakirov 547* (TASH); Nuratau Range, Akbel, 10.06.1962, *Khaydarov 130* (TASH); Nuratau Nature Reserve, Hayatsay, 03.05.1978, *Korshunov* (TASH); Hayatsay, 27.04.1983, *Fominykh 83075* (herbarium of the Nuratau Nature Reserve); Hayatsay, Novi Daroz, 14.05.2008, *Beshko 08017, 08035* (herbarium of the Nuratau Nature Reserve). **I-4-b Mt. Kokcha:** southern slope of remnant mountain Kokchatau, 18.05.1964, *Adylov, Shorakhimov 2387* (TASH); **I-4-c North-Nuratau insular low mountains:** Pistalitau, 08.04.1915, *Kultiasow 62* (TASH); Pistalitau, 25.05.1956, *Zaprometova* (TASH).

Gelasia Cass.

1148. *Gelasia circumflexa* (Krasch. & Lipsch.) Zaika, Sukhor. & N.Kilian (*Scorzonera circumflexa* Krasch. & Lipsch.), PhytoKeys 137: 57 (2020). Perennial, geophyte. Middle Asian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Jizzakh Region, Nuratau Range, 16.04.1962, *Karimov* (TASH); plateau near the lake Sentobkul (Fazilman), 14.05.1993, *Beshko 93065* (herbarium of the Nuratau Nature Reserve); watershed between Hayatsay and Andygensay, 08.06.1993, *Beshko 93073* (herbarium of the Nuratau Nature Reserve); Mt. Dushokh, 17.05.1995, *Beshko 95090* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, watershed crest between valleys Hayatsay and Madjrumsay, about 1800 m a.s.l., 09.05.2007, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 1200 m a.s.l., 06.05.2012, *Beshko* (herbarium of the Nuratau Nature Reserve, TASH); Mt. Kichik Fazilman, near Fazilman Lake, 06.05.2020, *Akbarov, Turdiev, Juramurodov 6052020113* (TASH). **I-4-b Aktau Range:** northern slope of Mt. Takhkuta, 07.05.1913, *Korovin* (TASH). **I-4-b Karatau Range:** Mts. Karakarga, near the pass Jizlan, 22.04.1913, *Korovin* (TASH).

1149. *Gelasia litwinowii* (Krasch. & Lipsch.) Zaika, Sukhor. & N.Kilian (*Scorzonera litwinowii* Krasch. & Lipsch.), PhytoKeys 137: 58 (2020). Perennial, geophyte. Hyrcanian, Mountain Middle Asian. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-b Aktau Range:** near the village Langar, valley Yangokly, 21.05.1941, *Zakirov, Niyazov* (TASH).

1150. *Gelasia sericeolanata* (Bunge) Sennikov (*Scorzonera sericeolanata* (Bunge) Krasch. & Lipsch.), Checkl. Vasc. Pl. Tian-Shan: 393 (2021). Perennial, geophyte. Turanian. Plain, foothills. Desert, Shrubland, Grassland, Rocky areas. Occasional. Native. **Occurrence records: I-4-b Karatau Range:** the road Navoi-Nurata, Karakarga Pass, 24.04.1987, *Pimenov, Vassiljeva 59* (MW).

Handelia Heimerl

1151. *Handelia trichophylla* (Schrenk) Heimerl., Oesterr. Bot. Z. 71: 215 (1922). Perennial, hemicryptophyte. Mountain Middle Asian. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Urganchi –Ak-Chap, 01.05.1913, *Korovin* (TASH); Hayatsay, 24.05.1984, *Petrochenko 84071* (herbarium of the Nuratau Nature Reserve); Hayatsay, 1991, *Maximova 91027*

(herbarium of the Nuratau Nature Reserve); Hayatsay, Andebaraut, 22.05.2006, *Beshko 06310* (herbarium of the Nuratau Nature Reserve); upper reaches of Osmansay above the Zangori Olov summer camp, 02.07.2020, *Beshko, Shomurodov, Adilov, Abduraimov* (plant community description); Nuratau Nature Reserve, Hayatsay, about 1100 m a.s.l., 05.06.2022, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** Koshrabad – Chuya, 06.05.1913, *Korovin* (TASH); Samarkand Region, 25-30 km north of Mt. Aktash, southern foothills of Aktau, 12.06.1983, *Rusanovich* (MW). **I-4-b Khobduntau Range:** southern piedmont plain of Khobduntau, north of Rostovtsevo station, 18.06.1929, *Kudrjashev* (TASH).

Helichrysum Mill.

1152. *Helichrysum luteoalbum* (L.) Rchb. (*Gnaphalium luteoalbum* L.). Annual, therophyte. Pluriregional. Wetlands (inland), Artificial aquatic, Artificial terrestrial. Foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** reported in «Conspectus Florae Asiae Mediae», vol. 10, 1993, p. 468.

1153. *Helichrysum maracandicum* Popov ex Kirp., Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk S.S.S.R. 20: 325 (1960). Perennial, hemicryptophyte. Mountain Middle Asian. Shrubland, Grassland, Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Reported by Zakirov in «Vegetation cover of Nuratau Mountains» (1969, p. 41) and «Botanical geography of low mountains of Kyzylkum and Nuratau Range» (1971, p. 75).

1154. *Helichrysum mussae* Nevski, Trudy Bot. Inst. Akad. Nauk S.S.S.R., Ser. 1, Fl. Sist. Vyssh. Rast. 4: 279 (1937). Perennial, hemicryptophyte. Hyrcanian, Mountain Middle Asian. Shrubland, Grassland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Nature Reserve, top of Mt. Hayatbashi, about 2160 m a.s.l., northern slope, 20.08.1977, *Levichev* (TASH); Nuratau Nature Reserve, upper reaches of Kachaksay, northern slope, about 1800 m a.s.l., 20.08.1977, *Levichev* (TASH); Nuratau Nature Reserve, Hayat, 1700 m a.s.l., 16.08.1978, *Korshunov* (TASH); Nuratau Nature Reserve, Hayat, 10.08.1980, *Mukhina* (TASH); Nuratau Nature Reserve, Hayatsay, 12.08.1980, *Pjatina, Mukhina* (TASH). **I-4-b Aktau Range:** 5 km south-west of village Chuya, between Mts. Bakhiltau and Karatau, 14.07.1932, *Knorring* (LE).

1155. *Helichrysum nuratavicum* Krasch., Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk S.S.S.R. 9: 154 (1946). Perennial, hemicryptophyte. Nuratau, Aktau (endemic). Shrubland, Grassland, Rocky areas. Montane zone. Occasional. Native. UzbRDB 2. **Occurrence records: I-4-a Nuratau Range:** pass from Madjrumsay to Sentob, 05.09.1932, *Knorring, Emme 163, 164* (LE); southern slope of Mts. Koytash, surroundings of Koytash, granites near the top of the range, 20.06.1971, *Botschantzev, Kamelin 182* (LE); southern slope of Mts. Koytash, surroundings of Koytash, upper part of slopes, 28.06.1971, *Botschantzev, Kamelin 565, 587* (LE); Koytash, near village Koytash, slopes near watershed, 13.07.1973, *Kamelin 55* (LE); Karysay, Pubsay, 30.06.1995, *Beshko 95101* (herbarium of the Nuratau Nature Reserve); watershed between Hayatsay and Andygensay, 21.07.2007, *Beshko 07064, 07065, 07070* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, watershed crest near Hayat Pass and the top of Mt. Hayat-bashi, about 2150 m a.s.l., 23.07.2014, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** m. Aktau, prope pagum Tesalik [Tikalik], in lapidosis, 08.07.1932, *Knorring* (type LE); north of the village Andak, 08.07.1932, *Knorring, Emme* (LE); mountains Aktau east of town Nurata, valley Ingichka, 13.07.1970, *Botschantzev 158* (LE).

Heteracia Fisch. & C.A.Mey.

1156. *Heteracia szovitzii* Fisch. & C.A.Mey. (*Heteracia epapposa* (Regel & Schmalh.) Popov), Index Seminum (LE, Petropolitanus) 1: 30 (1835). Annual, therophyte. Irano-Turanian. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Koytash, near the village Bogdon, 25.05.1914,

Mikhelson (LE); Mts. Koytash, the village Osmansay, 25.05.1931, *Kobranova* (TASH); Nuratau Range, Farish District, 26.04.1941, *Momotov* 58 (TASH); Nuratau Range, Farish District, 01.05.1941, *Momotov* (TASH); Koblatysay, 07.04.1952, *Zaprometova* (TASH); Farish District, piedmont plain, 17.04.1952, *Novikova* (TASH); valley 1 km west of Kyzylcha State Farm, 06.05.1957, *Zaprometova* (TASH); Koblatysay, 13.05.1957, *Zaprometova* (TASH); Alaysay, 30.03.1958, *Zaprometova* 254 (TASH); Gatchasay, 08.04.1958, *Zaprometova* 375 (TASH); north slopes of Nuratau Range, Ambulatory valley, 20.05.1960, *Zaprometova*, *Nikerov* 193 (TASH); Yangi-Hayat, 28.05.1969, *Mambetjumaev* 109 (TASH). **I-4-b Aktau Range:** south of district center Nurata, plain, 22.05.1974, *Pratov* (TASH). **I-4-b Karatau Range:** Sarmysh, 08.06.1967, *students* 156 (TASH). **I-4-b Mt. Kokcha:** mountains Kokcha, 17.08.1934, *Tyshchenko* 965 (TASH); southern slope of remnant mountain Kokchatau, 18.05.1964, *Adylov*, *Shorakhimov* 2406 (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 08.04.1915, *Kultiasow* 67, 79, 109 (TASH).

Heteroderis Boiss.

1157. *Heteroderis pusilla* (Boiss.) Boiss., Fl. Orient. 3: 794 (1875). Annual, therophyte. Irano-Turanian. Desert, Artificial terrestrial. Plain, foothills. Occasional. Native. **Occurrence records:** **I-4-b Aktau Range:** south of district center Nurata, 22.05.1974, *Pratov* (TASH); Navoi Region, district center Nurata, 40.57377° N, 65.68628° E, 17.05.2024, *Beshko* (www.plantarium.ru, www.inaturalist.org). **I-4-b Mt. Kokcha:** surroundings of the village Kokcha, 24.04.1987, *Pimenov*, *Vassiljeva* 42 (MW).

Inula L.

1158. *Inula grandis* Schrenk ex Fisch. & C.A.Mey. (*Inula macrophylla* Kar. & Kir.), Enum. Pl. Nov. 1: 50 (1841). Perennial, hemicryptophyte. Irano-Turanian. Shrubland, Grassland. Montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** reported in «Conspectus Florae Asiae Mediae», vol. 10, 1993, p. 453–454.

1159. *Inula helenium* L., Sp. Pl.: 881 (1753). Perennial, hemicryptophyte. Siberian, Tethyan. Shrubland, Grassland. Montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** reported in «Conspectus Florae Asiae Mediae», vol. 10, 1993, p. 453.

1160. *Inula rhizocephala* Schrenk ex Fisch. & C.A.Mey., Enum. Pl. Nov. 1: 51 (1841). Perennial, hemicryptophyte. Irano-Turanian. Wetlands (inland). Montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** Ustuksay, 12.07.1956, *Vvedensky* 111 (TASH); surroundings of Fazilman Lake, 40°32'37" N 66°35'55" E, 1645 m a.s.l., 12.07.2019, *Beshko* (TASH); Samarkand Region, Koshrabad District, surroundings of Fazilman Lake, 40.54835° N 66.58932° E, 04.07.2024, *Beshko* (www.inaturalist.org).

Jurinea Cass.

1161. *Jurinea kokanica* Iljin, Bot. Mater. Gerb. Glavn. Bot. Sada R.S.F.S.R. 5: 66 (1924). Perennial, hemicryptophyte. Western Tien Shan, Pamir-Alay. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** Koytash, near the watershed, 28.06.1971, *Botschantzev*, *Kamelin* (LE); southern slope, Nakrutsay (Beshbarmaksay), 1500 m a.s.l., 20.06.1992, *Beshko* 92320–322 (herbarium of the Nuratau Nature Reserve, TASH).

1162. *Jurinea lasiopoda* Trautv., Trudy Imp. S.-Peterburgsk. Bot. Sada 8: 510 (1883). Perennial, hemicryptophyte. Hyrcanian, Mountain Middle Asian. Desert, Shrubland, Rocky areas. Plain, foothills, montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** Kyzylchali, mountains, 28.04.1913, *Korovin* (TASH); Nuratau Range, Farish District, 02.05.1941, *Momotov* (TASH); foothills of Nuratau Range, Farish District, Kirov State Farm, 15.05.1943, *Vernik*, *Raykova* 73 (TASH); Farish District, 4 km north-east of the village Deristan, 28.04.1958, *Li*, *Zakirov* 214 (TASH); Alaysay, 28.04.1958, *Zaprometova* (TASH); Jizzakh Region, Farish District, near the village Katta

Bogdon, 06.08.1998, *Pratov* (TASH). **I-4-b Aktau Range:** the spring Bitav, 18.04.1963, *Khaydarov 894* (TASH). **I-4-b Karatau Range:** Nurata, north of the village Kalkanata, 05.06.1926, *Popov 3/94* (TASH); variegated foothills near Ijant, 17.05.1941, *Zakirov* (TASH); 2.5 km south-west of ruins Sarmysh, 06.05.1955, *Momotov, Li 186* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 07.04.1911, *Dimo, Sprygin, Shulga* (TASH); valley between Nuratau and Balyklitau, 13.05.1928, *Sovetkina 159* (TASH); remnant mountains north of Nuratau Range (60 km 3 Jizzakh), 26.05.1956, *Zaprometova* (TASH); southern slope of Pistalitau, 400 m a.s.l., 18.03.2013, *Beshko, Tojibaev, Shomurodov, Batoshov* (TASH); northern slope of Pistalitau, 340 m a.s.l., 40.540707° N 67.395056° E, 09.05.2024, *Beshko* (www.plantarium.ru).

1163. *Jurinea olgae* Regel & Schmalh., *Izv. Imp. Obshch. Lyubit. Estestv. Moskovsk. Univ.* 34(2): 51 (1882). Perennial, hemicryptophyte. Western Tien Shan, Western Pamir-Alay. Shrubland, Rocky areas. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Ukhum Pass, 04.09.1932, *Knorring, Emme 158* (MW); Mts. Koytash, Piyazli, 08.05.1934, *Botschantzev* (TASH); 2–3 km east-north-east of Ukhum Pass, 29.07.1937, *Demurina 313, 315, 323* (TASH); Nuratau Range, Farish District, 20.05.1941, *Momotov* (TASH); Kichiksay, 14.06.1956, *Zaprometova 195* (TASH); Hayatsay gorge, 01.06.1969, *Mambetjumaev 145* (TASH); Hayatsay, Alichak, 16.07.1983, *Petrochenko 83062* (herbarium of the Nuratau Nature Reserve); watershed between Hayatsay and Andygensay, 13.06.1990, *Beshko, Yakovenko 90114, 90115* (herbarium of the Nuratau Nature Reserve, TASH); Mt. Parrandoz, 22.07.1992, *Beshko 92347* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, about 1300 m a.s.l., 30.05.2006, *Beshko* (www.plantarium.ru); Hayatsay, Andebaraut, 02.06.2006, *Beshko 06165, 06166* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, rocky massif Parrandoz, watershed crest, about 1800 m a.s.l., 18.06.2010, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, about 1400 m a.s.l., 05.06.2022, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** mountains Aktau, 10.06.1928, *Lepeschkin* (TASH); mountains Aktau, 2 km north of 2-nd Khalbashi, 05.07.1932, *Knorring, Emme 11* (MW); southern slope of Aktau Mts., ascent to the Tikalik Pass, 06.07.1932, *Knorring, Emme 18* (MW); 5 km west of the village Tikalik, 06.07.1932, *Knorring, Emme 29* (MW); [same locality], 08.07.1932, *Knorring* (LE, MW); Aktau, Samarkand Region, 29.05.1963, *Khaydarov 1631* (TASH); mountains Aktau, upper reaches of gorge Chuya, 13.06.1980, *Rakhmankulov, Melibaev 1818* (TASH); Samarkand Region, Aktau Range, downstream of the village Langar, about 1100–1500 m a.s.l., 10.06.1983, *Rusanovich* (MW); Samarkand Region, Aktau Range, 6–8 km downstream of the village Langar, about 1200–1300 m a.s.l., 08.06.1983, *Rusanovich* (MW); Navoi Region, Aktau Range, mountains Bakhiltai, Ambarsay, about 900 m a.s.l., 10.06.2018, *Beshko* (www.plantarium.ru).

1164. *Jurinea suffruticosa* Regel, *Bull. Soc. Imp. Naturalistes Moscou* 40(II): 166 (1867). Subshrub, chamaephyte. Western Tien Shan, Western Pamir-Alay. Shrubland, Rocky areas. Foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Kichiksay, 28.04.1956, *Zaprometova* (TASH).

1165. *Jurinea trautvetteriana* Regel & Schmalh., *Izv. Imp. Obshch. Lyubit. Estestv. Moskovsk. Univ.* 34(2): 52 (1882). Perennial, hemicryptophyte. Western Pamir-Alay. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** foothills of Nuratau Range on the latitude of town Jizzakh, 16.05.1928, *Sovetkina 217* (TASH); ¼ km from the village Khukala, 01.09.1932, *Knorring, Emme 148* (MW); 2 km south-west of the village Ingichka, 18.07.1937, *Demurina 645* (TASH); northern spurs of Nuratau Mts., surroundings of the well Kazybay, foothills, 05.05.1939, *Mikhaylova, Popova* (TASH); Nuratau Range, Farish District, 14.05.1941, *Momotov* (TASH); Mt. Piyazli, 2 km south-south-east of the village Kuvakiya, 24.04.1941, *Bukasov* (TASH); Kyzylcha State Farm, Ukansay, 10.05.1951, *Novikova* (TASH); surroundings of Kyzylcha State Farm, 29.05.1951, *Zaprometova* (TASH); Nuratau, 1955, *Burygin* (TASH); 2 km SW of

Kyzylcha State Farm, 17.05.1955, *Burygin* (TASH); Tolubaysay, 09.05.1956, *Zakirov 149* (TASH); NE slope of Kichiksay, 10.05.1956, *Zaprometova 100* (TASH); Ustuksay, 17.05.1956, *Korotkova 5771* (TASH); Koblatysay, 26.04.1958, *Zaprometova* (TASH); Alaysay, 03.05.1958, *Zaprometova 442* (TASH); 1 km east of the pass through Pistalisay, 08.05.1958, *Li, Zakirov 426* (TASH); 4 km south of the village Khukala, 19.05.1958, *Li, Zakirov 656* (TASH); 2 km south-east of the village Jenichka, southern foothills, 22.05.1958, *Li, Zakirov 738* (TASH); Yangikishlak, 16.05.1961, *Khokhryakov* (MW); watershed between Hayatsay and Andygensay, 1500 m a.s.l., 12.06.1992, *Beshko 92153, 92162, 92163* (herbarium of the Nuratau Nature Reserve, TASH); Jizzakh Region, Farish District, near the village Nurak, 27.04.2008, *Tillaev* (www.plantarium.ru); northern slope of Nuratau Range, slopes of Kulbasay on the way to Saurbel Pass, 900 m a.s.l., 13.05.2012, *Beshko* (TASH); Nuratau Nature Reserve, Madjrumsay, about 900 m a.s.l., 13.05.2012, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Madjrumsay, about 900 m a.s.l., 20.05.2017, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** Dzhush – Koshrabad, 03.05.1913, *Korovin 262* (TASH, MW); mountains Aktau near the village Shamaly, 24.05.1925, *Popov 354* (TASH); 2–3 km south-east of the village Jangak, 30.06.1937, *Demurina 345* (TASH); 7–8 km south-east of the village Maulyan, 03.07.1937, *Demurina 409* (TASH); near the village Langar, valley Yangokly, 19–21.05.1941, *Zakirov, Niyazov* (TASH); Samarkand Region, mountains Aktau, 29.05.1963, *Khaydarov 1597* (TASH); surroundings of the village Kuray (south of Bakhiltau Mts.), foothills, 06.06.1964, *Pryakhin* (TASH); Mts. Aktau, upper reaches of stream, village Chuya, 13.06.1980, *Rakhmankulov, Melibaev 1817* (TASH); Samarkand Region, Aktau Range, 6–8 km downstream of the village Langar, about 1000–1200 m a.s.l., 09.06.1983, *Rusanovich* (MW); Bakhiltau Mts., Charkhansay, 750 m a.s.l., 10.05.2013, *Beshko* (TASH, www.plantarium.ru); northern slope of Aktau Range, Charkhansay, 17.05.2024, *Beshko, Volis et al.* (TASH); Ambarsay, 18.05.2024, *Beshko, Volis et al.* (TASH). **I-4-b Karachatau Range:** Karachatau Range, eastern part, 08.06.1929, *Kudrjashev* (TASH); foothills, 10 km east of the village Bulakbashi, 06.07.1937, *Demurina 432* (TASH). **I-4-b Khobduntau Range:** plain between mountains Khobduntau and Karachatau, near the village Almali, 12.06.1929, *Kudrjashev* (TASH).

1166. *Jurinea xeranthemoides* Iljin, Bot. Mater. Gerb. Glavn. Bot. Sada R.S.F.S.R. 5: 171 (1924). Perennial, hemicryptophyte. Western Tien Shan, Western Pamir-Alay. Shrubland, Rocky areas. Foothills, montane zone. Rare. Native. **Occurrence records:** **I-4-b Aktau Range:** near village Chuya, 01.08.1937, *Mironov 76* (TASH); mountains Aktau, Samarkand Region, 29.05.1963, *Khaydarov 1601* (TASH).

1167. *Jurinea zakirovii* Iljin, Fl. URSS 27: 634, 723 (1962). Perennial, hemicryptophyte. Nuratau, Aktau (endemic). Shrubland, Grassland, Rocky areas. Montane zone. Rare. Native. UzBRDB 1. **Occurrence records:** **I-4-a Nuratau Range:** Karysay, Pubsay, 06.06.1990, *Beshko, Yakovenko 90101* (herbarium of the Nuratau Nature Reserve); Hayatsay, upper reaches of Bedarak, 1600 m a.s.l., 30.05.1993, *Beshko 93039, 93040* (herbarium of the Nuratau Nature Reserve, TASH); watershed of Hayatsay and Madjrumsay. 40°30'48" N, 66°43'19" E, 1800 m a.s.l., 22.05.2011, *Beshko 047/2011* (TASH). **I-4-b Aktau Range:** valley Yangokly, near Langar, 21.05.1941, *Zakirov* (TASH).

Karelinia Less.

1168. *Karelinia caspia* (Pall.) Less., Linnaea 9: 187 (1834). Perennial, hemicryptophyte. Turanian. Wetlands (inland), Artificial aquatic. Plain, foothills. Occasional. Native. **I-4-b Aktau Range:** Khatyrchi District, 18.08.1928, *Lepeschkin* (TASH). **I-4-c North-Nuratau insular low mountains:** northern piedmonts of Pistaltau near the shore of Tuzkan Lake, 40.5424° N, 67.403589° E, 09.05.2024, *Beshko* (plant community description).

Koelpinia Pall.

1169. *Koelpinia linearis* Pall., Reise Russ. Reich. 3(2, App.): 755 (1776). Annual, therophyte. Tethyan. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone.

Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Gallaaral District, Karakuduk, 03.06.1934, *Toporova* (TASH); northern spurs of Nuratau Mts., surroundings of the well Kazybay, foothills, 05.05.1939, *Mikhaylova, Popova* (TASH); gorge Alichaksay, 27.05.1969, *Mambetjumaev 59* (TASH); mountains Nuratau, 04.05.1963, *Khaydarov 56* (TASH); Hayatsay, 1991, *Maximova 91018* (herbarium of the Nuratau Nature Reserve); Sanguzarsay, 07.05.1992, *Beshko 92440* (herbarium of the Nuratau Nature Reserve); piedmont plain, lower reaches of Ukhumsay, 25.05.1993, *Beshko 93062* (herbarium of the Nuratau Nature Reserve); Hayatsay, Novi Daroz, 23.05.2006, *Beshko 06135, 06136* (herbarium of the Nuratau Nature Reserve); foothills near Yangikishlak, 800 m a.s.l., 13.05.2012, *Beshko* (TASH). **I-4-b Aktau Range:** Koshrabad – Chuya, *Iris* formation, 06.05.1913, *Korovin 402* (TASH). **I-4-b Khobduntau Range:** plain between mountains Khobduntau and Karachatau, surroundings of Kuropatkino railway station, 08.06.1929, *Kudrjashev* (TASH); Gallaaral District, experimental station of cereal crops, 07.04.1934, *Toporova* (TASH); [same locality], 14.05.1934, *Toporova* (TASH); [same locality], 17.05.1934, *Toporova* (TASH); [same locality], 01.06.1934, *Toporova* (TASH); [same locality], 08.06.1934, *Toporova* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistaltau, 08.04.1915, *Kultiasow 18* (TASH).

1170. *Koelpinia macrantha* C.Winkl., Trudy Imp. S.-Peterburgsk. Bot. Sada 11: 285 (1890). Annual, therophyte. Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** reported in «Conspectus Florae Asiae Mediae», vol. 10, 1993, p. 228. **I-4-b Aktau Range:** mountains Aktau near the village Langar, valley Yangokly, 21.05.1941, *Zakirov, Niyazov* (TASH).

1171. *Koelpinia tenuissima* Pavlov & Lipsch., Fl. Centr. Kazakh. 3: 332 (1938). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, Novi Daroz, 23.05.2006, *Beshko 06133, 06134* (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** Nurata, 29.04.1913, *Korovin 146* (TASH); Koshrabad – Chuya, *Iris* formation, 06.05.1913, *Korovin 405* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistaltau, 07.04.1911, *Dimo, Sprygin, Shulga 372, 1093* (TASH).

1172. *Koelpinia turanica* Vassilcz., Fl. Uzbekistan. 6: 419, 515 (1962). Annual, therophyte. Middle Asian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** reported in «Conspectus Florae Asiae Mediae», vol. 10, 1993, p. 227. **I-4-b Aktau Range:** near the town Nurata, 23.05.1964, *Pryakhin* (TASH).

Lachnophyllum Bunge

1173. *Lachnophyllum gossypinum* Bunge, Mém. Acad. Imp. Sci. St.-Pétersbourg Divers Savans 7: 327 (1847). Annual, therophyte. Hyrcanian, Mountain Middle Asian. Desert, Shrubland, Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** north-east of the village Sarymsak, 06.09.1932, *Knorring, Emme 170* (MW). **I-4-b Khobduntau Range:** reported by Kudrjashev in “Vegetation of the Khobduntau and Karachatau Mountains” (1929, p. 67).

Lactuca L.

1174. *Lactuca crambifolia* (Bunge) Boiss. (*Steptorhamphus crambifolius* Bunge, *Cicerbita crambifolia* (Bunge) Beauverd), Fl. Orient. 3: 806 (1875). Perennial, hemicryptophyte. Mountain Middle Asian, Dzungarian. Shrubland, Rocky areas. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Range, Mt. Piyazli, 24.04.1941, *Bukasov* (TASH); surroundings of Kyzylcha State Farm, 29.05.1951, *Zaprometova* (TASH); the pass in Koblatysay, 20.05.1955, *Zaprometova* (TASH); Pistalisay valley, near the pass, 08.05.1958, *Li, Zakirov 447*

(TASH); Hayatsay, Andebaraut, lower reaches, 1100 m a.s.l., 25.05.2011, *Beshko 039/2011, 040/2011* (herbarium of the Nuratau Nature Reserve, TASH, www.plantarium.ru). **I-4-b Aktau Range:** northern slope of Aktau Range, Charkhansay, about 900 m a.s.l., 17.05.2024, *Beshko* (www.plantarium.ru, www.inaturalist.org).

1175. *Lactuca orientalis* (Boiss.) Boiss. (*Scariola orientalis* (Boiss.) Soják), Fl. Orient. 3: 819 (1875). Subshrub, chamaephyte. Tethyan. Desert, Shrubland, Rocky areas. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** southern slope, village Ukhum, 01.07.1931, *Kobranova 90* (TASH); stony southern slope 5–6 km west of the village Guzhum, 23.07.1937, *Demurina 710, 711* (TASH); Sob Pass, 04.08.1940, *Gomolitsky, Dolgikh, Arkhireev 282* (TASH); Nuratau Nature Reserve, Mt. Hayatbashi, about 2100 m a.s.l., 20.08.1977, *Levichev* (TASH); Hayatsay, 09.08.1978, *Levichev* (TASH); Hayatsay, Alichak, 16.07.1983, *Petrochenko 83074* (herbarium of the Nuratau Nature Reserve); Mt. Parrandoz, 22.07.1992, *Beshko 92475* (herbarium of the Nuratau Nature Reserve); Hayatsay, Andebaraut, 14.07.2006, *Beshko 06274* (herbarium of the Nuratau Nature Reserve, www.plantarium.ru); upper reaches of Ustuksay, about 1750 m a.s.l., 05.07.2024, *Beshko* (www.inaturalist.org, www.plantarium.ru). **I-4-b Aktau Range:** northern slope of Mt. Takhku-tau, 07.05.1913, *Korovin 434* (TASH); top of Mt. Takhku-tau, 07.05.1913, *Korovin 437* (TASH); on the latitude of the village Besh-Bulak, 03.07.1937, *Demurina 394* (TASH). **I-4-b Khobduntau Range:** Gumsay, 11.06.1929, *Kudrjashev* (TASH); valley Bodbod, 20.06.1929, *Kudrjashev* (TASH); valley Langar, 24.06.1929, *Kudrjashev* (TASH); Khobduntau Range, watershed, 09.07.1937, *Demurina 464* (TASH); Khobduntau Range, stony peak, 09.07.1937, *Demurina 479* (TASH).

1176. *Lactuca saligna* L., Sp. Pl.: 796 (1753). Annual, biennial, therophyte. European, Tethyan. Wetlands (inland), Artificial aquatic, Artificial terrestrial. Foothills, montane zone. Rare. Alien. **Occurrence records: I-4-a Nuratau Range:** 2 km north-east of the village Dzhush, cliffs, 05.07.1932, *Knorring, Emme 6* (MW); Samarkand Region, Koshrabad District, Ustuksay, 40.55497° N 66.5627° E, 06.07.2024, *Beshko* (www.inaturalist.org). **I-4-b Khobduntau Range:** reported by Kudrjashev in “Vegetation of the Khobduntau and Karachatau Mountains” (1929, p. 67).

1177. *Lactuca serriola* L. (*Lactuca altaica* Fisch. & C.A.Mey.), Cent. Pl. II: 29 (1756). Annual, biennial, therophyte. Euro-Siberian, Irano-Turanian. Desert, Forest, Shrubland, Grassland, Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** 1 km south of the village Ugat, 21.07.1931, *Kobranova 171* (TASH); 2–3 km east-north-east of Ukhum Pass, 29.07.1937, *Demurina 802* (TASH); Hayatsay, field station of nature reserve, 950 m a.s.l., 25.07.2012, *Beshko* (TASH); Jizzakh Region, Farish District, Hayatsay, field station of nature reserve, 40.527522° N 66.775071° E, 28.05.2023, *Beshko* (www.inaturalist.org). **I-4-b Aktau Range:** village Chuya, 16.07.1932, *Knorring, Emme 94* (MW); along the road to Koshrabad, 03.10.1958, *Li, Zakirov 991* (TASH). **I-4-b Karachatau Range:** Karachatau Range, eastern slope, 02.08.1931, *Kobranova 127* (TASH). **I-4-b Khobduntau Range:** valley Bodbod, upper reaches, 20.06.1929, *Kudrjashev* (TASH); Gallaaral District, surroundings of Milyutinskaya Station, experimental station of cereal crops, 24.07.1934, *Toporova* (TASH).

1178. *Lactuca soongorica* Regel (*Cephalorrhynchus soongoricus* (Regel) Kovalevsk.), Bull. Soc. Imp. Naturalistes Moscou 40(II): 174 (1867). Perennial, hemicryptophyte. Mountain Middle Asian, Dzungarian. Shrubland, Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** 5 km north-west of the village Khukala, 17.05.1958, *Li, Zakirov 634* (TASH); Nuratau Nature Reserve, Tykchasay, rocky massif Parrandoz, about 1500 m a.s.l., 11.05.2010, *Beshko* (www.plantarium.ru).

1179. *Lactuca tatarica* (L.) C.A.Mey., Verz. Pfl. Casp. Meer.: 56 (1831). Perennial, hemicryptophyte. Euro-Siberian, Irano-Turanian. Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain,

foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Mt. Mirishkar, near Koshrabad, 05.05.1913, *Korovin 358* (TASH); Bolosay, Yailok, 11.06.1993, *Beshko 93051–053* (herbarium of the Nuratau Nature Reserve). **I-4-b Khobduntau Range:** reported by Kudrjashev in “Vegetation of the Khobduntau and Karachatau Mountains” (1929, p. 67).

1180. *Lactuca undulata* Ledeb., Fl. Altaic. 4: 156 (1833). Annual, therophyte. Eastern Tethyan, Himalayan. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** 2–3 km east-north-east of Ukhum Pass, 29.07.1937, *Demurina 800-2* (TASH); piedmont plain between Mt. Piyazli and Balykli, 24.04.1941, *Momotov 28* (TASH); Koblatysay, 03.05.1957, *Zaprometova* (TASH); mountains Nuratau north-west of district center Nurata, 22.05.1963, *Markova 641* (TASH). **I-4-b Karatau Range:** valley Karakarga, descent from Karakarga Pass, 04.05.2013, *Tojibaev, Beshko, Batashov, Azimova* (TASH); Bukhara Region, Gzhduvan District, western part of Karatau Range, about 410 m a.s.l., 40.470752°N 65.107587°E, 21.04.2024, *Beshko* (www.inaturalist.org). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 16.04.2011, *Batashov* (TASH).

Lepidolopha C.Winkl.

1181. *Lepidolopha komarowii* C.Winkl., Trudy Imp. S.-Peterburgsk. Bot. Sada 13: 236 (1894). Subshrub, chamaephyte. Western Tien Shan, Western Pamir-Alay. Shrubland, Grassland, Rocky areas. Montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Mt. Mirishkar, 05.05.1913, *Korovin 337* (TASH); north slopes in upper reaches of Garashasay, 20.07.1937, *Demurina 635* (TASH); pass near the sources of Guzhumsay, 23.07.1937, *Demurina 659* (TASH); near the village Ustakhan, 23.08.1937, *Titov* (TASH); Nuratau Range, Mts. Koytash, 28.05.1941, *Lepeschkin* (TASH); valley Aktash (Uchma), August 1948, *Ikonnikova* (TASH); Farish District, valley Tulibay, 22.07.1955, *Zakirov* (TASH); 2 km south of the village Ustakhan, 25.05.1958, *Li, Zakirov 808* (TASH); 7 km south of the village Farish, 18.06.1962, *Karimov* (TASH); upper reaches of Parrandozsay, way to Ukhum Pass, 31.05.1964, *Zuckerwanik 424* (TASH); valley Ukhum, above the village, 01.06.1964, *Zuckerwanik 455* (TASH); Nuratau Nature Reserve, Hayatsay, 1700 m a.s.l., 10.08.1978, *Korshunov* (TASH); Hayatsay, watershed, 1900 m a.s.l., 10.08.1978, *Korshunov* (TASH); [same locality], 10.09.1978, *Korshunov* (TASH); Nuratau Nature Reserve, Hayatsay, 1700 m a.s.l., 13.08.1980, *Mukhina, Pjatina* (TASH); Jizzakh Region, Kuchliksay above the village Deristan, 16.08.1980, *Belolipov* (TASH); Ukhumsay, 18.08.1980, *Belolipov* (TASH); Nuratau Range, Kachak, 1600 m a.s.l., 04.07.1981, *Mukhina* (TASH); Karysay, Kazhum, 22.07.1992, *Beshko 92467* (herbarium of the Nuratau Nature Reserve); watershed between Hayatsay and Andygensay, 21.07.2007, *Beshko 07060, 07061* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, upper reaches of Hayatsay, Alichak, 1500 m a.s.l., 27.06.2012, *Beshko* (TASH); Hayatsay, upper reaches, 08.05.2014, *Tojibaev, Beshko 17183* (TASH); Nuratau Nature Reserve, watershed crest near Mt. Hayat-bashi, about 2100 m a.s.l., 23.07.2014, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** Aktau Range, on the latitude of the village Besh-Bulak, 03.07.1937, *Demurina 326, 395* (TASH); Nurata District, near the village Chashma, mountains, Koshrabad 2 State Farm, 24.04.1963, *unknown collector* (TASH).

1182. *Lepidolopha nuratavica* Krasch., Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk S.S.S.R. 9: 179 (1946). Subshrub, chamaephyte. Western Pamir-Alay (Nuratau Mts., Kugitang Range). Shrubland, Grassland, Rocky areas. Montane zone. Occasional. Native. UzBRDB 3. **Occurrence records: I-4-a Nuratau Range:** Tykchabel Pass, 02.08.1940, *Gomolitsky, Dolgikh 321* (TASH); Nuratau Range, Farish District, 06.05.1941, *Momotov 127* (TASH); piedmont plain 15 km east of Farish, 12.05.1955, *Zaprometova* (TASH); Nuratau Range, 1959, *Inamov* (TASH); Nuratau Range, mountains, 28.05.1963, *Khaydarov 1474* (TASH); southern slope of Mt. Zargar, 27.04.1979, *Pimenov, Boryaev, Kljuykov, Baranova, Vassiljeva 105* (MW); gorge Gurdara, 17.07.1980, *Belolipov* (TASH); Sentob, left side, 29.06.1983, *Bulgakova 156* (TASH); watershed between Hayatsay and Andygensay, July 1990, *Beshko*,

Yakovenko 90112 (herbarium of the Nuratau Nature Reserve); upper reaches of Karysay, 30.06.1992, *Beshko 92383* (herbarium of the Nuratau Nature Reserve); Asrafsay, 16.06.1994, *Beshko 94107, 94108, 94109* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Bolosay, watershed, 10.06.1996, *Beshko 96080* (TASH); watershed between Hayatsay and Andygensay, 1600 m a.s.l., 21.07.2007, *Beshko 07063* (TASH). **I-4-b Aktau Range:** top of Mt. Takhkuta, 07.05.1913, *Korovin* (TASH); mountains Aktau, 2 km north of the village 2-nd Khanbashi, 05.07.1932, *Knorring, Emme 13* (MW); near Tilakik Pass, 08.07.1932, *Knorring* (MW); 6–8 km south of mountains Takhku, 29.06.1937, *Demurina 318, 319* (TASH); Aktau, near the village Langar, valley Yangokly, 19–21.05.1941, *Zakirov, Niyazov* (TASH); Nurata District, Lenin State Farm, 2 km south-west of the village Mushkent, 21.05.1963, *unknown collector* (TASH); mountains Aktau south-west of Charkhona well, near Raimbay well, 28.05.1963, *Khaydarov 1460* (TASH); south-east of town Nurata, piedmonts of Bakhiltau Mts., 23.05.1964, *Pryakhin* (TASH); upper reaches of river Bitau, near the village, 25.05.1964, *Zuckerwanik 265* (TASH); mountains Aktau, Ingichkasay, 20.07.1980, *Belolipov* (TASH); Navoi Region, Nuratau mountains, northern slope of Aktau Range, Ambarsay, about 800 m a.s.l., 10.06.2018, *Beshko* (www.plantarium.ru); northern slope of Aktau Range, Charkhansay, 17.05.2024, *Beshko, Volis et al.* (TASH).

Lepidolopsis Poljakov

1183. *Lepidolopsis turkestanica* (Regel & Schmalh.) Poljakov, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk S.S.S.R. 19: 375 (1959). Perennial, hemicryptophyte. Irano-Turanian, Himalayan. Shrubland, Grassland, Rocky areas, Artificial terrestrial. Foothills, montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** Gurdara, 23.06.1971, *Botschantzev, Kamelin* (LE); Hayatsay, 28.07.1990, *Beshko, Yakovenko 90103, 90104, 90121* (herbarium of the Nuratau Nature Reserve); Hayatsay, 20.06.2007, *Beshko 07048* (herbarium of the Nuratau Nature Reserve).

Ligularia Cass.

1184. *Ligularia heterophylla* Rupr., F.von der Osten-Saken, Sert. Tiansch.: 53 (1869). Perennial, hemicryptophyte. Mountain Middle Asian, Dzungarian. Wetlands (inland). Montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** reported in «Conspectus Florae Asiae Mediae», vol. 10, 1993, p. 446–447.

Microcephala Pobed.

1185. *Microcephala lamellata* (Bunge) Pobed., Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk S.S.S.R. 21: 357 (1961). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** near the villages Yangikishlak and Ilonchi, 01.04.1992, *Beshko 92014* (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** Koshrabad – Shurcha, 15.04.1913, *Teplov* (TASH); Koshrabad – Shurcha, 16.04.1913, *Korovin* (TASH). **I-4-b Karatau Range:** Karmana District, Aktau, southern slope, 04.05.1955, *Vernik, Nabiev 90* (TASH); Karmana District, near the village Yangoklyk, 06.05.1955, *Vernik, Nabiev 140* (TASH).

Onopordum L.

1186. *Onopordum acanthium* L., Sp. Pl.: 827 (1753). Biennial, hemicryptophyte. Euro-Siberian, Irano-Turanian. Shrubland, Grassland, Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** 5 km south-east of the village Kokbulak, 23.05.1958, *Li, Zakirov 746* (TASH); Koytash, northern slope, 28.06.1971, *Botschantzev, Kamelin* (LE); Jizzakh Region, Farish District, 4 km south-west of town Yangikishlak, 02.06.2023, *Fateryga* (www.plantarium.ru); Samarkand Region, Koshrabad District, Ustusay, 40.55431° N, 66.56459° E, 06.07.2024, *Beshko* (www.inaturalist.org). **I-4-b Khobduntau**

Range: reported by Kudrjashev in “Vegetation of the Khobduntau and Karachatau Mountains” (1929, p. 68).

1187. *Onopordum leptolepis* DC., Prodr. 6: 619 (1838). Biennial, hemicryptophyte. Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Koytash, 25.05.1914, *Mikhelson* (LE); mountains Nuratau, 12.06.1963, *Khaydarov 1686* (TASH); Hayatsay, Novi Daroz, 18.07.1992, *Beshko 92199* (herbarium of the Nuratau Nature Reserve); Hayatsay, near the village Upper Hayat, about 1000 m a.s.l., 26.06.2009, *Beshko* (www.plantarium.ru). **I-4-b Khobduntau Range:** plain near southern piedmonts of Khobduntau Mts., near the village Kyrk, 19.06.1929, *Kudrjashev* (TASH); Jizzakh Region, Gallaaral District, between town Gallaaral and the village Moltop, 39.988141° N 67.533073° E, 15.07.2023, *Beshko* (www.inaturalist.org).

Pentanema Cass.

1188. *Pentanema divaricatum* Cass., Bull. Sci. Soc. Philom. Paris 1818: 75 (1818). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Rocky areas, Artificial terrestrial. Plain, foothills. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Navoi Region, Nurata District, Kichiksay, 23.06.2002, *Beshko 02074* (herbarium of the Nuratau Nature Reserve); Navoi Region, Nurata District, Nuratau Range, surroundings of the village Kyzylcha, Koblatysay, 570 m a.s.l., 15.06.2019, *Beshko* (www.plantarium.ru, www.inaturalist.org). **I-4-b Aktau Range:** Mts. Aktau, 10.06.1928, *Yakimova* (TASH).

Picnomon Adans.

1189. *Picnomon acarna* (L.) Cass., G.-F.Cuvier, Dict. Sci. Nat., ed. 2. 40: 188 (1826). Annual, biennial, therophyte. Tethyan. Desert, Shrubland, Grassland, Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** town Jizzakh, railway embankment, 05.08.1921, *Vvedensky 1746, 1747* (TASH); Mts. Koytash, Savryuksay, 20.07.1931, *Kobranova 148, 149* (TASH); mountains Nuratau, 2 km south of Karasay Pass, 05.08.1932, *Knorring, Emme 127* (MW); Nuratau Nature Reserve, Hayatsay, about 1000 m a.s.l., 29.07.2006, *Beshko* (www.plantarium.ru); Hayatsay, Novi Daroz, 30.07.2006, *Beshko 06298, 06299* (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** near the village Keriz, 11.07.1931, *Knorring, Emme 54* (MW). **I-4-b Khobduntau Range:** Mts. Khobduntau, north-western slopes, 30.07.1931, *Kobranova 116* (TASH).

Pseudohandelia Tzvelev

1190. *Pseudohandelia umbellifera* (Boiss.) Tzvelev, Fl. URSS 26: 363 (1961). Biennial, perennial, hemicryptophyte. Hyrcanian, Mountain Middle Asian. Desert, Shrubland, Grassland, Artificial terrestrial. Plain, foothills. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** piedmont plain between Yangikishlak and Ukhum, 04.05.1958, *Li, Zakirov 330* (TASH); 5 km north-east of the village Karasay, gentle upland of Nuratau valley, 20.05.1958, *Li, Zakirov 676* (TASH). **I-4-b Aktau Range:** valley Chashma, 10.05.1962, *Khaydarov 131* (TASH); sources of river Bitau, 27.05.1964, *Zuckerwanik 330* (TASH); near the village Chashma (south of Bakhiltai Mts.), 06.06.1964, *Pryakhin* (TASH). **I-4-b Khobduntau Range:** Gallaaral District, surroundings of Milyutinskaya Station, experimental station of cereal crops, 00.06.1934, *Toporova* (TASH). **I-4-c North-Nuratau insular low mountains:** Jizzakh Region, Farish District, Pistalitau, 20.04.2011, *Batashov 00174* (TASH); [same locality], 04.05.2012, *Batashov 00190* (TASH).

Pseudopodospermum (Lipsch. & Krasch.) Kuth.

1191. *Pseudopodospermum ovatum* (Trautv.) Zaika, Sukhor. & N.Kilian (*Scorzonera ovata* Trautv.). Perennial, hemicryptophyte. Irano-Turanian. Shrubland, Grassland, Rocky areas. Foothills, montane

zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Ukhum, May 1892, *Komarov* (LE). **I-4-c North-Nuratau insular low mountains:** Jizzakh Region, remnant range Egarbelistag, 03.05.2013, *Beshko* (www.plantarium.ru); [same locality], 03.05.2013, *Tojibaev, Beshko, Batashov, Azimova* (TASH).

Psychrogeton Boiss

1192. *Psychrogeton aucheri* (DC.) Grierson (*Erigeron khorassanicus* Boiss.), Notes Roy. Bot. Gard. Edinburgh 27: 142 (1967). Biennial, therophyte. Irano-Turanian. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, 09.07.1981, *Mukhina 81084–086* (herbarium of the Nuratau Nature Reserve).

Pulicaria Gaerth.

1193. *Pulicaria dysenterica* subsp. *uliginosa* Nyman (*Pulicaria uliginosa* Steven ex DC.), Consp. Fl. Eur.: 394 (1879). Annual, therophyte. Tethyan. Wetlands (inland), Artificial aquatic. Foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Madjrumsay, 1 km upstream of the village, 700 m a.s.l., 13.07.1999, *Beshko 031–035/1999* (TASH, herbarium of the Nuratau Nature Reserve); Madjrumsay, 27.08.2003, *Beshko 03044, 03045* (herbarium of the Nuratau Nature Reserve); lower reaches of Madjrumsay, about 700 m a.s.l., 13.09.2014, *Beshko* (TASH).

1194. *Pulicaria gnaphalodes* (Vent) Boiss., Diagn. Pl. Orient. 6: 76 (1846). Perennial, hemicryptophyte. Irano-Turanian. Shrubland, Rocky areas, Artificial terrestrial. Foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** the village Madjrum, 06.09.1932, *Knorring, Emme* (LE); Tykchasay, near the village Upper Ukhum, 1000–1100 m a.s.l., 14.08.2012, *Beshko* (TASH). **I-4-b Karatau Range:** between Karmana and Nurata, slopes of Karatau, 07.09.1959, *Adylov 1256* (TASH). **I-4-b Mt. Kokcha:** Mt. Kokcha, 17.08.1934, *Sakhobiddinov* (TASH). **I-4-c North-Nuratau insular low mountains:** Jizzakh Region, piedmonts of remnant range Balyklitau, near the limestone quarry, 30.09.2012, *Beshko* (TASH).

1195. *Pulicaria salviifolia* Bunge, Beitr. Fl. Russl.: 155 (1852). Perennial, hemicryptophyte. Irano-Turanian. Shrubland, Rocky areas, Artificial terrestrial. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Upper Ukhum, 20.07.2010, *Beshko 10015, 10016* (herbarium of the Nuratau Nature Reserve).

Rhaponticum Ludwig

1196. *Rhaponticum repens* (L.) Hidalgo (*Acroptilon repens* (L.) DC.), Ann. Bot. (Oxford), n.s., 97: 714 (2006). Perennial, hemicryptophyte. Euro-Siberian, Tethyan. Forest, Shrubland, Grassland, Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, 13.07.1983, *Baskakova 83030* (herbarium of the Nuratau Nature Reserve); Hayatsay, 03.06.2006, *Beshko 06150* (herbarium of the Nuratau Nature Reserve); Samarkand Region, Koshrabad District, Ustuksay, 40.55493° N 66.56373° E, 06.07.2024, *Beshko* (www.inaturalist.org, www.plantarium.ru).

Scorzonera L.

1197. *Scorzonera bracteosa* C.Winkl., Trudy Imp. S.-Peterburgsk. Bot. Sada 11: 324 (1890). Perennial, hemicryptophyte. Pamir-Alay. Shrubland, Grassland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Gurdara, 08.06.1994, *Beshko 94067* (herbarium of the Nuratau Nature Reserve); Yongoklisay, about 1000 m a.s.l., 06.06.2009, *Beshko* (www.plantarium.ru); Hayatsay, Andebaraut, 1200 m a.s.l., 21.05.2011, *Beshko 038/2011* (herbarium of the Nuratau Nature Reserve, TASH, www.plantarium.ru).

1198. *Scorzonera parviflora* Jacq., Fl. Austriac. 4: 3 (1776). Perennial, hemicryptophyte. Euro-Siberian, Irano-Turanian. Plain, foothills. Wetlands (inland). Rare. Native. **Occurrence records: I-4-b Karachatau Range:** surroundings of the villages Chelak and Koshtegirmon, May 1938, *Botschantzev 14* (TASH).

1199. *Scorzonera tragopogonoides* Regel & Schmalh., Trudy Imp. S.-Peterburgsk. Bot. Sada 5: 635 (1877). Perennial, hemicryptophyte. Hyrcanian, Mountain Middle Asian. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** 2.5 km north-west of the village Kuray, 11.06.1965, *Pereyagina* (TASH); Hayatsay gorge, 28.05.1969, *Mambetjumaev 76* (TASH); Hayatsay gorge, slopes, 28.05.1969, *Mambetjumaev 77* (TASH); Koytash, crests of the range, 28.06.1971, *Botschantzev, Kamelin* (LE); Nuratau Nature Reserve, Hayatsay, about 1500 m a.s.l., 16.08.1978, *Korshunov* (TASH); Karysay, Chashmi Mullo, 19.06.1992, *Beshko 92317* (herbarium of the Nuratau Nature Reserve); Hayatsay, Bedarak, 22.06.1992, *Beshko 92481* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 09.06.2020, *Ortikov, Pulatov, Turdiev, Juramurodov, Makhmudjanov 9062020604* (TASH). **I-4-b Khobduntau Range:** Mts. Khobduntau, near the village Bodbod, 16.06.1929, *Kudrjashev* (TASH); one of the peaks near the village Beshkutan, 16.06.1929, *Kudrjashev* (TASH).

Silybum Adans.

1200. *Silybum marianum* (L.) Gaertn., Fruct. Sem. Pl. 2: 378 (1791). Annual, biennial, therophyte. Tethyan. Artificial terrestrial. Plain, foothills. Rare. Alien. **Occurrence records: I-4-a Nuratau Range:** roadside near the village Gandumtash, 11.05.2016, *Usmonov* (www.plantarium.ru).

Sonchus L.

1201. *Sonchus asper* (L.) Hill, Herb. Brit. 1: 47 (1769). Annual, therophyte. Pluriregional (native to Eurasia). Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Rare. Alien. **Occurrence records: I-4-a Nuratau Range:** Payaryk District, near the village Savryukbazar, 25.07.1931, *Kobranova 215* (TASH); the village Madjrum, 06.09.1932, *Knorring, Emme 168* (LE, MW); Nuratau Nature Reserve, Madjrum, 02.05.2025, *Beshko* (www.inaturalist.org). **I-4-b Aktau Range:** village Chuya, 16.07.1932, *Knorring, Emme 95* (LE, MW).

1202. *Sonchus oleraceus* L., Sp. Pl.: 794 (1753). Annual, therophyte. Pluriregional (Europe, Mediterranean). Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Rare. Alien. **Occurrence records: I-4-a Nuratau Range:** Jizzakh Region, Farish District, Hayatsay, field station of nature reserve, 40.527236° N 66.774646° E, 19.07.2006, *Beshko 06277* (herbarium of the Nuratau Nature Reserve, www.inaturalist.org); Jizzakh Region, Gallaaral District, southern foothills of Nuratau, surroundings of the village Karakchi, 40.10698° N, 67.54782° E, 17.10.2024, *astrapia* (www.inaturalist.org). **I-4-c North-Nuratau insular low mountains:** Jizzakh Region, Farish District, northern slope of Pistaltau, 40.54819° N, 67.39188° E, 09.05.2024, *Beshko* (www.inaturalist.org).

1203. *Sonchus palustris* L., Sp. Pl.: 793 (1753). Perennial, hemicryptophyte. Euro-Siberian, Irano-Turanian. Wetlands (inland), Artificial aquatic. Plain, foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Madjrum, Bedar, 1270 m a.s.l., 29.06.2011, *Beshko 078/2011* (herbarium of the Nuratau Nature Reserve, TASH). **I-4-b Aktau Range:** 15 km east of the village Tikalik, gorge, 08.07.1932, *Knorring, Emme 38* (LE, MW).

Stizolophus Cass.

1204. *Stizolophus balsamita* (Lam.) K.Koch, Fl. Erevana: 329 (1945). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Rare.

Probably alien. **Occurrence records: I-4-a Nuratau Range:** Yangikishlak, surroundings of the office of Nuratau Nature Reserve, 23.06.1992, *Beshko* 92463 (herbarium of the Nuratau Nature Reserve).

Takhtajaniantha Nazarova

1205. *Takhtajaniantha pusilla* (Pall.) Nazarova (*Scorzonera pusilla* Pall.), Biol. Zhurn. Armenii 43: 180 (1990). Perennial, geophyte. Siberian, Irano-Turanian. Desert, Shrubland, Rocky areas. Plain, foothills. Rare. Native. **I-4-a Nuratau Range:** Reported by Zakirov in «Vegetation cover of Nuratau Mountains» (1969, p. 42) and «Botanical geography of low mountains of Kyzylkum and Nuratau Range» (1971, p. 76). **I-4-b Mt. Kokcha: central part of Kokchatau, southern slope, 40.52625° N, 65.042361° E, 22.03.2013, Beshko (field observation); central part of Kokchatau, 11.04.2015, Shomurodov et al. (plant community description, published in “Coenopopulation of rare and endangered plant species of remnant low mountains of Kyzylkum”, 2018, p. 79–80). I-4-c North-Nuratau insular low mountains:** Reported by Zakirov in «Botanical geography of low mountains of Kyzylkum and Nuratau Range» (1971, p. 76).

Tanacetopsis (Tzvelev) Kovalevsk.

1206. *Tanacetopsis handeliiformis* Kovalevsk., Novosti Sist. Vyssh. Rast. 9: 268 (1972). Perennial, hemicryptophyte. Aktau, Zirabulak-Ziadin Mts. (subendemic). Shrubland, Rocky areas. Foothills, montane zone. Rare. Native. **I-4-b Aktau Range:** northern slope of Aktau Range, valley Ingichka 22 km east of town Nurata, 26.06.1971, *Botschantzev, Kamelin* 452 (LE, TASH); spring Bitau, 29.07.1982, *Shermatov, Kazakbaev, Levichev, Tagaev* 102 (TASH); south-east of the village Dekhibaland, the spring Bitav, 18.04.1963, *Khaydarov* 883, 910 (TASH).

1207. *Tanacetopsis karataviensis* (Kovalevsk.) Kovalevsk., Fl. Uzbekistan. 6: 143 (1962). Perennial, hemicryptophyte. Western Tien Shan, Nuratau (subendemic). Shrubland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Ukhum Pass, 1800 m a.s.l., 28.07.1937, *Demurina* 744 (TASH); upper reaches of Koblatysay, 20.05.1955, *Zaprometova* (TASH); slopes of Fazilmantau, near the top, 12.05.1956, *Korotkova* 5148 (TASH); Ukansay, 1960, *Zaprometova* (TASH); Nuratau Nature Reserve, Hayatsay, 16.08.1978, *Korshunov* (TASH); Nuratau mountains, 12.06.1984, *Shimolina* 129 (TASH); Nuratau Range, south-eastern slope, 10.06.1985, *Shimolina* 51 (TASH); Karysay, 20.07.1990, *Beshko, Yakovenko* 90107 (herbarium of the Nuratau Nature Reserve); Gurdara, 08.06.1994, *Beshko* 94066 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, upper reaches of Hayatsay, Alichak, 1600 m a.s.l., 27.06.2012, *Beshko* (TASH); Samarkand Region, Nuratau Range, crest of Mt. Kichik Fazilman, about 1800 m a.s.l., 08.06.2013, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** mountains Aktau, north of the village Khodzha-Kolishan, valley Yangokly, 08.06.1926, *Popov* 119, 120 (TASH); Nuratau mountains, between mountains Aktau and Bakhiltai, 18.07.1932, *Knorring, Emme* (LE).

Taraxacum F.H.Wigg.

1208. *Taraxacum bessarabicum* (Hornem.) Hand.-Mazz., Monogr. Taraxacum: 26 (1907). Perennial, hemicryptophyte. Euro-Siberian, Irano-Turanian. Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Sentob plateau, 30.07.1928, *Yakimova, Moskvina* 1302 (TASH). **I-4-b Aktau Range:** 8 km from Payshambe, 08.08.1932, *Knorring, Emme* (LE).

1209. *Taraxacum bicornis* Dahlst, Ark. Bot. 5(9): 29 (1906). Perennial, hemicryptophyte. Irano-Turanian, Himalayan, Oriental. Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills. Occasional. Native. **Occurrence records: I-4-b Aktau Range:** Nurata, May 1913, *Korovin* (TASH).

1210. *Taraxacum ecornutum* Kovalevsk., Bot. Mater. Gerb. Inst. Bot. Akad. Nauk Uzbeksk. S.S.R. 17: 14 (1962). Perennial, hemicryptophyte. Middle Asian. Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Reported by Zakirov in «Vegetation cover of Nuratau Mountains» (1969, p. 42) and «Botanical geography of low mountains of Kyzylkum and Nuratau Range» (1971, p. 76).

1211. *Taraxacum maracandicum* Kovalevsk., Bot. Mater. Gerb. Inst. Bot. Akad. Nauk Uzbeksk. S.S.R. 17: 10 (1962). Perennial, hemicryptophyte. Western Tien Shan, Pamir-Alay. Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** north-east of village Koytash, 30.04.1956, Zakirov 107 (TASH); Tamerlane's Gate, lower terrace of Sanzar, 17.04.1957, Vvedensky, Kovalevskaya 33 (TASH)

1212. *Taraxacum monochlamydeum* Hand.-Mazz., Monogr. Taraxacum: 43 (1907). Perennial, hemicryptophyte. Irano-Turanian. Desert, Forest, Shrubland, Grassland, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Alaysay, 05.05.1956, Zaprometova, Vvedensky 52 (TASH); Gatchasay, 30.03.1958, Zaprometova 30 (TASH); 1.5 km south-west of Saurbel Pass, 27.04.1958, Li, Zakirov 115, 116 (TASH); 3 km south of village Midzhigan, 15.05.1958, Li, Zakirov 590 (TASH); mountains Nuratau, 10.04.1963, Khaydarov 19 (TASH); Kyzylcha State Farm, 3.5 km east of Koblaty, foothills, 03.06.1963, Makarchuk (TASH); Nurata District, Lenin State Farm, 26.04.1963, Makarchuk (TASH). **I-4-b Aktau Range:** Yangoklysay, near the village Yangokly, 19–21.05.1941, Zakirov, Niyazov (TASH).

1213. *Taraxacum nuratavicum* Schischk., Fl. URSS 29: 486, 733 (1964). Perennial, hemicryptophyte. Pamir-Alay. Wetlands (inland). Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range: I-4-b Aktau Range:** jugum Nuratau, montes Aktau, Tutak, 04.06.1951, Neustrueva, Zvetkova 103 (holotype LE); mountains Aktau, upper reaches of river Tutak, 05.06.1951, Knorring, Cvetkova 122 (isotype LE).

1214. *Taraxacum officinale* F.H.Wigg., Prim. Fl. Holsat.: 56 (1780). Perennial, hemicryptophyte. Pluriregional. Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Alien. **Occurrence records: I-4-a Nuratau Range:** Nurak, northern slope, May 1957, Zakirov 13, 14 (TASH); Bolosay, 10.06.1996, Beshko 96127 (herbarium of the Nuratau Nature Reserve).

1215. *Taraxacum sonchoides* (D.Don) Sch.Bip. (*Taraxacum montanum* (C.A.Mey.) DC.), Index Seminum (HEID, Heidelbergensi) 1850: 4 (1850). Perennial, hemicryptophyte. Irano-Turanian. Shrubland, Grassland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, upper reaches of the stream Karakisa, 02.08.1934, Botschantzev (TASH); Nuratau mountains, near the village Ustakhan, 23.08.1937, Titov (TASH); Ustuksay, 12.07.1956, Vvedensky 85 (TASH).

Tragopogon L.

1216. *Tragopogon capitatus* S.A.Nikitin, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk S.S.S.R. 7: 257 (1938). Biennial, hemicryptophyte. Hyrcanian, Mountain Middle Asian. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, the village Osmansay, 00.06.1931, Kobranova 478 (TASH); Mts. Koytash, Savryuksay, 20.07.1931, Kobranova 150 (TASH); Ustuksay, 12.07.1957, Vvedensky 90 (TASH); Karysay, 07.06.1982, Mukhina 82046 (herbarium of the Nuratau Nature Reserve). **I-4-b Karachatau Range:** near the village Fedorovskoe, 21.05.1925, Popov 299 (TASH).

1217. *Tragopogon coelesyriacus* Boiss. (*Tragopogon kraschennikovii* S.A.Nikitin). Biennial, hemicryptophyte. Irano-Turanian. Shrubland, Grassland, Rocky areas. Foothills, montane zone.

Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Hayatsay gorge, 28.05.1969, *Mambetjumaev* 87, 91 (TASH); Hayatsay, Bedarak, 22.06.1992, *Beshko* 92361 (herbarium of the Nuratau Nature Reserve); Hayatsay, Novi Daroz, 07.05.1993, *Beshko* 93012 (herbarium of the Nuratau Nature Reserve, TASH); upper reaches of Bolosay, 10.06.1996, *S.Michel* 96070 (herbarium of the Nuratau Nature Reserve). **I-4-b Khobduntau Range:** Mts. Khobduntau, valley Bodbod, upper reaches, 20.06.1929, *Kudrjashev* (TASH);

1218. *Tragopogon conduplicatus* S.A.Nikitin, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk S.S.S.R. 7: 265 (1938). Perennial, hemicryptophyte. Pamir-Alay. Shrubland, Grassland, Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** mountains Nuratau, 05.04.1963, *Khaydarov* 12 (TASH).

1219. *Tragopogon malikus* S.A.Nikitin, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk S.S.S.R. 7: 267 (1938). Perennial, hemicryptophyte. Western Tien Shan, Western Pamir-Alay. Desert, Forest, Shrubland, Grassland, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Range, Farish District, 25.04.1941, *Momotov* 45 (TASH); Mts. Koytash, the village Karatash, 26.04.1941, *Lepeschkin* (TASH); Nuratau Range, Farish District, 26.04.1941, *Momotov* 56 (TASH); Nuratau Range, Farish District, 29.04.1941, *Momotov* (TASH); Nuratau Range, Farish District, 05.05.1941, *Momotov* 105 (TASH); [same locality], 06.05.1941, *Momotov* 138 (TASH); [same locality], 14.05.1941, *Momotov* (TASH); foothills of Nuratau Range, Farish District, Kirov State Farm, 07.05.1943, *Vernik*, *Raykova* 48 (TASH); Kyzylcha State Farm, 12.05.1951, *Novikova* (TASH); Koblatysay, 27.03.1955, *Zaprometova* (TASH); Farish District, Tolubaysay, 09.05.1956, *Zakirov* 151 (TASH); Asrafsay, 10.05.1956, *Zaprometova* 96 (TASH); Mt. Zargar 2 km north-east of the village Urtasay, 1400 m a.s.l., 11.05.1957, *Momotov*, *Li* 220, 237 (TASH); Ukansay, 02.04.1958, *Zaprometova* 300 (TASH); Ukansay, 15.04.1958, *Zaprometova* (TASH); 4 km NNE of the village Kara-baganly, 26.04.1958, *Li*, *Zakirov* 85 (TASH); 1.5 km south-west of Saurbel Pass, 27.04.1958, *Li*, *Zakirov* 111 (TASH); 2 km north of Saurbel Pass, 27.04.1958, *Li*, *Zakirov* 164 (TASH); Sentob, 0.5 km south of the village Yukary-Kurgan, 11.05.1958, *Li*, *Zakirov* 489 (TASH); plain to the north of Nuratau Mts., 12.05.1958, *Li*, *Zakirov* 526 (TASH); Hayatsay gorge, 28.05.1969, *Mambetjumaev* 92 (TASH); Hayatsay gorge, 30.05.1969, *Mambetjumaev* 119, 123 (TASH); Jizzakh Region, northern slope of Nuratau Range, south-west of town Jizzakh, Tamerlane's Gate, 26.04.1979, Pimenov, *Kljuykov*, *Boryaev*, *Baranova*, *Vassiljeva* 41 (MW); Karysay, 21.04.1992, *Beshko* 92423, 92424 (herbarium of the Nuratau Nature Reserve); Hayatsay, Khotunon, 11.06.1992, *Beshko* 92146 (herbarium of the Nuratau Nature Reserve); Hayatsay, Zamezhak, 08.06.1993, *Beshko* 93072 (herbarium of the Nuratau Nature Reserve); Yongoklisay, about 900 m a.s.l., 01.04.2009, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Madjrumsay, about 900 m a.s.l., 18.04.2019, *Beshko* (www.plantarium.ru); surroundings of village Ukhum, Ukhumsay, 05.05.2020, *Akbarov*, *Turdiyev*, *Juramurodov* 5052020020, 5052020027, 5052020028 (TASH); Mt. Kichik Fazilman, near Fazilman Lake, 06.05.2020, *Akbarov*, *Turdiyev*, *Juramurodov* 6052020125, 6052020133, 6052020134 (TASH). **I-4-b Aktau Range:** mountains Aktau near the village Shamaly, 24.05.1925, *Popov* 389 (TASH); near the village Langar, valley Yangokly, 21.05.1941, *Zakirov*, *Niyazov* (TASH); near the pass Tikalik, 3 km south of village Sarygul, 12.05.1957, *Momotov*, *Li* 305 (TASH); the spring Bitav, 18.04.1963, *Khaydarov* 786 (TASH); mountains Aktau, Samarkand Region, 28.05.1963, *Khaydarov* 1503 (TASH). **I-4-b Karatau Range:** 2.5 km south-west of ruins Sarmysh, 06.05.1955, *Momotov*, *Li* 191, 192 (TASH); **I-4-c North-Nuratau insular low mountains:** Pistalitau, 08.04.1911, *Dimo*, *Sprygin*, *Shulga* 371 (TASH); Pistalitau, 08.04.1915, *Kultiasow* 4, 50 (TASH); Jizzakh Region, mountains Pistalitau, 22.04.1986, Pimenov, *Kljuykov*, *Vassiljeva*, *Melibaev* 116 (MW).

1220. *Tragopogon montanus* S.A.Nikitin, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk S.S.S.R. 7: 270 (1938). Perennial, hemicryptophyte. Irano-Turanian. Shrubland, Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Ukhum, 01.05.1982, *Glazunov* (LE).

1221. *Tragopogon pseudomajor* S.A.Nikitin, Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk S.S.S.R. 7: 258 (1938). Biennial, hemicryptophyte. Middle Asian. Desert, Shrubland, Grassland, Rocky areas. Plain, foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** reported in «Conspectus Florae Asiae Mediae», vol. 10, 1993, c. 218.

1222. *Tragopogon vvedenskyi* Popov, Byull. Moskovsk. Obshch. Isp. Prir., Otd. Biol., n.s., 42: 128, 138 (1933). Biennial, hemicryptophyte. Hyrcanian, Mountain Middle Asian. Shrubland, Grassland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** southern slopes 5–6 km west of the village Guzhum, 23.07.1937, *Demurina* 719 (TASH); 6–7 km west of the village Guzhum, 23.07.1937, *Demurina* 734 (TASH); Hayatsay, Andebaraut, 1400 m a.s.l., 25.06.2012, *Beshko* (herbarium of the Nuratau Nature Reserve, TASH); Samarkand Region, Koshrabad District, southern slope of Nuratau Range, upper reaches of Ustuksay, 1736 m a.s.l., 40°31'02" N 66°35'44" E, 09.06.2013, *Beshko* (TASH). **I-4-b Aktau Range:** 8 km south-west of the village Chuya, 29.06.1937, *Demurina* 306 (TASH).

Trichanthesis Regel & Schmalh.

1223. *Trichanthesis karataviensis* Regel & Schmalh., Trudy Imp. S.-Peterburgsk. Bot. Sada 5: 617 (1877). Perennial, hemicryptophyte. Western Tien Shan, Western Pamir-Alay. Shrubland, Grassland, Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, Arbankul, between the village Sarymsakly and Tutli, 29.05.1940, *Gomolitsky, Dolgikh* 84 (TASH); the pass Avga, 13.06.1961, *Krasnopolin, Gyunina* (TASH); upper reaches of Ustuksay, 1500 m a.s.l., 21.06.1998, *Stefan Michel* 98038 (herbarium of the Nuratau Nature Reserve, TASH).

Tripolium L.

1224. *Tripolium pannonicum* (Jacq.) Dobrocz., Fl. URSS 11: 63 (1962). Annual, therophyte. Palearctic. Wetlands (inland), Artificial aquatic. Plain, foothills. Rare. Probably alien. **Occurrence records: I-4-a Nuratau Range:** Reported by Zakirov in in «Vegetation cover of Nuratau Mountains» (1969, p. 42) and «Botanical geography of low mountains of Kyzylkum and Nuratau Range» (1971, p. 76).

Vicoa Cass.

1225. *Vicoa albertoregelia* C.Winkl. (*Pentanema albertoregelia* (C.Winkl.) Gorschk.), Trudy Imp. S.-Peterburgsk. Bot. Sada 11: 277 (1890). Perennial, hemicryptophyte. Western Tien Shan, Western Pamir-Alay. Rocky areas. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** upper reaches of Asrafsay, 24.07.1990, *Beshko, Yakovenko* 90105 (herbarium of the Nuratau Nature Reserve); Bolosay, 15.07.2010, *Beshko* 10030 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, rocky massif Parrandoz, about 1700 m a.s.l., 27.07.2016, *Beshko* (www.plantarium.ru).

1226. *Vicoa krascheninnikovii* Kamelin (*Pentanema krascheninnikovii* (Kamelin) Czerep.), Novosti Sist. Vyssh. Rast. 13: 244 (1976). Perennial, hemicryptophyte. Aktau (endemic). Rocky areas. Montane zone. Rare. Native. UzbRDB 3. **I-4-b Aktau Range:** Petyrsay gorge, 14.07.1972, *Kamelin* 98a (LE).

Xanthium L.

1227. *Xanthium orientale* L., Sp. Pl., ed. 2: 1400 (1763). Annual, therophyte. Pluriregional (native to America). Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Rare. Alien. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, field station of nature reserve, 27.07.2007, *Beshko* 07072 (herbarium of the Nuratau Nature Reserve).

1228. *Xanthium spinosum* L., Sp. Pl.: 987 (1753). Annual, therophyte. Pluriregional (native to America). Desert, Forest, Shrubland, Grassland, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Alien. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, Novi Daroz, 27.07.2007, *Beshko* 07077 (herbarium of the Nuratau Nature Reserve); Hayatsay, surroundings of the village Upper Hayat, 40.5293° N, 66.77363° E, 27.08.2008, *Beshko* (www.plantarium.ru, www.inaturalist.org). **I-4-b Khobduntau Range:** Gallaaral District, surroundings of Marjonbulak, 39.919908° N, 67.514609° E, 02.07.2021, *Beshko* (www.inaturalist.org).

Xeranthemum L.

1229. *Xeranthemum longepapposum* Fisch. & C.A.Mey., Nouv. Mém. Soc. Imp. Naturalistes Moscou 4: 337 (1835). Annual, therophyte. Pontic, Caucasian Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Koytash, near the village Bogdon, 25.05.1914, *Mikhelson* (LE); south-east of the village Jangak, 30.06.1937, *Demurina* 345 (TASH); Nuratau Range, Farish District, 14.05.1941, *Momotov* (TASH); Tamerlane's Gate, Karakchisay, 05.06.1973, *Khamidov* (TASH); Hayatsay, 1991, *Maximova* 91026 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, Andebaraut, 1200 m a.s.l., 26.06.2012, *Beshko* (herbarium of the Nuratau Nature Reserve, TASH). **I-4-b Aktau Range:** mountains Aktau, Samarkand Region, 28.05.1963, *Khaydarov* 1517 (TASH); 30 km south-east of the town Nurata, 01.06.1963, *Pryakhin* (TASH); valley Chashma, 13.06.1963, *Khaydarov* 1720 (TASH). **I-4-b Karatau Range:** mountains Karatau, valley Bakachinak, 05.05.1955, *Momotov*, *Li* 136 (TASH). **I-4-b Karachatau Range:** northern slope, 2.5–3 km north-east of the village Yukary-Kariya, 06.07.1937, *Demurina* 598 (TASH); southern foothills, 2 km north-east of the village Yukary-Kariya, 06.07.1937, *Demurina* (TASH); southern foothills, 1 km north-east of the village Ingichka, 07.07.1937, *Demurina* (TASH). **I-4-b Khobduntau Range:** north of Khobduntau, 16.07.1914, *Mikhelson* (LE); plain between mountains Khobduntau and Karachatau, north of the village Gumsay, 26.06.1929, *Kudrjashev* (TASH).

Caprifoliaceae Juss.

Cephalaria Schrad.

1230. *Cephalaria syriaca* (L.) Schrad. ex Roem. & Schult., Syst. Veg. (ed. 15) 3(1): 45 (1818). Annual, therophyte. Irano-Turanian. Desert, Artificial terrestrial. Plain, foothills. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Koytash, 25.05.1914, *Mikhelson* (LE); Yangikishlak, near the office of Nuratau Nature Reserve, 23.06.1992, *Beshko* 92515 (herbarium of the Nuratau Nature Reserve).

Dipsacus L.

1231. *Dipsacus dipsacoides* (Kar. & Kir.) Botsch. (*Dipsacus azureus* Schrenk), Novosti Sist. Vyssh. Rast. 13: 250 (1976). Perennial, hemicryptophyte. Mountain Middle Asian, Dzungarian. Montane zone. Shrubland, Grassland. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, 16.08.1978, *Korshunov* 78033 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Karysay, Mt. Parrandoz, 16.08.1980, *Mukhina*, *Pjatina* (TASH); Asrafsay, 26.08.1984, *Petrochenko* 84065, 84066 (herbarium of the Nuratau Nature Reserve); Madjrumsay, Shokhchinon, 09.09.1992, *Beshko* 92543 (herbarium of the Nuratau Nature Reserve); Karysay, Pubsay, 15.07.2010, *Beshko* 10020 (herbarium of the Nuratau Nature Reserve, www.plantarium.ru, www.inaturalist.org).

1232. *Dipsacus laciniatus* L., Sp. Pl.: 97 (1753). Biennial, therophyte. Tethyan. Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Reported by Zakirov in «Vegetation cover of Nuratau Mountains» (1969, p. 39) and «Botanical geography of low mountains of Kyzylkum and Nuratau Range» (1971, p. 73).

Lomelosia Raf.

1233. *Lomelosia flavida* (Boiss. & Hausskn.) Soják (*Scabiosa flavida* Boiss. & Hausskn.), Sborn. Nár. Mus. v Praze, Řada B, Přír. Vědy 43(1): 58 (1987). Annual, therophyte. Caucasian, Irano-Turanian. Shrubland, Rocky areas. Foothills. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** reported in «Conspectus Florae Asiae Mediae», vol. 9, 1987, p. 347.

1234. *Lomelosia olivieri* (Coul.) Greuter & Burdet (*Scabiosa olivieri* Coul., *S. rhodantha* Kar. & Kir), Willdenowia 15(1): 75 (1985). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Urganchi – Ak-Chap, 01.05.1913, *Sprygin* (LE); Nurata District, clayey plain, 27.05.1951, *Novikova* (TASH); Yangikishlak, near the office of Nuratau Nature Reserve, 23.06.1992, *Beshko* 92453, 95454 (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** Nurata, 09.05.1913, *Korovin* 475 (TASH); mountains Aktau, 11.05.1941, *Zakirov*, *Niyazov* (LE, SAM); the town Nurata, 01.06.1963, *Pryakhin* (TASH). **I-4-b Khobduntau Range:** Kuropatkino railway station, 17.06.1913, *Mikhelson* (LE); plain between mountains Khobduntau and Karachatau, 07.06.1929, *Kudrjashev* (TASH); [same locality], 08.06.1929, *Kudrjashev* (TASH); [same locality], 14.06.1929, *Kudrjashev* (TASH).

1235. *Lomelosia songarica* (Schrenk) Soják (*Scabiosa songarica* Schrenk), Sborn. Nár. Muz. Praž, B 43(1): 58 (1987). Perennial, hemicryptophyte. Irano-Turanian. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Koshrabad, Mt. Mirishkar, 06.05.1913, *Korovin* (LE); Mts. Koytash, southern slope, 23.07.1931, *Kobranova* 76 (TASH); Koytash, southern slope, 28.06.1971, *Botschantzev*, *Kamelin* (LE); Hayatsay, Alichak, 25.06.2006, *Beshko* 06244 (herbarium of the Nuratau Nature Reserve).

Lonicera L.

1236. *Lonicera bracteolaris* Boiss. & Buhse, Nouv. Mém. Soc. Imp. Naturalistes Moscou 12: 106 (1860). Shrub, phanerophyte. Caucasian, Irano-Turanian. Shrubland, Grassland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, 20.08.1977, *Levichev* (TASH); Hayatsay, 10.08.1978, *Korshunov* 78034 (herbarium of the Nuratau Nature Reserve); Tykchasay, 21.04.1992, *Beshko* 92063 (herbarium of the Nuratau Nature Reserve); Hayatsay, Bedarak, 22.06.1992, *Beshko* 92478, 92479 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 31.05.2008, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Tykchasay, 11.05.2009, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, upper reaches of Hayatsay, Alichak, 27.06.2012, *Beshko* (TASH).

1237. *Lonicera nummulariifolia* Jaub. & Spach, Ill. Pl. Orient. 1: 133 (1843). Shrub, phanerophyte. Eastern Tethyan. Forest, Shrubland, Grassland, Rocky areas. Montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** pass near the sources of Guzhumay, 23.07.1937, *Demurina* 677, 738 (TASH); 2–3 km east-north-east of Ukhum Pass, 29.07.1937, *Demurina* 814 (TASH); Sob Pass, 04.08.1940, *Gomolitsky*, *Dolgikh* 271 (TASH); slopes of Koytash Mts., 28.05.1941, *Lepeschkin* 28 (TASH); Ustuksay, 12.07.1956, *Vvedensky* 102 (TASH); Hayatsay, 08.06.1969, *Mambetjumaev* 160 (TASH); Hayatsay, 30.06.1969, *Mambetjumaev* 126 (TASH); Hayatsay, 16.08.1978, *Korshunov* 78035 (herbarium of the Nuratau Nature Reserve); Hayatsay, 21.05.1981, *Mukhina* 81109 (herbarium of the Nuratau Nature Reserve); Karysay, 23.05.1984, *Petrochenko* 84063, 84064 (herbarium of the Nuratau Nature Reserve); Hayatsay, 30.05.1990, *Beshko*, *Yakovenko* 90097 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 22.05.2011, *Beshko* (www.plantarium.ru); upper reaches of Savryuksay, upstream of the village Koytash, 28.06.2019, *Beshko*, *Abduraimov* (plant community description); upper reaches of Osmansay, upstream of the village Baland Osman, 05.04.2019, 26.06.2019, 26.09.2019, 28.04.2020, 02.07.2020, 24.09.2020,

Beshko, Adilov (plant community description); upper reaches of Osmansay above the Zangori Olov summer camp, 28.04.2020, 02.07.2020, 24.09.2020, *Beshko, Shomurodov, Adilov, Abduraimov* (plant community description); Nuratau Nature Reserve, Hayatsay, 19.05.2021, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** northern slope of Aktau Range, mountains Bakhiltau, Charkhansay, 10.05.2013, *Beshko* (www.plantarium.ru). **I-4-b Khobduntau Range:** Bulungur District, Khobduntau, Ingichkasay, 1275 m a.s.l., 39°53'17.33" N, 67°18'07.41" E, *Beshko* (plant community description).

Valeriana L.

1238. *Valeriana chionophila* Popov & Kult., Trudy Turkestansk. Gosud. Univ. 4: 65 (1922). Perennial, hemicryptophyte. Western Tien Shan, Western Pamir-Alay. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau, 07.04.1915, *Spiridonov* (LE); mountains south-west of town Jizzakh, 04.05.1921, *Kultiasow 142, 143* (TASH); north slopes of Nuratau Range, near the top of Mt. Fazilmantau, 12.05.1956, *Korotkova 5136* (TASH); Hayatsay, Andebaraut, 16.04.1984, *Petrochenko 84078* (herbarium of the Nuratau Nature Reserve); Karysay, Pubsay, 17.04.1992, *Beshko 92036–039* (herbarium of the Nuratau Nature Reserve); Hayatsay, Andebaraut, 05.04.2008, *Beshko 08003* (herbarium of the Nuratau Nature Reserve); Navoi Region, Nurata District, Nuratau Range, near Sob Pass, 31.08.2018, *Beshko* (www.plantarium.ru).

1239. *Valeriana ficariifolia* Boiss., Fl. Orient. 3: 89 (1875). Perennial, hemicryptophyte. Irano-Turanian. Forest, Shrubland, Grassland, Rocky areas, Wetlands (inland). Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Koshrabad, Mt. Mirishkar, 05.05.1913, *Korovin 363*; Koblatysay, 26.04.1958, *Zaprometova* (TASH); south of the village Hayat, 30.04.1958, *Li, Zakirov 259* (TASH); Hayatsay gorge, 30.05.1969, *Mambetjumaev 112* (TASH); Tykchasay, 21.04.1992, *Beshko 92100, 92101* (herbarium of the Nuratau Nature Reserve); Karysay, Pubsay, 16.05.1993, *Beshko 93037, 93038* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Tykchasay, Parrandoz, 40.48716° N, 66.77686° E, 11.05.2009, *Beshko* (www.inaturalist.org); Hayatsay, 40.52369° N, 66.76552° E, 22.04.2010, (www.inaturalist.org).

Valerianella Mill.

1240. *Valerianella cymbaearpa* C.A.Mey., Verz. Pfl. Casp. Meer.: 49 (1831). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** reported in «Conspectus Florae Asiae Mediae», vol. 10, 1993, p. 74–75. **I-4-c North-Nuratau insular low mountains:** Pistaltau, 07.04.1911, *Dimo, Sprygin, Shulga 1180* (TASH).

1241. *Valerianella dactylophylla* Boiss. & Hohen., Diagn. Pl. Orient. Nov., ser. 1, 10: 75 (1849). Annual, therophyte. Irano-Turanian. Shrubland, Grassland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Bolosay, 08.05.1992, *Beshko 92522* (herbarium of the Nuratau Nature Reserve); Asrafsay, 04.06.1996, *Beshko 96113* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 23.04.2025, *Beshko* (TASH); Nuratau Nature Reserve, lower reaches of Gurdara, 24.04.2025, *Beshko, Khabibullaev* (TASH); [same locality], 24.04.2025, *Beshko* (www.plantarium.ru).

1242. *Valerianella leiocarpa* (K.Koch) Kuntze, in Acta Horti Petropol. 10: 195 (1887). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Rocky areas. Plain, foothills. Rare. Native. **Occurrence records: I-4-b Karatau Range:** Bukhara Region, Gizhduvan District, Nuratau mountains, western part of Karatau Range, about 370 m a.s.l., 21.04.2024, *Beshko* (www.plantarium.ru, www.inaturalist.org).

1243. *Valerianella muricata* (Steven ex M.Bieb. & Schult.) W.H.Baxter & Wooster, Suppl. Hort. Brit.: 654 (1850). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau**

Range: Reported by Zakirov in «Vegetation cover of Nuratau Mountains» (1969, p. 39) and «Botanical geography of low mountains of Kyzylkum and Nuratau Range» (1971, p. 73), as well as in «Conspectus Florae Asiae Mediae», vol. 10, 1993, p. 77.

1244. *Valerianella oxyrrhyncha* Fisch. & C.A.Mey. (*Valerianella diodon* Boiss.), Index Seminum Hort. Petropol. 4: 51 (1838). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Urganchi, *Iris* formation, 01.05.1913, *Korovin 1566, 1612* (TASH); Nuratau Range, Farish District, 02.05.1941, *Momotov* (TASH); Nuratau Range, Farish District, 03.05.1941, *Momotov* (TASH); surroundings of Kyzylcha State Farm, piedmont plain, 29.04.1952, *Zaprometova* (TASH); near the pass through Pistalisay, 07.05.1958, *Li, Zakirov 409* (TASH); Nuratau Nature Reserve, watershed crest between Hayatsay and Madjrumsay, about 1850 m a.s.l., 05.06.2022, *Beshko* (TASH). **I-4-b Aktau Range:** the town Nurata, sagebrush steppe 7 verst of well Pashat, 22.04.1913, *Korovin 7141d* (TASH); *Iris* steppe in surroundings of Nurata, 01.05.1913, *Korovin 165* (TASH); Nurata valley, surroundings of Koshrabad, 02.05.1913, *Korovin 220* (TASH); piedmont plain near district center Nurata, 22.04.1963, *Markova* (TASH).

1245. *Valerianella plagiostephana* Fisch. & C.A.Mey., Index Seminum Hort. Petropol. 2: 52 (1835). Annual, therophyte. Irano-Turanian. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Range, Farish District, 25.04.1941, *Momotov 45* (TASH); Hayatsay, near the village Upper Hayat, 14.05.2009, *Beshko* (herbarium of the Nuratau Nature Reserve, www.plantarium.ru); [same locality], 23.04.2025, *Beshko* (TASH).

1246. *Valerianella szovitsiana* Fisch. & C.A.Mey., Index Seminum Hort. Petropol. 3: 48 (1836). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** northern spurs of Nuratau Mts., north of the spring Yangaly, 10.05.1939, *Mikhaylova, Popova* (TASH); Nuratau Range, Farish District, 25.04.1941, *Momotov* (TASH); near the village Bogdon, 27.04.1941, *Bukasov* (TASH); Nuratau Range, Farish District, 10.05.1941, *Momotov* (TASH); Farish District, piedmont plain, 17.04.1952, *Novikova* (TASH); Gatchasay, 27.03.1958, *Zaprometova 143* (TASH); Ukansay, 02.04.1958, *Zaprometova* (TASH); Gatchasay, 29.04.1958, *Zaprometova 207* (TASH); 5 km south-east of the village Kokbulak, 23.05.1958, *Li, Zakirov 741* (TASH); mountains Nuratau, 01.04.1963, *Khaydarov 251* (TASH); mountains Nuratau, 04.05.1963, *Khaydarov 1170* (TASH); Hayatsay, Zamezhak, 03.05.2000, *Beshko 00003, 00020* (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** mountains in surroundings of Koshrabad, 02.05.1913, *Korovin 220* (TASH); Nurata valley, 4 km west of the village Koktepa, 12.05.1957, *Momotov 350* (TASH); south of district center Nurata, 22.05.1974, *Pratov* (TASH). **I-4-b Mt. Kokcha:** Kokcha, 26.04.1936, *Klimovskaya 74* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 07.04.1911, *Dimo, Sprygin, Shulga 1180* (TASH); Pistalitau, 08.04.1915, *Kultiasow* (TASH).

1247. *Valerianella tuberculata* Boiss., Diagn. Pl. Orient. Nov., ser. 1, 3: 59 (1843). Annual, therophyte. Irano-Turanian. Shrubland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, Zamezhak, 03.05.2000, *Beshko 00004* (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** Samarkand Region, mountains Aktau, 28.05.1963, *Khaydarov 1509* (TASH).

1248. *Valerianella turkestanica* Regel & Schmalh., Izv. Imp. Obshch. Lyubit. Estestv. Moskovsk. Univ. 34(2): 43 (1882). Annual, therophyte. Hyrcanian, Mountain Middle Asian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** northern spurs of Nuratau Mts., north of the spring Yangaly, 10.05.1939, *Mikhaylova, Popova* (TASH); mountains Nuratau, 16.04.1963, *Khaydarov 151*

(TASH). **I-4-b Aktau Range:** south of district center Nurata, 22.05.1974, *Pratov* (TASH). **I-4-b Khobduntau Range:** reported by Kudrjashev in “Vegetation of the Khobduntau and Karachatau Mountains” (1929, p. 66).

Apiaceae Lindl. (Umbelliferae Juss.)

Anthriscus Pers.

1249. *Anthriscus sylvestris* (L.) Hoffm. (*Anthriscus glacialis* Lipsky), Gen. Pl. Umbell.: 40 (1814). Perennial or biennial, monocarpic or polycarpic, hemicryptophyte. Palearctic. Wetlands (inland). Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Karysay, Pubsay, valley, 25.06.2010, *Beshko* (TASH).

Aphanopleura Boiss.

1250. *Aphanopleura capillifolia* (Regel & Schmalh.) Lipsky (*Psammogeton capillifolium* (Regel & Schmalh.) Mousavi, Mozaff. & Zarre), Bull. Acad. Imp. Sci. Saint-Petersbourg (ser. 5) 4(4): 379 (1898). Annual, therophyte. Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Abundant. Native. **Occurrence records: I-4-a Nuratau Range:** Gallaaral District, Karakuduk, 08.06.1934, *Rybakov* (TASH); Farish District, 15.05.1941, *Momotov* (TASH); Kyzylcha State Farm, 30.05.1956, *Zaprometova* (TASH); Koblatysay, 20.05.1957, *Zaprometova* 289 (TASH); Hayatsay, Novi Daroz, 23.05.2006, *Beshko* 06137, 06138 (herbarium of the Nuratau Nature Reserve); piedmont plain between the villages Uchma and Safarota, 28.04.2020, *Beshko, Shomurodov, Adilov* (plant community description); northern foothills of Nuratau, between the village Ilonchi and Osmansay, N 40°23'27" E 67°15'45", 27.04.2020, *Beshko, Shomurodov, Adilov* (plant community description); foothills of Nuratau between the villages Egiz-Bulak and Amandara, 27.04.2020, *Beshko, Shomurodov, Adilov, Abduraimov* (plant community description); piedmont plain of Nuratau Range 6 km east of the village Karatash, 27.04.2020, *Beshko, Shomurodov, Adilov, Abduraimov* (plant community description); piedmonts of Mt. Karatash, 28.04.2020, *Beshko, Shomurodov, Adilov* (plant community description). **I-4-b Aktau Range:** loess upland near Tosaryk, 15.05.1928, *Lepeschkin* (TASH); Khatyrchi District, 16.05.1928, *Lepeschkin* (TASH); near the village Dekhibaland, 28.05.1936, *Kharchenko* 1135 (TASH); Nurata, 17.04.1963, *Markova* (TASH); mountains Aktau, 29.05.1963, *Khaydarov* 1661 (TASH); valley Chashma, 13.06.1963, *Khaydarov* 1712 (TASH); near the village Gazgan, 16.06.1963, *Khaydarov* (TASH); Altynsay downstream of the village Langar, 28.04.1979, *Pimenov et al.* 144 (MW). **I-4-b Khobduntau Range:** Gallaaral District, experimental station of cereal crops, 13.05.1934, *Toporova* (TASH); [same locality], 25.05.1934, *Toporova* (TASH). **I-4-c North-Nuratau insular low mountains:** plain between mountains Koytash and Balyklitau, 23.05.1931, *Kobranova* 395 (TASH); northern piedmonts of Pistalitau, 24.04.2020, *Beshko, Shomurodov, Adilov* (plant community description); pass on the remnant range Pistalitau, 25.04.2020, *Beshko, Shomurodov, Adilov* (plant community description); 5 km north of town Band, between two dumps of the Uchkulach open pit, 26.04.2020, *Beshko, Shomurodov, Adilov* (plant community description); northern piedmonts of remnant mountains Uchkulach, 26.04.2020, *Beshko, Shomurodov, Adilov* (plant community description); surroundings of Uchkulach, piedmonts of remnant mountains Pistalitau, 25.04.2020, *Beshko, Shomurodov, Adilov* (plant community description); the crest of Egarbelistag, 1.5 km west of the Carbonat JSC quarry, 27.04.2020, *Beshko, Shomurodov, Adilov* (plant community description); plain between remnant mountains Egarbelistag and Pistalitau, between Karaman well and 5th farmstead of Bogdon State Farm, N 40°23'45" E 67°29'27", 28.04.2020, *Beshko, Shomurodov, Adilov* (plant community description); southern piedmonts of remnant mountains Pistalitau, about 7 km east of the villages Yangiabad and Uchkulach, 26.04.2020, *Beshko, Shomurodov, Adilov* (plant community description).

Apium L.

1251. *Apium graveolens* L., Sp. Pl.: 264 (1753). Annual, biennial, therophyte. European, Tethyan. Wetlands (inland), Artificial aquatic. Plain, foothills. Rare. Alien. **Occurrence records: I-4-a Nuratau Range:** Koytash, 02.07.1914, *Knorring* (LE).

Autumnalia Pimenov

1252. *Autumnalia innopinata* Pimenov, Bot. Zhurn. (Moscow & Leningrad) 74: 1495 (1989). Perennial, monocarpic, geophyte. Karatau (endemic). Shrubland, Rocky areas. Foothills. Rare. Native. UzBRDB 1. **Occurrence records: I-4-b Karatau Range:** Karakarga Pass, 21.04.1986, *Pimenov, Kljuykov, Vassiljeva* 96 (LE, MW); Karakargasay, 15.09.2012, *Tojibaev, Beshko, Batashov, Karimov* (TASH); southern slope of Karatau Range, near Karakarga Pass, 15.09.2012, *Beshko* (www.plantarium.ru); [same locality], 04.05.2013, *Beshko* (www.plantarium.ru); Karakargasay, 04.05.2013, *Tojibaev, Beshko, Batashov, Azimova* 1129 (TASH); dry valley 2.5 km west of Karakarga Pass, 04.05.2013, *Tojibaev, Beshko, Batashov, Azimova* (TASH); Karakargasay, descent from Karakarga Pass, 10.05.2013, *Beshko, Shomurodov* (TASH).

Berula W.D.J.Koch

1253. *Berula erecta* (Huds.) Coville, Contr. U.S. Natl. Herb. 4: 115 (1893). Perennial, polycarpic, hydrophyte. Circumtemperate. Wetlands (inland), Artificial aquatic. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, near the village Karatash, 25.05.1914, *Mikhelson* (LE); Hayatsay, field station of Nuratau Nature Reserve, 02.07.1994, *Beshko* 94100 (herbarium of the Nuratau Nature Reserve); [same locality], 21.06.2006, *Beshko* 06472 (herbarium of the Nuratau Nature Reserve); [same locality], 14.08.2012, *Beshko* (TASH). **I-4-b Aktau Range:** surroundings of Koshrabad, 26.04.1979, *Pimenov et al.* (MW).

Bupleurum L.

1254. *Bupleurum exaltatum* M.Bieb., Tabl. Prov. Mer Casp.: 113 (1798). Perennial, polycarpic, hemicryptophyte. European, Caucasian, Irano-Turanian. Shrubland, Grassland, Rocky areas. Montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Ukhum Pass, 28.07.1937, *Demurina* 761 (TASH); the village Farish, 12.06.1962, *Karimov* (TASH); upper reaches of Parrandozsay, the way to Ukhum Pass, 31.05.1964, *Zuckerwanik* 423 (TASH); Hayatsay, 12.07.1980, *Mukhina* 13 (MW); upper reaches of Madjrumsay, 12.07.1992, *Beshko* 92374, 92375 (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** Mt. Takhkutaу, 07.05.1913, *Korovin* 430, 467 (TASH); mountains Aktau, Tutaksay, 19.06.1951, *Neustrujeva-Knorring, Cvetkova* (LE); mountains Aktau, 29.05.1963, *Khaydarov* 1658 (TASH); upper reaches of Bitausay, 26.05.1964, *Zuckerwanik* 260 (TASH).

Carum L.

1255. *Carum carvi* L., Sp. Pl.: 263 (1753). Biennial, therophyte. Palearctic. Wetlands (inland). Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** upper reaches of Ustuksay, 1800 m a.s.l., 08.06.2013, *Beshko* (TASH); middle reaches of Ustuksay, 1500 m a.s.l., 10.06.2013, *Beshko* (TASH); surroundings of Fazilman Lake, 40°32'37" N 66°35'55" E, 1645 m a.s.l., 12.07.2019, *Beshko* (TASH).

Conioselinum Hoffm.

1256. *Conioselinum tataricum* Hoffm., Gen. Pl. Umbell., ed. 2: 185 (1816). Perennial, polycarpic, hemicryptophyte. Palearctic. Rocky areas, Wetlands (inland). Montane zone. Rare. Native. **Occurrence records: I-4-b Aktau Range:** mountains Aktau, Tutaksay, 19.06.1951, *Knorring, Cvetkova* (LE).

Conium L.

1257. *Conium maculatum* L., Sp. Pl.: 243 (1753). Biennial, therophyte. Circumtemperate. Wetlands (inland), Artificial aquatic. Foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** valley of Karatashsay, 17.05.1958, *Li, Zakirov* 654; Nuratau Nature Reserve, Karysay, middle reaches, 27.06.2011, *Beshko* (TASH); [same locality], 27.07.2011, *Beshko 2011/61* (TASH); northern slope of Talabaysay, 8 km south-west of Yangikishlak, 1100 m, 27.05.2012, *Beshko* (TASH); Uchmasay, 19.06.2016, *Beshko* (TASH). **I-4-b Khobduntau Range:** reported by Kudrjashev in “Vegetation of the Khobduntau and Karachatau Mountains” (1929, p. 64).

Cuminum L.

1258. *Cuminum setifolium* (Boiss.) Koso-Pol., Bull. Soc. Imp. Naturalistes Moscou, n.s. 29: 209 (1916). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Kyzylchali, 28.04.1913, *Korovin* (TASH); Urganchi, 01.05.1913, *Korovin* (TASH); plain north of the spring Yangaly, 10.05.1939, *Mikhaylova, Popova* (TASH); foothills of Nuratau Range, Farish District, Kirov State Farm, 24.05.1943, *Vernik, Raykova* 87 (TASH); Karasay, 30.05.1954, *Zaprometova* (TASH); near Kyzylcha State Farm, 28.05.1954, *Zaprometova* (TASH); 6 km from Kyzylcha State Farm, 27.05.1960, *Zaprometova, Nikerov* (TASH). **I-4-b Aktau Range:** surroundings of Koshrabad, 03.05.1913, *Korovin* (TASH); Dzhush – Koshrabad, 03.05.1913, *Korovin* (TASH); Nurata District, piedmont plain, 12.05.1951, *Novikova* (TASH).

Daucus L.

1259. *Daucus carota* L., Sp. Pl. 1: 242 (1753). Biennial, therophyte. European, Tethyan. Forest, Shrubland, Grassland, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, south-west of the village Savryuk, 20.07.1931, *Kobranova* 159 (TASH); near the village Savryukbazar, 25.07.1931, *Kobranova* 211 (TASH); surroundings of village Sentob, 23.06.1971, *Botschantzev, Kamelin* 396 (LE); Hayatsay, field station of Nuratau Nature Reserve, 07.07.2006, *Beshko* 06212, 06237 (herbarium of the Nuratau Nature Reserve); Jizzakh Region, Farish District, Hayatsay, 40.527142°N, 66.77492°E, 30.08.2020, *Beshko* (www.inaturalist.org).

Echinophora L.

1260. *Echinophora sibthorpiana* Guss., Fl. Sic. Prodr. Suppl. 1: 69 (1832). Perennial, monocarpic, hemicryptophyte. Pontic, Caucasian, Irano-Turanian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** 3 km south of the village Almaly, 08.08.1932, *Knorring, Emme* 136 (MW); Mts. Koytash, on the way from Yangikishlak to the Mt. Kaunchitau, 10.08.1934, *Botschantzev* (TASH); near the village Guran of Chakir-Chukur village council, 25.07.1940, *Gomolitsky, Dolgikh* 220; 7 km north-east of Yangikishlak, piedmont plain between Nuratau and Uchkulach, 7 km from Yangikishlak, 28.05.1958, *Li, Zakirov* 829 (TASH); northern slope of Nuratau Range, south of the village Deristan, 29.06.1973, *unknown collector* (TASH); Farish District, northern slope of Nuratau Range, foothills near Yangikishlak, 30.09.2012, *Beshko* (TASH); Jizzakh Region, Sharof Rashidov District, eastern part of the range Nuratau, about 770 m a.s.l., 15.07.2023, *Beshko* (www.plantarium.ru). **I-4-b Karachatau Range:** 3–5 km south-east of the village Kursafar, 07.07.1937, *Makarchuk* 574 (TASH). **I-4-b Khobduntau Range:** Gallaaral District, experimental station of cereal crops, 10.06.1934, *Toporova* (TASH); [same locality], 28.07.1934, *Toporova* (TASH); Gallaaral, 13.06.1951, *Galkina* 40 (TASH); Jizzakh Region, surroundings of Marjonbulak, 02.07.2021, *Beshko* (www.plantarium.ru).

Elaeosticta Fenzl

1261. *Elaeosticta allioides* (Regel & Schmalh.) Kljuykov, Pimenov & V.N.Tikhom., Byull. Moskovsk. Obshch. Isp. Prir., Otd. Biol., n.s., 81(6): 92 (1976). Perennial, monocarpic, geophyte. Irano-Turanian. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** south-eastern part of Koytash Mts., surroundings of town Jizzakh, 26.05.1931, *Kasimenko 1784* (TASH); Mts. Koytash, south-eastern slopes, Bereshek, 28.05.1940, *Gomolitsky, Dolgikh, Arkhireev 45* (TASH); foothills near district center Yangikishlak, 800 m a.s.l., 13.05.2012, *Beshko* (TASH); Nuratau Nature Reserve, upper reaches of Hayatsay, 1200 m a.s.l., 27.06.2012, *Beshko* (TASH). **I-4-b Aktau Range:** Koshrabad, 06.05.1913, *Korovin* (TASH); 2–3 km south of village Kokbulak, 01.07.1937, *Demurina 354, 369, 377* (TASH); 7–9 km south of the village Chuya, 01.07.1937, *Demurina 406* (TASH); Aktau, 17.05.1963, *Khaydarov 2* (TASH). **I-4-b Khobduntau Range:** reported by Kudrjashev in “Vegetation of the Khobduntau and Karachatau Mountains” (1929, p. 64).

1262. *Elaeosticta hirtula* (Regel & Schmalh.) Kljuykov, Pimenov & V.N.Tikhom., Byull. Moskovsk. Obshch. Isp. Prir., Otd. Biol., n.s., 81(6): 92 (1976). Perennial, monocarpic, geophyte. Western Tien Shan, Pamir-Alay. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** Mts. Koytash, near the village Bogdon, upper reaches of Osmansay, 07.08.1934, *Botschantzev 10* (TASH); Mts. Koytash, surroundings of Koytash, 06.1991, *Botschantzev, Kamelin 575* (LE).

1263. *Elaeosticta polycarpa* (Korovin) Kljuykov, Pimenov & V.N.Tikhom., Byull. Moskovsk. Obshch. Isp. Prir., Otd. Biol., n.s., 83(6): 106 (1978). Perennial, polycarpic. Hyrcanian, Mountain Middle Asian. Desert, Shrubland, Grassland, Rocky areas. Plain, foothills, montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** north of Nuratau Range, 26.05.1956, *Zaprometova* (TASH); Mts. Koytash, west of the village Jizzakhli, 28.05.1940, *Gomolitsky, Dolgikh 24* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistaltau, 30.07.1934, *Afanasyev 195* (LE); mountains Balyklitau, south of the village Chimkurgan, 30.05.1958, *Vvedensky, Nabiev* (TASH).

1264. *Elaeosticta vvedenskyi* (Kamelin) Kljuykov, Pimenov & V.N.Tikhom., Byull. Moskovsk. Obshch. Isp. Prir., Otd. Biol., n.s., 83(6): 106 (1978). Perennial, monocarpic, geophyte. Nuratau, Kyzylkum Relic Mountains (subendemic). Shrubland, Grassland, Rocky areas. Foothills, montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** Mts. Koytash, 5 km north-east of the village Narvan, 19.07.1937, *Demurina 624, 652* (TASH); Mts. Koytash, Guzhumsay Pass, 23.07.1937, *Demurina 670* (TASH); Mts. Koytash, northern slope upper reaches of Garashasay, 20.07.1937, *Demurina 639* (TASH); Karasay, 12.04.1957, *Zaprometova* (LE); Sharaussay, 28.06.1958, *Zaprometova* (LE); Mts. Koytash, village Koytash, 28.06.1971, *Botschantzev, Kamelin 538* (LE); Nuratau Nature Reserve, Karysay, Pubsay, plateau, 1500 m a.s.l., 15.07.2010, *Beshko* (TASH). **I-4-b Aktau Range:** 4–6 km south of the village Chuya, 29.06.1937, *Demurina 353* (TASH); 2–3 km south of village Kokbulak, 01.07.1937, *Demurina 389* (TASH); valley Ingichka, 22 km from town Nurata, 26.06.1971, *Botschantzev, Kamelin 465* (LE). **I-4-b Karachatau Range:** 3–5 km south-east of the village Kursafar, 07.07.1937, *Demurina 568* (TASH). **I-4-b Karatau Range:** Karakarga Pass, 24.09.2009, *Tojibaev, Kljuykov* (TASH).

Elwendia Boiss.

1265. *Elwendia capusii* (Franch.) Pimenov & Kljuykov (*Bunium capusii* (Franch.) Korovin), Plant. Syst. Evol. 299: 1002 (2013). Perennial, polycarpic, geophyte. Western Tien Shan, Western Pamir-Alay. Desert, Shrubland, Grassland, Rocky areas. Plain, foothills, montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** Nuratau, south of ruins Atakurgan, 15.04.1915, *Spiridonov* (LE); Gallaaral State Farm, Karakuduk, 03.06.1934, *Rybakov* (TASH); northern spurs of Nuratau Mts., surroundings of the well Kozybay, 05.05.1939, *Mikhaylova, Popova* (TASH); northern spurs of Nuratau Mts., plain north of the spring Yangaly, 10.05.1939, *Mikhaylova, Popova* (TASH);

between Mt. Piyazli and Balykli, 24.04.1941, *Momotov 36* (TASH); Farish District, 25.04.1941, *Momotov 44* (TASH); northern slope of Nuratau Range, Gatchasay, 16.05.1950, *Zaprometova 409* (LE); Nurata District, surroundings of Kyzylcha State Farm, 29.04.1952, *Zaprometova* (TASH); Nurata District, piedmont plain near Kyzylcha State Farm, 21.05.1957, *Zaprometova* (TASH); Farish District, 4 km north-east of the village Deristan, 28.04.1958, *Li, Zakirov 221* (TASH); 2 km north-west of the village Arvaten, 24.05.1958, *Li, Zakirov 753* (TASH); Gallaaral State Farm-2, 15.05.1967, *unknown collector* (TASH); piedmont plain between Nuratau Range and Pistalitau, between the village Osmansay and Uchkulach, 418 m a.s.l., 13.05.2012, *Beshko* (TASH). **I-4-b Karatau Range:** mountains Karatau, 20.05.1936, *Kharchenko 1113* (TASH). **I-4-c North-Nuratau insular low mountains:** between Kuzkuduk and Pistali-Mazar well, 15.04.1915, *Spiridonov* (LE); mountains Balyklitau, 10.04.1915, *Spiridonov* (LE); mountains Balyklitau, 25.05.1931, *Kobranova 449*; southern slopes of Mt. Khanbandytau, near the village Ment, 02.05.1941, *Momotov* (TASH); northern piedmonts of Pistalitau, 24.04.2020, *Beshko, Shomurodov, Adilov* (plant community description); 5 km north of town Band, between two dumps of the Uchkulach open pit, 26.04.2020, *Beshko, Shomurodov, Adilov* (plant community description); northern piedmonts of remnant mountains Uchkulach, 26.04.2020, *Beshko, Shomurodov, Adilov* (plant community description); plain between remnant mountains Egarbelistag and Pistalitau, between Karaman well and 5th farmstead of Bogdon State Farm, N 40°23'45" E 67°29'27", 28.04.2020, *Beshko, Shomurodov, Adilov* (plant community description); southern piedmonts of remnant mountains Pistalitau, about 7 km east of the villages Yangiabad and Uchkulach, 26.04.2020, *Beshko, Shomurodov, Adilov* (plant community description).

1266. *Elwendia chaerophylloides* (Regel & Schmalh.) Pimenov & Kljuykov (*Bunium chaerophylloides* (Regel & Schmalh.) Drude), Plant. Syst. Evol. 299(5): 1002 (2013). Perennial, polycarpic, geophyte. Hyrcanian, Mountain Middle Asian. Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Foothills, montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** Sentob, 28.04.1892, *Komarov* (LE); foothills of Nuratau Range, at the latitude of town Jizzakh, 16.05.1928, *Sovetkina 225* (TASH); gorge Koblatysay, 02.05.1943, *Djanaeva 121* (TASH); gorge Alichaksay near Yangi-Hayat, 26.05.1969, *Mambetjumaev 29* (TASH); Tykchasay, 21.04.1992, *Beshko 92105–92107* (herbarium of the Nuratau Nature Reserve); Sanguzarsay, 07.05.1992, *Beshko 92524* (herbarium of the Nuratau Nature Reserve); watershed between Hayatsay and Andygensay, 12.06.1992, *Beshko 92170* (herbarium of the Nuratau Nature Reserve); Hayatsay, 20.05.2006, *Beshko 06067–06069* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Gurdara, 03.05.2012, *Beshko* (TASH); piedmonts of Mt. Karatash, 05.04.2019, 28.04.2020, *Beshko, Shomurodov, Adilov* (plant community description); upper reaches of Osmansay above the Zangori Olov summer camp, 05.04.2019, 28.04.2020, *Beshko, Shomurodov, Adilov, Abduraimov* (plant community description); upper reaches of right tributary of Uchmasay, upstream of the village Jakak, 28.06.2019, 30.04.2020, *Beshko, Shomurodov, Adilov, Abduraimov* (plant community description); northern foothills of Nuratau between the villages Uchma and Lalyk, N 40°27'09" E 67°03'59", 28.03.2019, *Beshko, Shomurodov, Adilov, Abduraimov* (plant community description); upper reaches of Osmansay, upstream of the village Baland Osman, 05.04.2019, 02.07.2020, *Beshko, Adilov* (plant community description). **I-4-b Aktau Range:** Khatyrchi District, 05.05.1928, *Lepeschkin* (TASH). **I-4-c North-Nuratau insular low mountains:** northern piedmonts of Pistalitau, 30.06.2020, *Beshko, Shomurodov, Adilov* (plant community description); the crest of Egarbelistag, 1.5 km west of the Carbonat JSC quarry, 25.03.2019, 27.04.2020, *Beshko, Shomurodov, Adilov* (plant community description).

1267. *Elwendia intermedia* (Korovin) Pimenov & Kljuykov (*Bunium intermedium* Korovin), Plant. Syst. Evol. 299(5): 1003 (2013). Perennial, polycarpic, geophyte. Western Tien Shan, Western Pamir-Alay. Shrubland, Grassland, Rocky areas. Montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** Nuratau Nature Reserve, Tykchasay, Parrandoz, 07.05.2012, *Beshko* (TASH).

1268. *Elwendia persica* (Boiss.) Pimenov & Kljuykov (*Bunium persicum* (Boiss.) B. Fedtsch.), Plant. Syst. Evol. 299(5): 1004 (2013). Perennial, polycarpic, geophyte. Irano-Turanian. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Sentob, 0.5 south of the village Yukary-Kurgan, 11.05.1958, *Li, Zakirov 485, 514* (TASH); 1 km east of Ukhumsay, 12.05.1958, *Li, Zakirov 532* (TASH); 2–3 km north of the village Andygen, 05.06.1973, *unknown collector* (TASH); Hayatsay, Andebaraut, 22.05.2006, *Beshko 06317* (herbarium of the Nuratau Nature Reserve).

1269. *Elwendia salsa* (Korovin) Pimenov & Kljuykov (*Bunium salsum* Korovin), Plant. Syst. Evol. 299(5): 1004 (2013). Perennial, polycarpic, geophyte. Western Tien Shan, Western Pamir-Alay. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** foothills of Nuratau, near Yangikishlak, 800 m a.s.l., 13.05.2012. *Beshko* (TASH). **I-4-b Aktau Range:** mountains Aktau near the village Tikalik, 24.05.1925, *Popov 377* (TASH).

Eremodaucus Bunge

1270. *Eremodaucus lehmannii* Bunge, Index Seminum (TU, Dorpatensis) 1843: vi (1843). Annual, therophyte. Irano-Turanian. Desert, Shrubland, Grassland, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Koblatysay, 17.05.1957, *Zaprometova 184* (TASH); Kyzylcha State Farm, 21.05.1957, *Zaprometova* (TASH); Jizzakh Region, Farish District, surroundings of village Ukhum, 40.55149° N, 66.798759° E, 13.05.2024, *langli* (www.inaturalist.org); Samarkand Region, Koshrabad District, Ustuksay, 40.55431° N 66.56466° E, 06.07.2024, *Beshko* (www.inaturalist.org). **I-4-b Aktau Range:** Koshrabad, 06.05.1913, *Lipsky* (TASH); near the village Chashma, 06.06.1964, *Pryakhin* (TASH); vilayat Navoiy, 35 km NE from city Nurata (Nurota), Koshrabad town, 520 m, 40°42'57.00"N, 66°03'52.00"E, 16.05.2013, *Lyskov 220* (MW). **I-4-b Khobduntau Range:** Jizzakh Region, Gallaaral District, surroundings of the village Aktash, 40.07454° N, 67.30795° E, 18.10.2024, *astrapia* (www.inaturalist.org). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 25.05.1956, *Zaprometova* (TASH); piedmonts of Pistalitau, 03.06.2003, *Beshko 03052* (herbarium of the Nuratau Nature Reserve).

Eryngium L.

1271. *Eryngium caeruleum* M.Bieb. (*Eryngium caucasicum* Trautv.), Tabl. Prov. Mer Casp.: 112 (1798). Perennial, monocarpic, hemicryptophyte. Caucasian, Irano-Turanian. Artificial terrestrial. Plain, foothills. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Range, Farish District, 19.05.1941, *Momotov* (TASH). **Occurrence records: I-4-b Khobduntau Range:** near the village Khodzha-Kabud, 15.06.1929, *Kudrjashev* (TASH); Gallaaral District, surroundings of Marjonbulak, 39.92029° N, 67.512649° E, 02.07.2021, *Beshko* (www.inaturalist.org); Samarkand Region, Bulungur District, southern piedmonts of Mts. Khobduntau, lower reaches of Kattasay, about 800 m a.s.l., 15.07.2023, *Beshko* (www.plantarium.ru).

1272. *Eryngium macrocalyx* Schrenk, Enum. Pl. Nov. 1: 60 (1841). Perennial, monocarpic, hemicryptophyte. Mountain Middle Asian, Dzungarian. Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Reported by Zakirov in «Vegetation cover of Nuratau Mountains» (1969, p. 34), «Botanical geography of low mountains of Kyzylkum and Nuratau Range» (1971, p. 68), as well as in «Conspectus Florae Asiae Mediae», vol. 7, 1983, p. 178.

1273. *Eryngium octophyllum* Korovin (*Eryngium mirandum* Bobrov), Bot. Mater. Gerb. Inst. Bot. Zool. Akad. Nauk Uzbeksk. S.S.R. 8: 4 (1947). Perennial, polycarpic, hemicryptophyte. Western Pamir-Alay. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Occasional. Native. **Occurrence records:**

I-4-a Nuratau Range: Koytash Mts., pass near the sources of Guzhumsay, 23.07.1937, *Demurina* (TASH); Ukansay, 13.05.1951, *Zaprometova* 88 (TASH); upper reaches of Sentobsay, 13.07.1992, *Beshko* 92373 (herbarium of the Nuratau Nature Reserve); Talabaysay (left tributary of Kulbasay), 8 km south-west of Yangikishlak, 27.05.2012, *Beshko* (TASH); Nuratau Nature Reserve, surroundings of Mt. Hayat-bashi, 23.07.2014, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** Nurata, the village Pashat, mountains, 04.05.1913, *Korovin* 290 (TASH); 7–9 km south of village Chuya, 01.07.1937, *Demurina* 400 (TASH); mountains Aktau, Samarkand Region, 29.05.1963, *Khaydarov* 1568 (TASH); Aktau, east of the town Nurata, valley Ingichka, 13.07.1970, *Botschantzev* 155 (LE); Aktau Range, valley Petyr, 14.07.1972, *Kamelin* (LE); mountains Aktau between villages Chuya and Langar, 09.07.1975, *Pimenov*, *Kljuykov*, *Baranova* 731 (MW); northern slope of Aktau Range, west of the village Chuya, gorge Ashbarana, 28.04.1979, *Pimenov et al.* 115 (MW).

Falcaria Fabr.

1274. *Falcaria vulgaris* Bernh., Syst. Verz. (Bernhardi) 176 (1800). Biennial, perennial, monocarpic, hemicryptophyte. Euro-Siberian, Irano-Turanian. Forest, Grassland, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Rare. Native. **Occurrence records:** **I-4-a Nuratau Range:** town Jizzakh, garden, 25.05.1931, *Kasimenko* 1819 (TASH); Hayatsay, 22.05.2006, *Beshko* 06229 (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** between villages Chuya and Langar, 09.07.1975, *Pimenov et al.* 748 (LE).

Ferula L.

1275. *Ferula angreni* Korovin, Ill. Monogr. Ferula: 61 (1947). Perennial, polycarpic, geophyte. Western Tien Shan, Western Pamir-Alay. Forest, Shrubland, Grassland, Rocky areas. Montane zone. Frequent. Native. **Occurrence records:** **I-4-a Nuratau Range:** gorge Alichaksay, 26.05.1969, *Mambetjumaev* 39 (TASH); northern slope of Nuratau Range, the village Kuvakiya, Mt. Piyazli, 17.05.1971, *Pimenov*, *Pimenova*, *Baranova*, *Sdobnina* 293 (MW); surroundings of Koytash, 28.06.1971, *Botschantzev*, *Kamelin* 606 (LE); surroundings of Jizzakh, Sanzar river gorge, 17.05.1990, *Melibaev* (MW); Nuratau Nature Reserve, Madjrumsay, Fargun, 02.06.2000, *Beshko* (herbarium of the Nuratau Nature Reserve); Hayatsay, 29.04.2011, *Beshko* (www.plantarium.ru); upper reaches of Hayatsay, Alichak, 31.05.2012, *Beshko* (TASH); [same locality], 27.06.2012, *Beshko* (TASH); Hayatsay, 26.05.2017, *Beshko* (www.plantarium.ru).

1276. *Ferula clematidifolia* Koso-Pol., Bot. Mater. Gerb. Glavn. Bot. Sada R.S.F.S.R. 2: 64 (1921). Perennial, polycarpic, geophyte. Pamir-Alay. Montane zone. Rare. Native. **Occurrence records:** **I-4-b Khobduntau Range:** near the village Baztau, 16.06.1929, *Kudrjashev* (TASH).

1277. *Ferula diversivittata* Regel & Schmalh., Trudy Imp. S.-Peterburgsk. Bot. Sada 5: 593 (1877). Perennial, monocarpic, geophyte. Western Tien Shan, Pamir-Alay. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Occasional. Native. **Occurrence records:** **I-4-a Nuratau Range:** near Kyzylchali, 01.08.1932, *Knorring*, *Emme* 1213 (LE); Koytash, the village Guzhum, 04.07.1937, *Makarchuk* 520 (TASH); valley Mikhinsay, the village Yangikishlak, 22.07.1940, *Gomolitsky*, *Dolgikh* 186 (TASH); surroundings of the village Sentob, 24.06.1971, *Botschantzev*, *Kamelin* 447 (LE); near the village Kuvakiya, Mt. Piyazli, 17.07.1971, *Pimenov*, *Pimenova*, *Baranova*, *Sdobnina* 291 (VILR); Farish District, near the village Nurak, 27.04.2008, *Tillaev* (www.plantarium.ru); Talabaysay (left tributary of Kulbasay), 8 km south-west of Yangikishlak, 40°22'19" N, 67°05'17" E, 1075 m a.s.l., 27.05.2012, *Beshko* (TASH); Kulbasay, near the road to Saurbel Pass, 03.06.2021, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** mountains Aktau near the village Shamaly, 24.05.1925, *Popov* (TASH); northern slope of Aktau Range, 10.05.2013, *Beshko* (www.plantarium.ru).

1278. *Ferula dshizakensis* Korovin, Ill. Monogr. Ferula: 58 (1947). Perennial, polycarpic, geophyte. Nuratau, Kuhistan (subendemic). Shrubland, Grassland, Rocky areas. Foothills, montane zone.

Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Koshrabad, Mt. Mirishkar, 05.05.1913, *Korovin* (TASH); Farish District, 15.05.1941, *Momotov 114* (TASH); Sharaussay, 28.07.1958, *Zaprometova 121* (TASH); Saurbel Pass, 27.04.1958, *Li, Zakirov 113, 135* (TASH); the village Ustakhan, 25.05.1958, *Li, Zakirov 790* (TASH); the village Yukary Ukhum, near Ukhum Pass, 29.04.1958, *Li, Zakirov 246* (TASH); upper reaches of Ustuksay, 29.05.1964, *Zuckerwanik 375* (TASH); upper reaches of Parrandozsay, way to Ukhum Pass, 31.05.1964, *Zuckerwanik 421* (TASH); Ustuksay, 11.05.1956, *Korotkova 5087* (TASH); near the village Kuvakiya, Mt. Piyazli, 17.05.1971, *Pimenov, Pimenova, Baranova, Sdobnina* (MW, VILR); Nuratau Nature Reserve, watershed of Hayat and Tykchasay, 20.08.1977, *Levichev* (TASH); Mt. Zargar, 27.04.1979, *Pimenov et al. 79* (MW); Nuratau Nature Reserve, Gurdara, 03.05.2012, *Beshko* (TASH). **I-4-b Aktau Range:** Mt. Takhkutau, 07.05.1913, *Korovin* (TASH); 6–8 km south of Mt. Takhkutau, 29.06.1937, *Demurina 327* (TASH); 1 km north-east of the village Ingichka, 07.07.1937, *Demurina 549* (TASH); the spring Bitav, 18.04.1963, *Khaydarov 807* (TASH); near the village Langar, gorge Yangokly, 19–21.05.1941, *Zakirov, Niyazov* (TASH); the village Chuya, gorge Ashbarana, 28.04.1979, *Pimenov et al. 121* (MW). **I-4-b Karatau Range:** between Beshrabot and Dekhibaland, Karakarga Pass, 19.04.1986, *Pimenov, Kljuykov, Vassiljeva, Melibaev 98* (MW). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 07.04.1911, *Dimo, Sprygin, Shulga* (TASH); Pistalitau, 08.04.1911, *Dimo, Sprygin, Shulga 294* (LE).

1279. *Ferula foetida* (Bunge) Regel, Trudy Imp. S.-Peterburgsk. Bot. Sada 5: 592 (1877). Perennial, monocarpic, geophyte. Irano-Turanian. Desert, Shrubland, Grassland. Plain, foothills. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** near Kyzylcha, 01.08.1932, *Knorring, Emme 113* (MW); 1 km north of the village Madjrum, 28.07.1937, *Demurina 799* (TASH); Nurata District, Kyzylcha, 11.04.1952, *Zaprometova* (TASH); surroundings of the village Sentob, 15.06.1971, *Botschantzev, Kamelin 451* (LE); 35 km on the road Jizzakh-Farish, 15.04.1981, *Safraliev* (TASH); piedmont plain of Nuratau Range, 26.03.2011, *Davkaev* (www.plantarium.ru); Nuratau Nature Reserve, Madjrumsay, about 800 m a.s.l., 02.05.2011, *Beshko* (www.plantarium.ru); [same locality], about 700 m a.s.l., 05.05.2011, *Beshko 2011-004* (TASH); northern piedmont plain of Nuratau Range (Farish Steppe), 13.04.2014, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Madjrumsay, about 750 m a.s.l., 18.04.2019, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** north of the village Gazgan, 14.07.1937, *Mironov* (TASH). **I-4-b Khobduntau Range:** on the way to the village Gum, 14.05.1958, *Li, Zakirov 563* (TASH). **I-4-c North-Nuratau insular low mountains:** northern piedmonts of remnant mountains Uchkulach, 5–6 km east of the village Uzunkuduk, 280 m a.s.l. 26.03.2019, *Beshko* (www.plantarium.ru); remnant mountains Pistalitau, 25.04.2020, *Beshko* (www.plantarium.ru).

1280. *Ferula helenae* Rakhm. & Melibaev, Novosti Sist. Vyssh. Rast. 19: 117 (1982). Perennial, monocarpic, geophyte. North-Nuratau insular low mountains (endemic). Shrubland, Rocky areas. Foothills. Rare. Native. UzbRDB 2. **Occurrence records: I-4-c North-Nuratau insular low mountains:** Pistalitau, 08.04.1911, *Dimo, Sprygin, Shulga 294* (LE); montes Pistalitau, viciniis pagi Balykli, 18.04.1975, *Rachmankulov, Melibaev 1489* (TASH, holotype TASH002413, isotypes TASH002415–TASH002417); mountains Pistalitau, 22.04.1986, *Pimenov, Kljuykov, Vassiljeva, Melibaev 110* (MW); [same locality], 18.04.2012, *Batashov 34* (TASH).

1281. *Ferula kokanica* Regel & Schmalh., Trudy Imp. S.-Peterburgsk. Bot. Sada 5: 593 (1877). Perennial, monocarpic, geophyte. Western Tien Shan, Pamir-Alay. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, 28.05.1941, *Lepeschkin* (TASH); mountains Nuratau, Ustuksay, 12.07.1956, *Vvedensky 100* (TASH); Alichaksay, 26.05.1969, *Mambetjumaev 19* (TASH); Koytash, northern slope, 20.06.1971, *Botschantzev, Kamelin 226* (LE); southern slope of Mt. Zargar, 27.04.1979, *Pimenov et al. 101* (MW); Madjrumsay, Shokhchinon, 13.05.1994, *Beshko 94026* (herbarium of the Nuratau Nature Reserve); Hayatsay, 08.05.2014, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** top of Mt. Takhkutau,

07.05.1913, *Korovin 435* (TASH); valley Ingichka 22 km east of the town Nurata, 26.06.1971, *Botschantzev, Kamelin 457* (LE); the village Chuya, gorge Ashbarana, 28.04.1979, *Pimenov et al. 123* (MW). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 08.04.1915, *Kultiasow* (TASH).

1282. *Ferula kuhistanica* Korovin, Ill. Monogr. Ferula: 69 (1947). Perennial, monocarpic, geophyte. Western Pamir-Alay. Shrubland, Grassland. Montane zone. Rare. Native. **Occurrence records: I-4-b Khobduntau Range:** mountains near Kuropatkino railway station (Lalmikor), 27.05.1916, *Androssov* (TASH); Khobduntau Range, 09.07.1937, *Demurina 475* (TASH); Bulungur District, Khobduntau, Ingichkasay, 1275 m a.s.l., 39°53'17.33" N, 67°18'07.41" E, *Beshko* (plant community description).

1283. *Ferula kyzylkumica* Korovin, Fl. Uzbekist. 4: 490, 426 (1959). Perennial, polycarpic, geophyte. Kyzylkum Relic Mountains, Aktau (subendemic). Shrubland, Rocky areas. Foothills, montane zone. Rare. Native. UzbRDB 3. **Occurrence records: I-4-b Aktau Range:** near the pass Tikalik, village Sarygul, 12.05.1957, *Momotov 299* (TASH).

1284. *Ferula nuratavica* Pimenov, Byull. Moskovsk. Obshch. Isp. Prir., Otd. Biol., n.s., 83(4): 151 (1978). Perennial, polycarpic, geophyte. Aktau (endemic). Shrubland, Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-b Aktau Range:** montes meridionales Sogdiano-Transoxanae, ad abrupta calcarea montium Nuratau, loco Jang-ogly dicto, 08.06.1926, *Popov 325* (TASH, lectotype TASH002337); mountains Aktau, the village Hojakolishan, gorge Yangokly, 08.06.1926, *Popov* (MW, MHA, TASH); valley Ingichka, 26.06.1971, *Botschantzev, Kamelin 458* (LE); between Chuya and Langar, 19.07.1975, *Pimenov, Kljuykov, Baranova, Vassiljeva 740* (MW); the village Chuya, gorge Ashbarana, 28.04.1979, *Pimenov et al. 125* (MW, MHA).

1285. *Ferula ovina* Boiss., Exsicc. (Pl. Pers. Austr.) 1845: n.° 283 (1845). Perennial, polycarpic, geophyte. Irano-Turanian. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Abundant. Native. **Occurrence records: I-4-a Nuratau Range:** Ukansay, 1951, *Novikova* (TASH); Farish District, 06.05.1941, *Momotov 119* (TASH); Kyzylcha State Farm, 29.05.1951, *Novikova* (TASH); Tamerlane's Gate, Jizzakh mountains, 10.05.1954, *Krasnopolin, Ernazarov, Petrova 825* (TASH); Gatchasay, 08.04.1958, *Zaprometova* (TASH); Kyzylcha State Farm, 14.04.1958, *Galkina* (TASH); gorge Alichaksay, 26.05.1969, *Mambetjumaev 13* (TASH); near the village Kuvakiya, Mt. Piyazli, 30.05.1976, *Pimenov et al. 203* (MW); Bolosay, 08.05.1992, *Beshko 92517* (herbarium of the Nuratau Nature Reserve); Madjrumsey, Fargun, 02.06.2000, *Beshko* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Gurdara, 03.05.2012, *Beshko* (TASH); Nuratau Nature Reserve, watershed between Hayatsay and Andygensay, 1718 m a.s.l., 16.06.2019, *Beshko* (TASH); watershed crest between Hayatsay and Madjrumsey, 05.06.2022, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** the village Kushtamgaly, 13.06.1980, *Rakhmankulov, Melibaev 1821* (TASH). **I-4-b Khobduntau Range:** reported by Kudrjashev in "Vegetation of the Khobduntau and Karachatau Mountains" (1929, p. 64). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 25.05.1956, *Zaprometova* (TASH); mountains Pistalitau, Farish District, surroundings of Kirov State Farm 09.04.1975, *Rakhmankulov, Melibaev* (TASH).

1286. *Ferula penninervis* Regel & Schmalh., Trudy Imp. S.-Peterburgsk. Bot. Sada 5: 591 (1877). Perennial, polycarpic, geophyte. Mountain Middle Asian. Shrubland, Grassland, Rocky areas. Montane zone. Abundant. Native. **Occurrence records: I-4-a Nuratau Range:** Ukhum Pass, 29.07.1937, *Demurina 803* (TASH); village Sentob, 27.07.1937, *Demurina 797* (TASH); upper reaches of Sentobsay, 02.08.1940, *Gomolitsky, Dolgikh 256* (TASH); Ukansay, 13.05.1951, *Zaprometova 87* (TASH); Ustuksay, 12.07.1956, *Vvedensky 95* (TASH); 6 km north of the well Ernazar, 13.05.1957, *Momotov, Li 382* (TASH); Hayatsay gorge, 01.06.1959, *Mambetjumaev 140* (TASH); gorge Gurdara, near the village Sarymsak, 23.06.1971, *Botschantzev, Kamelin 315* (LE); near the village Sentob, 24.06.1971, *Botschantzev, Kamelin 422* (LE); Koytash, 20.06.1971, *Botschantzev, Kamelin 216* (LE); Mts. Koytash, northern slope, 06.06.1978, *Pimenov, Efremov, Karpova 264* (MW); Nuratau Nature

Reserve, Hayatsay, 1300 m, 30.06.1978, *Korshunov* (MW, MHA); Hayatsay, Bedarak, 22.06.1992, *Beshko* 92364 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Tykchasay, 21.06.2011, *Beshko* (www.plantarium.ru); Hayatsay, 30.05.2016, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** valley Kokbulak, 01.07.1937, *Demurina* 421 (TASH); Aktau, 1964, *Khaydarov* (TASH); valley Ingichka, 26.06.1971, *Botschantzev*, *Kamelin* 471 (LE).

1287. *Ferula samarkandica* Korovin, Ill. Monogr. Ferula: 44 (1947). Perennial, monocarpic, geophyte. Mountain Middle Asian. Shrubland, Grassland, Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** surroundings of Koytash, 20.06.1971, *Botschantzev*, *Kamelin* (LE). **I-4-c North-Nuratau insular low mountains:** mountains Balyklitau, the village Chimbkurgan, 30.05.1958, *Vvedensky*, *Nabiev* (TASH).

1288. *Ferula schtschurowskiana* Regel & Schmalh., Izv. Imp. Obshch. Lyubit. Estestv. Moskovsk. Univ. 34(2): 34 (1882). Perennial, monocarpic, geophyte. Middle Asian. Desert, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** near the village Kuvakiya, stony piedmonts, 15.09.1932, *Knorring*, *Emme* 188 (MW); Sharaussay, 28.05.1956, *Zaprometova* (TASH); Mt. Piyazli near the village Kuvakiya, 19.07.1975, *Pimenov*, *Kljuykov*, *Baranova*, *Vassiljeva* 757 (MW). **I-4-b Aktau Range:** valley Ingichka, 26.06.1971, *Botschantzev*, *Kamelin* 486 (LE); valley Petyr, 14.07.1972, *Kamelin* (LE). **I-4-b Khobduntau Range:** Rostovtsevo station (Bulungur), the village Mikhailovsky, 20.07.1913, *Budogossky* (LE).

1289. *Ferula sumbul* (Kauffm.) Hook.f. (*Ferula moschata* (H. Reinsch) Koso-Pol.), Bot. Mag. 101: t. 6196 (1875). Perennial, polycarpic, geophyte. Pamir-Alay. Forest, Shrubland, Rocky areas. Montane zone. Rare. Native. UzbRDB 3. **Occurrence records: I-4-a Nuratau Range:** gorge Gurdara, near the village Sarymsak, 23.06.1971, *Botschantzev*, *Kamelin* 359 (LE); Mt. Beshbarmak, 20.06.1992, *Beshko* 92287 (herbarium of the Nuratau Nature Reserve); Hayatsay, 20.06.2009, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, Hayatsay, 1200 m a.s.l., 04.05.2012, *Beshko* (TASH); Nuratau Nature Reserve, upper reaches of Hayatsay, Alichak, 1600 m a.s.l., 27.06.2012, *Beshko* (TASH); Nuratau Nature Reserve, surroundings of rocky massif Parrandoz, 20.05.2023, *Karimov* (www.plantarium.ru); Nuratau Nature Reserve, surroundings of rocky massif Parrandoz, 23.05.2023, *Turdiyev* (www.plantarium.ru).

1290. *Ferula varia* (Schrenk) Trautv., Bull. Soc. Imp. Naturalistes Moscou. Perennial, monocarpic, geophyte. Middle Asian. Desert, Shrubland, Grassland, Rocky areas. Plain, foothills. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Pistalisay, 19.03.2013, *Tojibaev*, *Shomurodov*, *Beshko*, *Batashov* (TASH). **I-4-b Aktau Range:** mountain slopes between Nurata and well Pashat, 24.04.1913, *Korovin* 52 (TASH). **I-4-c North-Nuratau insular low mountains:** Pistalitau, 07.04.1911, *Dimo*, *Sprygin*, *Shulga* 299 (LE); Pistalitau, 01.04.1915, *Kultiasow* (LE).

Galagania Lipsky

1291. *Galagania fragrantissima* Lipsky, Trudy Imp. S.-Peterburgsk. Bot. Sada 18: 63 (1900). Perennial, monocarpic, geophyte. Western Tien Shan, Western Pamir-Alay. Shrubland, Grassland, Rocky areas, Artificial terrestrial. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, 23.07.1931, *Kobranova* 45, 77 (TASH); 3–4 km south-east of the village Sulukli, 02.08.1937, *Demurina* 816 (TASH); Mt. Piyazli, 24.04.1941, *Bukasov* (TASH); surroundings of the village Deristan, 21.06.1971, *Botschantzev*, *Kamelin* 276 (LE); northern slope of Koytash Range, 20.06.1971, *Botschantzev*, *Kamelin* 239 (LE); gorge Gurdara, surroundings of the village Sarymsak, 23.06.1971, *Botschantzev*, *Kamelin* 375 (LE). **I-4-b Aktau Range:** mountains Bakhiltau, 15 km from the town Nurata, 07.09.2009, *Tojibaev* (TASH). **I-4-b Karachatau Range:** 3–5 km south-east of the village Kursafar, 07.07.1937, *Makarchuk* 568 (TASH).

1292. *Galagania neglecta* M.G.Vassiljeva & Kljuykov, Novosti Sist. Vyssh. Rast. 20: 158 (1983). Perennial, monocarpic, geophyte. Western Pamir-Alay. Shrubland, Grassland, Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Nature Reserve, Kachak, Sharaut, 04.07.1981, *Mukhina* (MW).

1293. *Galagania tenuisecta* (Regel & Schmalh.) M.G.Vassiljeva & Pimenov, Opred. Rast. Sred. Azii 7: 223 (1983). Perennial, monocarpic, geophyte. Middle Asian. Shrubland, Grassland, Rocky areas, Artificial terrestrial. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** northern slopes of Nuratau Mts., 23.04.1913, *Korovin* 25 (TASH); south-eastern slope of Nuratau Mts., 10.05.1915, *Spiridonov* (LE); Farish District, 14.05.1941, *Momotov* (TASH); [same locality], 23.05.1941, *Momotov* (TASH); Nuratau Range, Farish District, 29.04.1941, *Bukasov* (TASH). **I-4-b Aktau Range:** Dzhush – Koshrabad, *Iris* steppe, 03.05.1913, *Korovin* 241, 259 (TASH); mountains Bakhiltai, 15.04.1963, *Khaydarov* 370 (TASH); Nurata District, south of Bakhiltai Range, 05.06.1964, *Pryakhin* (LE). **I-4-b Karatau Range:** Sarmysh, 05.06.1967, *students* 182 (TASH).

Helosciadium W.D.J.Koch

1294. *Helosciadium nodiflorum* (L.) W.D.J.Koch (*Apium nodiflorum* (L.) Lag.), Nova Acta Phys.-Med. Acad. Caes. Leop.-Carol. Nat. Cur. 12(1): 126 (1824). Perennial, polycarpic, hydrophyte. European, Tethyan. Wetlands (inland). Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Koytash, northern slope, 28.06.1971, *Botschantzev, Kamelin* (LE); Jizzakh Region, Farish District, Hayatsay, 40.527062° N, 66.774965° E, 15.06.2014, *Beshko* (www.inaturalist.org); Temirqovuqsay, 40°38'57" N 66°22'38" E, 11.07.2019, *Beshko* (TASH); Jizzakh Region, Farish District, Madjrumsay, 40.574453° N, 66.719866° E, 06.06.2022, *Beshko* (www.inaturalist.org); Nuratau Nature Reserve, lower reaches of Madjrumsay, 16.09.2023, *Beshko* (TASH); Hayatsay, village Upper Hayat, field station of Nuratau Nature Reserve, about 950 m a.s.l., 17.09.2023, *Beshko* (www.plantarium.ru, TASH). **I-4-b Aktau Range:** between villages Chuya and Langar, 19.07.1975, *Pimenov et al.* 747 (MW); surroundings of Koshrabad, 26.04.1979, *Pimenov et al.* (MW).

Heracleum L.

1295. *Heracleum lehmannianum* Bunge, Index Seminum (TU, Dorpatensis) 1849: 2 (1850). Perennial, monocarpic, hemicryptophyte. Mountain Middle Asian. Wetlands (inland). Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Hayatsay, 1300 m a.s.l., 16.06.1978, *Korshunov* 68 (MW); Nuratau Nature Reserve, Alichaksay, 10.08.1980, *Mukhina* (MW, MHA); Hayatsay, 07.06.2006, *Beshko* 06182 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Hayatsay, 02.06.2013, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, upper reaches of Hayatsay, 27.05.2023, *Beshko* (www.plantarium.ru).

Hyalolaena Bunge

1296. *Hyalolaena jaxartica* Bunge (*Hyalolaena depauperata* Korovin), Beitr. Fl. Russl.: 128 (1852). Perennial, monocarpic, geophyte. Middle Asian. Desert, Shrubland, Grassland, Rocky areas. Plain, foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Reported by Zakirov in «Vegetation cover of Nuratau Mountains» (1969, p. 34) and «Botanical geography of low mountains of Kyzylkum and Nuratau Range» (1971, p. 68), as well as in «Conspectus Florae Asiae Mediae», vol. 7, 1983, p. 225. **I-4-b Aktau Range:** mountain slopes between Nurata and well Pashat, 24.04.1913, *Korovin* (TASH). **I-4-c North-Nuratau insular low mountains:** piedmonts of Pistalitai, 03.06.2003, *Beshko* 03053 (herbarium of the Nuratau Nature Reserve).

Korshinskya Lipsky

1297. *Korshinskia olgae* Lipsky, Trudy Imp. S.-Peterburgsk. Bot. Sada 18(1): 59 (1900). Perennial, monocarpic, geophyte. Western Pamir-Alay. Shrubland, Grassland, Rocky areas. Montane zone. Rare.

Native. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, 28.05.1941, *Lepeschkin* (TASH); Kyzylcha State Farm, 15 km north-east of the village Gilagan, foothills, 27.05.1963, *Makarchuk* (TASH); near the village Kuvakiya, Mt. Piyazli, 17.05.1971, *Pimenov et al.* 294 (VILR, MW); Jizzakh Region, Gallaaral, 14.05.1973, *Pimenov* 141 (MW); Nuratau Nature Reserve, Bolosay, 30.06.1992, *Beshko* 92495 (herbarium of the Nuratau Nature Reserve).

Kozlovina Lipsky

1298. *Kozlovina paleacea* (Regel & Schmalh.) Lipsky, Acta Horti Petropolit. 23(1): 147 (1904). Perennial, monocarpic, hemicryptophyte. Hyrcanian, Mountain Middle Asian. Shrubland, Grassland, Artificial terrestrial. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Mt. Piyazli, 13.05.1971, *Pimenov* (MW). **I-4-b Aktau Range:** between Yarbash and Dzhasman, 01.05.1869, *Fedtschenko* (LE); mountain slopes between Nurata and well Pashat, 24.04.1913, *Korovin* (TASH); Khanbandy – Chuya, 02.05.1913, *Korovin* (TASH); mountains Aktau, 28.05.1951, *Neustrueva, Cvetkova* 47 (LE).

Mediasia Pimenov

1299. *Mediasia macrophylla* (Regel & Schmalh.) Pimenov, Novosti Sist. Vyssh. Rast. 11: 255 (1975). Perennial, polycarpic, hemicryptophyte. Western Tien Shan, Pamir-Alay. Shrubland, Grassland, Rocky areas. Montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Mts. Koytash, 28.05.1941, *Lepeschkin* (TASH); Gurdara, 23.06.1971, *Botschantzev, Kamelin* (LE); Koytash, northern slope, 28.06.1971, *Botschantzev, Kamelin* (LE); Nuratau Nature Reserve, Hayatsay, 16.08.1978, *Korshunov* (MW); Hayatsay, 10.08.1980, *Mukhina* 80031–80033 (herbarium of the Nuratau Nature Reserve); Asrafsay, 21.07.1983, *Petrochenko* 83067 (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Bolosay, 01.07.2008, *Beshko* (www.plantarium.ru); Nuratau Nature Reserve, watershed of Hayatsay and Madjrumsay, 26.07.2012, *Beshko* (TASH); Nuratau Nature Reserve, Tykchasay, Parrandoz, 14.08.2012, *Beshko* (TASH); Nuratau Nature Reserve, rocky massif Parrandoz, 27.06.2016, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** 15 km east of the village Tikanli, gorge, 08.07.1937, *Knorring, Emme* 44 (MW).

Myrrhoides Heist.

1300. *Myrrhoides nodosa* (L.) Cannon (*Physocaulis nodosus* (L.) W.D.J.Koch), Feddes Repert. 79(1–2): 65 (1968). Annual, therophyte. Tethyan. Forest, Shrubland, Rocky areas, Wetlands (inland). Foothills, montane zone. **Occurrence records: I-4-a Nuratau Range:** Nuratau Nature Reserve, Gurdara, 03.05.2012, *Beshko* (TASH); [same locality], 04.04.2022, *Beshko* (TASH); Nuratau Nature Reserve, lower reaches of Gurdara, 24.04.2025, *Beshko, Khabibullaev* (TASH); [same locality], 24.04.2025, *Beshko* (www.plantarium.ru).

Oedibasis Koso.-Pol.

1301. *Oedibasis apiculata* (Kar. & Kir.) Koso.-Pol., Bull. Soc. Imp. Naturalistes Moscou 29: 175 (1916). Perennial, monocarpic, geophyte. Middle Asian. Shrubland, Grassland, Rocky areas, Artificial terrestrial. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Nurata State Farm, 17.04.1943, *Djanaeva* 70 (TASH).

1302. *Oedibasis chaerophylloides* (Regel & Schmalh.) Korovin (*Oedibasis tamerlanii* (Lipsky) Korovin ex Nevski), Byull. Sredne-Aziatsk. Gosud. Univ. 14(Suppl.): 14 (1926). Perennial, monocarpic, geophyte. Western Tien Shan, Pamir-Alay. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** angustis Tamerlan, inter Dzhisak et Yany-kurgan, 19.05.1882, *A.Regel* (LE00051592); near the village Bogdon, 07.08.1934, *Botschantzev* (TASH); Arbankul, between the villages Sarymsakli and Tutli, 29.05.1940, *Gomolitsky, Dolgikh* 88 (TASH); Farish District, 14.05.1941, *Momotov* (TASH); Farish District,

20.05.1941, *Momotov* (TASH); Mts. Koytash, 28.05.1941, *Lepeschkin* (TASH); Gatchasay, 31.05.1954, *Zaprometova* 126 (TASH); Ustuksay, 17.05.1956, *Korotkova* 5170 (TASH); Ustuksay, 13.07.1956, *Vvedensky* 113 (TASH); Koblatysay, 09.06.1957, *Zaprometova* (TASH); Koblatysay, 13.05.1958, *Zaprometova* (TASH); surroundings of village Sentob, 11.05.1958, *Li, Zakirov* 415 (TASH); 5 km north-east of the village Narvan, 21.05.1958, *Li, Zakirov* 693 (TASH); Nuratau mountains, 28.05.1963, *Khaydarov* 1490 (TASH); Mts. Koytash, 12.07.1972, *Kamelin* (LE); Mt. Piyazli, 30.5.1976, *Pimenov, Kljuykov, Boryaev, Vassiljeva* 267 (MW); southern slope of Mt. Zargar, 26.04.1979, *Pimenov et al.* 104 (MW); Nuratau Nature Reserve, Kachak, 15.06.1981, *Mukhina* (MW). **I-4-b Aktau Range:** Tikalik Pass, 1951, *Neustrueva et al.* (LE); the spring Bitav, 18.04.1963, *Khaydarov* 849 (TASH); Bakhiltai, 23.04.1964, *Pryakhin* (TASH, LE); sources of the river Bitau, 27.05.1964, *Zuckerwanik* 291 (TASH); valley Ingichka 22 km from town Nurata. 26.06.1971, *Botschantzev, Kamelin* (LE); between Kattakurgan and Ingichka, 12.05.1975, *Botschantzev* (LE); mountains Aktau near the village Shamaly, 24.05.1925, *Popov* 398 (TASH). **I-4-b Karatau Range:** between Beshrabot and Dekhibaland, Karakarga Pass, 21.04.1986, *Pimenov et al.* 95 (MW); Karakarga Pass, 24.09.2009, *Tojibaev* (TASH).

Pimpinella L.

1303. *Pimpinella peregrina* L., Sp. Pl.: 264 (1753). Biennial, therophyte. Tethyan. Wetlands (inland). Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** upper reaches of Madjrumsay, Bedar, 30.06.2011, *Beshko* 011069, 011070 (TASH, herbarium of the Nuratau Nature Reserve, www.plantarium.ru, www.inaturalist.org).

Prangos Lindl.

1304. *Prangos didyma* (Regel) Pimenov & V.N.Tikhom., S.K.Cherepanov, Sosud. Rast. SSSR: 28 (1981). Perennial, monocarpic, hemicryptophyte. Turanian. Desert. Plain, foothills. Rare. Native. **Occurrence records: I-4-c North-Nuratau insular low mountains:** between Pistalitau and lake Tuzkan, 08.04.1911, *Dimo, Sprygin, Shulga* 321 (TASH).

1305. *Prangos fedtschenkoi* (Regel & Schmalh.) Korovin, Bot. Mater. Gerb. Inst. Bot. Zool. Akad. Nauk Uzbeksk. S.S.R. 12: 24 (1948). Perennial, monocarpic, hemicryptophyte. Western Tien Shan, Western Pamir-Alay. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** foothills of Nuratau Range, on the latitude of town Jizzakh, 16.05.1928, *Sovetkina* 215 (TASH); south-eastern part of Koytash Mts., 26.05.1931, *Kasimenko* 1820 (TASH); surroundings of Bogdon (Farish), 04.06.2009, *Beshko* (www.plantarium.ru); Ilonchisay, 26.06.2019, *Beshko* (www.plantarium.ru, www.inaturalist.org); [same locality], 02.07.2020, *Beshko* (www.plantarium.ru). **I-4-b Aktau Range:** Nurata, 1913, *Korovin* (TASH); mountains Aktau near the village Shamaly, 24.05.1925, *Popov* 383 (TASH).

1306. *Prangos ornata* Kuzmina, Bot. Zhurn. 47: 252 (1962). Perennial, polycarpic, hemicryptophyte. Mountain Middle Asian. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** the village Kulbasay, 27.06.1973, *unknown collector* (TASH); Hayatsay, Andebaraut, 22.05.2006, *Beshko* 06319 (herbarium of the Nuratau Nature Reserve); Hayatsay, Novi Khushk, 07.06.2006, *Beshko* 06188, 06189 (herbarium of the Nuratau Nature Reserve). **I-4-b Aktau Range:** Aktau Range, west of the village Chuya, gorge Ashbarana, 28.04.1979, *Pimenov et al.* 124 (MW). **I-4-b Khobduntau Range:** reported by Kudrjashev in "Vegetation of the Khobduntau and Karachatau Mountains" (1929, p. 64).

1307. *Prangos pabularia* Lindl., Quart. J. Sci. Lit. Arts 10: 7 (1825). Perennial, polycarpic, hemicryptophyte. Irano-Turanian, Himalayan. Shrubland, Grassland, Rocky areas. Montane zone. Abundant. Native. **Occurrence records: I-4-a Nuratau Range:** upper reaches of Sentobsay, 10.05.1958, *Li, Zakirov* 472 (TASH); 5 km south-east of the village Upper Ukhum, near Ukhum Pass,

29.04.1958, *Li, Zakirov 247* (TASH); southern slope of Mt. Zargar, 27.04.1979, *Pimenov et al. 96* (MW); Hayatsay, 30.05.2006, *Beshko* (www.plantarium.ru).

Scandix L.

1308. *Scandix pecten-veneris* L., Sp. Pl. 1: 256 (1753). Annual, therophyte. European, Tethyan. Forest, Shrubland, Grassland, Rocky areas, Wetlands (inland), Artificial aquatic, Artificial terrestrial. Plain, foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Koytash, southern slope, 28.06.1971, *Botschantzev, Kamelin* (LE); Hayatsay, Bedarak, 22.06.1992, *Beshko 92367, 92368, 92369, 92370* (herbarium of the Nuratau Nature Reserve); Hayatsay, field station of nature reserve, 24.04.2005, *Beshko 05010, 05011, 05012, 05013, 05014* (herbarium of the Nuratau Nature Reserve); Nuratau Nature Reserve, Gurdara, 03.05.2012, *Beshko* (TASH); Nuratau Nature Reserve, Madjrumsay, 18.04.2019, *Beshko* (www.plantarium.ru); upper reaches of Osmansay, upstream of the village Baland Osman, 26.06.2019, *Beshko, Adilov* (plant community description); surroundings of village Ukhum, Ukhumsay, 05.05.2020, *Akbarov, Turdiev, Juramurodov 0552020049* (TASH).

1309. *Scandix stellata* Banks & Sol., Nat. Hist. Aleppo, ed. 2, 2: 249 (1794). Annual, therophyte. Tethyan. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Karysay, 19.05.1983, *Fominykh 83063* (herbarium of the Nuratau Nature Reserve); Hayatsay, Khotunon, 23.05.2006, *Beshko 06044, 06054* (herbarium of the Nuratau Nature Reserve); Hayatsay, 01.05.2009, *Beshko* (www.plantarium.ru); upper reaches of Osmansay above the Zangori Olov summer camp, 05.04.2019, 28.06.2019, 28.04.2020, *Beshko, Shomurodov, Adilov, Abduraimov* (plant community description); upper reaches of Osmansay, upstream of the village Baland Osman, 26.06.2019, 28.04.2020, 02.07.2020, *Beshko, Adilov* (plant community description); upper reaches of Savryuksay, upstream of the village Koytash, 06.04.2019, *Beshko, Abduraimov* (plant community description); piedmonts of Mt. Karatash, 28.04.2020, *Beshko, Shomurodov, Adilov* (plant community description); Nuratau Nature Reserve, Hayatsay, 40.51888° N, 66.74833° E, 22.06.2022, *Selyutina* (www.inaturalist.org). **I-4-b Khobduntau Range:** reported by Kudrjashev in “Vegetation of the Khobduntau and Karachatau Mountains” (1929, p. 64); Bulungur District, Khobduntau, Ingichkasay, 1275 m a.s.l., 39°53'17.33" N, 67°18'07.41" E, *Beshko* (plant community description). **I-4-c North-Nuratau insular low mountains:** Jizzakh Region, Farish District, Pistalitau, 16.04.2011, *Batashov* (MW); the crest of Egarbelistag, 1.5 km west of the Carbonat JSC quarry, 25.03.2019, 26.06.2019, *Beshko, Shomurodov, Adilov* (plant community description).

Schrenkia Fisch. & C.A.Mey.

1310. *Schrenkia golickeana* (Regel & Schmalh.) B.Fedtsch. (*Schrenkia fasciculata* Korovin), Consp. Fl. Turkest. 3: 125 (1909). Perennial, monocarpic, hemicryptophyte. Western Tien Shan, Western Pamir-Alay. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Montes Nuratau, regione urbis Dshizak, promont. Kojtasch [Bagdan], 25.05.1914, *Michelson* (LE). **I-4-b Aktau Range:** Nuratau mountains, near Langar, 19–21.05.1941, *Zakirov, Niyazov* (SAM).

1311. *Schrenkia pungens* Regel & Schmalh., in Acta Horti Petropolit. 5(2): 607 (1878). Perennial, polycarpic, hemicryptophyte. Western Tien Shan, Western Pamir-Alay. Shrubland, Grassland, Rocky areas. Foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Farish District, 20.05.1941, *Momotov 20* (TASH); Farish District, 20.05.1941, *Momotov* (TASH); Mts. Koytash, Mt. Piyazli, 30.05.1976, *Pimenov 284* (MW); Nuratau Nature Reserve, Hayatsay, 19.08.1978, *Korshunov* (MW); southern slope of Mt. Zargar, 27.04.1979, *Pimenov et al. 85* (MW); Nuratau Nature Reserve, Karysay, 07.06.1981, *Mukhina* (MW); Madjrumsay, 03.06.2000, *Beshko* (TASH); Nuratau

Nature Reserve, Hayatsay, 26.06.2012, *Beshko* (TASH). **I-4-b Aktau Range:** 5 km from the village Tikalik, 06.07.1932, *Knorring, Emme* 28 (MW); between villages Chuya and Langar, 19.07.1975, *Pimenov, Kljuykov, Baranova, Vassiljeva* 733 (MW); the village Chuya, gorge Ashbarana, 28.04.1979, *Pimenov et al.* 112 (MW); 6–8 km downstream of the village Langar, 09.06.1983, *Rusanovich* (MW).

1312. *Schrenkia vaginata* (Ledeb.) Fisch. & C.A.Mey. Enum. Pl. Nov.: 64 (1841). Perennial, monocarpic, hemicryptophyte. Western Tien Shan, Western Pamir-Alay. Shrubland, Grassland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Koytash, near the village Bogdon, 25.05.1914, *Knorring* (LE); village Ukhum, 01.07.1931, *Kobranova* (TASH); near the village Kuvakiya, Mt. Piyazli, 17.05.1971, *Pimenov et al.* 296 (MW); Nuratau Nature Reserve, Tykchasay, Parrandoz, 24.06.2010, *Beshko* (herbarium of the Nuratau Nature Reserve, TASH).

Semenovia Regel & Herd.

1313. *Semenovia pimpinellioides* (Nevski) Manden., Trudy Tbilissk. Bot. Inst. 20: 22 (1959). Perennial, polycarpic, hemicryptophyte. Pamir-Alay. Shrubland, Grassland, Rocky areas. Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Nature Reserve, upper reaches of Hayatsay, Alichak, 27.06.2012, *Beshko* (TASH).

Seseli L.

1314. *Seseli korovinii* Schischk., Bot. Mater. Gerb. Bot. Inst. Komarova Akad. Nauk S.S.S.R. 13: 162 (1950). Perennial, polycarpic, hemicryptophyte. Western Pamir-Alay. Shrubland, Grassland, Rocky areas. Montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Ukhum Pass, 28.07.1937, *Demurina* 763 (TASH); [same locality], 03.08.1940, *Gomolitsky, Protopov, Dolgikh* 246 (TASH); Nuratau Nature Reserve, Hayatsay, 16.08.1978, *Korshunov* (MW, MHA); watershed of Hayatsay and Madjrumsay, 20.08.1977, *Levichev* (TASH); Mt. Hayatbashi, 12.08.1980, *Mukhina* 57 (MW); Nuratau Nature Reserve, upper reaches of Hayatsay, Alichak, 27.06.2012, *Beshko* (TASH); Nuratau Nature Reserve, watershed of Hayatsay and Madjrumsay, 26.07.2012, *Beshko* (TASH); Nuratau Nature Reserve, watershed crest near the top of Mt. Hayat-bashi, about 2100 m a.s.l., 23.07.2014, *Beshko* (www.plantarium.ru).

1315. *Seseli turbinatum* Korovin, Bot. Mater. Gerb. Inst. Bot. Zool. Akad. Nauk Uzbeksk. S.S.R. 8: 21 (1947). Perennial, polycarpic, hemicryptophyte. Western Tien Shan, Western Pamir-Alay. Shrubland, Rocky areas. Foothills, montane zone. Rare. Native. UzbRDB 1. **Occurrence records: I-4-a Nuratau Range:** Pamir-alaj meridionalis, jugum Koj-tasch, m. Piasly, 05.08.1934, *Botschancev* (TASH, holotype TASH002317); Mt. Piyazli near the village Kuvakiya, 19.07.1975, *Pimenov, Kljuykov, Baranova, Vassiljeva* 761 (MW); northern slope of Koytash Mts., Mt. Piyazli, 30.05.1976, *Pimenov, Kljuykov, Baranova, Vassiljeva* 286 (MW); near the village Kyzylcha, Koblatysay, 40°42'52" N, 66°07'02" E, 570 m a.s.l., 15.06.2019, *Beshko* (TASH).

Sium L.

1316. *Sium sisaroides* DC., Prodr. 4: 124 (1830). Perennial, polycarpic, hydrophyte. Euro-Siberian, Irano-Turanian. Wetlands (inland). Montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Nuratau Nature Reserve, Karysay, valley in the middle reaches, 26.06.2011, *Beshko* (TASH).

Torilis Adans.

1317. *Torilis arvensis* (Huds.) Link., Enum. Hort. Berol. Alt. 1: 265 (1821). Annual, therophyte. Pluriregional. Forest, Rocky areas, Artificial terrestrial. Foothills, montane zone. Rare. Native. **Occurrence records: I-4-a Nuratau Range:** Sentob, valley of stream, 24.06.1971, *Botschantzev, Kamelin* (LE).

1318. *Torilis leptophylla* (L.) Rchb.f., Icon. Fl. Germ. Helv. 21: 83, t. 169 (1866). Annual, therophyte. Circumtemperate. Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Foothills, montane zone. Occasional. Native. **Occurrence records: I-4-a Nuratau Range:** Samarkand Region, Jizzakh, southern slope of Drunken Mt., 10.04.1915, *O. & B. Fedtschenko* (LE); Gurdara, gardens, 23.06.1971, *Botschantzev, Kamelin* (LE); Nuratau Nature Reserve, Hayatsay, 05.05.2012, *Beshko* (TASH). **I-4-b Aktau Range:** Nuratau mountains, 10.05.1915, *Spiridonov* (LE); northern slope of Aktau Range west of the village Chuya, gorge Ashbarana, 28.04.1979, *Pimenov et al.* 129 (MW). **I-4-b Khobduntau Range:** reported by Kudrjashev in “Vegetation of the Khobduntau and Karachatau Mountains” (1929, p. 64).

Trachyspermum Link.

1319. *Trachyspermum ammi* (L.) Sprague, Bull. Misc. Inform. Kew 1929(7): 228 (1929). Annual, therophyte. Tethyan. Artificial aquatic, Artificial terrestrial. Plain, foothills. Rare. Alien. **Occurrence records: I-4-b Aktau Range:** Khatyrchi District, 18.08.1928, *Lepeschkin* 404 (TASH); the village Bakhrin, May 1929, *Lepeschkin* (TASH).

Turgenia Hoffm.

1320. *Turgenia latifolia* (L.) Hoffm., Gen. Pl. Umbell.: 59 (1814). Annual, therophyte. Circumtemperate. Desert, Forest, Shrubland, Grassland, Rocky areas, Artificial terrestrial. Plain, foothills, montane zone. Frequent. Native. **Occurrence records: I-4-a Nuratau Range:** Jizzakh District, northern slope of Mts. Koytash near the village Karatash, 1914, *Mikhelson* (LE); plain north of the spring Yangaly, experimental plot of Nurata State Farm, 09.05.1939, *Mikhaylova, Popova* (TASH); Hayatsay, 06.06.1984, *Petrochenko* 84084 (herbarium of the Nuratau Nature Reserve); Tykchasay, 08.06.1984, *Petrochenko* 84085 (herbarium of the Nuratau Nature Reserve); Hayatsay, 28.05.1990, *Beshko, Yakovenko* 90082 (herbarium of the Nuratau Nature Reserve); Hayatsay, Khotunon, 08.06.2006, *Beshko* 06203, 06204 (herbarium of the Nuratau Nature Reserve); Madjrumsay, Fargun, 02.06.2000, *Beshko* (TASH); Nuratau Nature Reserve, Karysay, northern piedmonts of rocky massif Parrandoz, about 1600 m a.s.l., 25.06.2010, *Beshko* (www.plantarium.ru, www.inaturalist.org); Jizzakh Region, Farish District, foothills of Nuratau near Yangikishlak, 13.05.2012, *Beshko* (TASH); upper reaches of Osmansay above the Zangori Olov summer camp, 28.06.2019, *Beshko, Shomurodov, Adilov, Abduraimov* (plant community description); upper reaches of Osmansay, upstream of the village Baland Osman, 26.06.2019, 02.07.2020, *Beshko, Adilov* (plant community description); Nuratau Nature Reserve, Hayatsay, 09.06.2020, *Ortikov et al.* 9062020593 (TASH); Jizzakh Region, Gallaaral District, eastern part of Nuratau Range, 40.057237°N 67.637263°E, 04.06.2021, *Beshko* (www.inaturalist.org); Jizzakh Region, Farish District, surroundings of village Ukhun, 40.55149° N, 66.798759° E, 13.05.2024, *langli* (www.inaturalist.org). **I-4-b Aktau Range:** Dzhus – Koshrabad, 1913, *Korovin* (TASH); Koshrabad – Chuya, 06.05.1913, *Korovin* (TASH); northern slope Aktau Range west of the village Chuya, gorge Ashbarana, 28.04.1979, *Pimenov et al.* 129 (MW). **I-4-b Khobduntau Range:** between Khobduntau and Karachatau, 14.06.1929, *Kudrjashev* (TASH). **I-4-c North-Nuratau insular low mountains:** Pistaltau, 14.04.2013, *Batashov* (TASH).