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RESEARCH ARTICLE

Click beetles (Coleoptera, Elateridae) of the Ulytau State National Natural Park and adjacent territories (Central Kazakhstan)

Gaukhar Zh. Ormanova[1], Izbasar I. Temreshev[2, 3]

1 *Institute of Zoology of the Republic of Kazakhstan, 93 Al-Farabi Ave., Almaty 050060, Republic of Kazakhstan*
2 *LLP "Agro Consult", 010010, Astana, Almaty district, 21 Kanysh Satbaev st., Republic of Kazakhstan*
3 *LLP Kazakh Scientific Research Institute of Plant Protection and Quarantine named after Zh. Zhiembayev, Almaty, Republic of Kazakhstan*

Corresponding author: Gaukhar Zh. Ormanova (gauhar.ormanova@gmail.com)

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Abstract

The results of primary studies of the fauna of click beetles (Coleoptera, Elateridae) in the Ulytau State National Natural Park and in adjacent territories are presented. A total of 29 species and 18 genera of click beetles are recorded. In the territory of the National park, 27 species of click beetles belonging to 18 genera are recorded. 12 species of Elateridae belonging to 7 genera are recorded for adjacent territories.

Keywords

Checklist, east Palaearctic region, Elateroidea, faunistics, snapping beetles, Specially protected natural area, neighboring territories, Central Asia

Introduction

Click beetles, or snapping beetles (Elateridae Leach, 1815) are found worldwide, with the exception of Antarctica, and almost at all altitudes, e.g. some species have been collected from altitudes of up to 5000 m and even higher. Currently, over 10000 species have been described, they are divided into more than 400 genera (Medvedev 2005). The greatest diversity of click beetles is found in equatorial and subequatorial regions. Adults of some species do not feed throughout their lives. Imagoes of snapping beetles of other species undergo supplemental feeding, typically feeding on plant tissues such as pollen, petals, and leaves. Larvae can be either obligate predators or polyphagous, primarily carnivorous, or phytophagous. Some snapping beetles are dangerous pests because of their ability to damage and destroy crops, trees and busch (Tsherepanov 1957; Gurjeva 1965, 1989a, b; Dolin 1978; Nikitsky 1980; Medvedev 2005; Ormanova and Temreshev 2014; Ormanova 2024).

The fauna of click beetles in the Republic of Kazakhstan is still little-studied. Ormanova (2024) compiled a list of 171 species belonging to 47 genera, 16 tribes, and 9 subfamilies based on her research and literary sources (Gurjeva, 1965; Tugusheva, 1968, 1972; Tsherepanov 1957; Gurjeva 1965, 1989; Dolin 1978; Medvedev 2005; Ormanova and Temreshev 2014). However, new faunistic records occur regularly (Prosvirov 2017; Gabdullina and Prosvirov 2025; Temreshev 2025).

Ulytau State National Natural Park is located in the Ulytau region (Central Kazakhstan). The area of the national natural park is 58.9 thousand hectares, the forested part is 7.918 thousand hectares. The territory includes both meadow and steppe biotopes with lakes, rivers and artificial reservoirs, and the slopes of the Ulytau Mountains, an ancient low mountain range in the southwest of the Kazakh Uplands. The ridge is composed predominantly of granites. The slopes are dissected by gorges of temporary streams, bare and rocky. There is predominantly steppe vegetation on the slopes, there are birch and aspen groves in places in moist depressions, there are steppe grasses, wormwood, and ephedra in rock crevices; – shrubs occur on rocky screes. Extension of ridge is 200 km from north to south. The highest point is Mount Akmeshit, 1133 m above sea level. There are branches in the neighborhoods of the villages of Korgasyn, Sarlyk, Koskol and the Satpayev city (Specially Protected Natural Areas of the Republic of Kazakhstan 2023).

The fauna of click beetles of the Ulytau State National Natural Park is almost not studied. There is separate information on the adjacent territories of Ulytau oblast and neighboring regions of Central Kazakhstan (Kazenas and Baizhanov 2009). However, a general checklist of Elateridae of this specially protected natural area is absent.

Materials and methods

The material was collected during 2023-2024 in Central Kazakhstan, Ulytau oblast by second author. Standard techniques (Fasulati 1971) used in entomology were used during the collection of the material. The following sources (Tsherepanov 1957; 1965; Gurjeva 1965; Tugusheva 1968; Gurjeva 1972; Dolin 1978; Nikitsky 1980; Gurjeva 1989a, b; Medvedev 2005; Kazenas and Baizhanov 2009; Ormanova and Temreshev 2014; Prosvirov 2017; Ormanova 2024; Gabdullina and Prosvirov 2025; Greilberger and Polt 2025; Temreshev 2025) were used for identification of the species, clarification of their taxonomic position, bionomics and the distribution. The studied specimens are kept in the private collection of I.I. Temreshev (Almaty, Kazakhstan).

The taxonomy of click beetles is given in accordance with Catalogue of Palaearctic Coleoptera (Cate et al 2007).

The spiders, in whose webs the material was collected were identificated by the following sources (Azheganova 1968; Tyshchenko 1971).

The plants, on which the material was collected were identificated by special literature (Flora of Kazakhstan 1956; 1958; 1960; 1961a, b; 1963; 1964; 1965; 1966).

Photographs of click beetles and their habitats were taken with a camera Redmi 7, Canon EOS 50 D and microscope Levenhuk DTX RC by authors (Figs 2, 4). Body measuring were performed using a Micromed MC var 1-C dissecting stereomicroscope and microscope Levenhuk DTX RC.

The following abbreviations are used: UO - Ulytau oblast, Ud. – Ulytau district, ex. – exemplar, mt. – mounts, nei. - neighborhoods, v. – village.

The coordinates of the studied localities: Zhezkazgan city, shore of the Kengir reservoir: N 47°48'22.42" E 67°41'48.32"; Zhezkazgan city, bus terminal area: N 47°46'49.52" E 67°41'32.68"; Nei. Talap v.: N 47°40'8.11" E 67°51'45.16"; Satpayev city, shore of lake Ainakol: N 47°52'51.07" E 67°33'29.56"; Nei. Karsakpai v.: N 47°50'2.56" E 66°43'40.60; Nei. Baikonur v.: N 47°49'8.96 E 66° 2'29.14"; Nei. Terekty v.: N 48° 4'31.88" E 68°32'10.71"; Nei. Zhezdy v.: N 48° 3'24.33" E 67° 3'30.21"; Nei. Ulytau v.: N 48°38'48.48" E 67° 2'10.88"; Nei. Sarlyk v.: N 48°43'8.63" E 66°42'5.82"; Nei. Korgasyn v. 1: N 49°12'25.21" E 66°39'36.39"; Nei. Korgasyn v. 2: N 49°14'4.02" E 66°39'23.48"; Nei. Koskol v.: N 49°30'55.31" E 67° 4'9.25".

The studied localities are shown on the map (Fig. 1).

During collection of material, both a variety of natural biotope and anthropogenically disturbed biomes were examined (Fig. 2).

The division of the territory of Kazakhstan into regions is given according Baitenov (1974), with some changes (Fig. 3).

The map was made using the Simple Mappr program (Shorthouse 2010) and the sources indicated above.

Figure 1. The studied localities. Red line – borders of the main territory of Ulytau National Park. Red circles – branches in the neighborhoods of the villages of Korgasyn, Koskol and the Satpayev city.

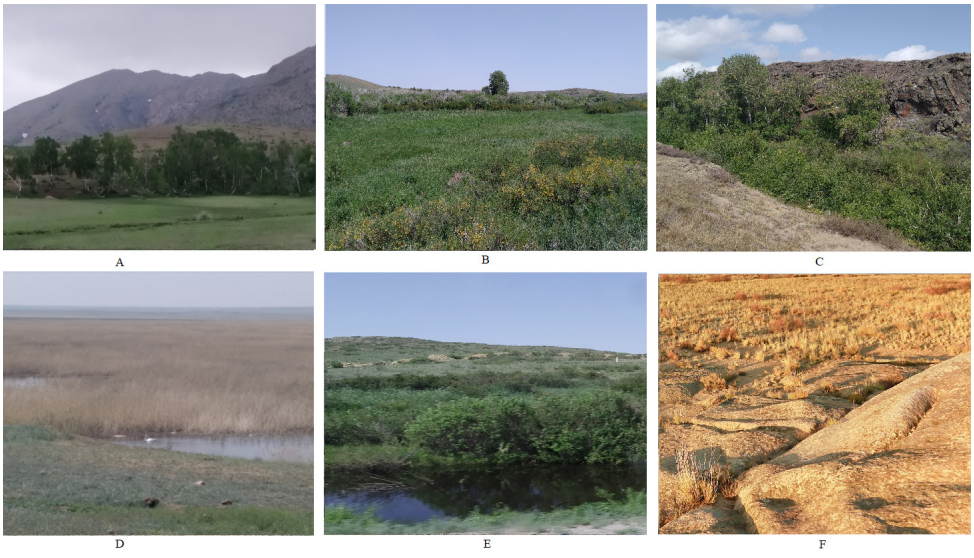

Figure 2. Continued on the next page.

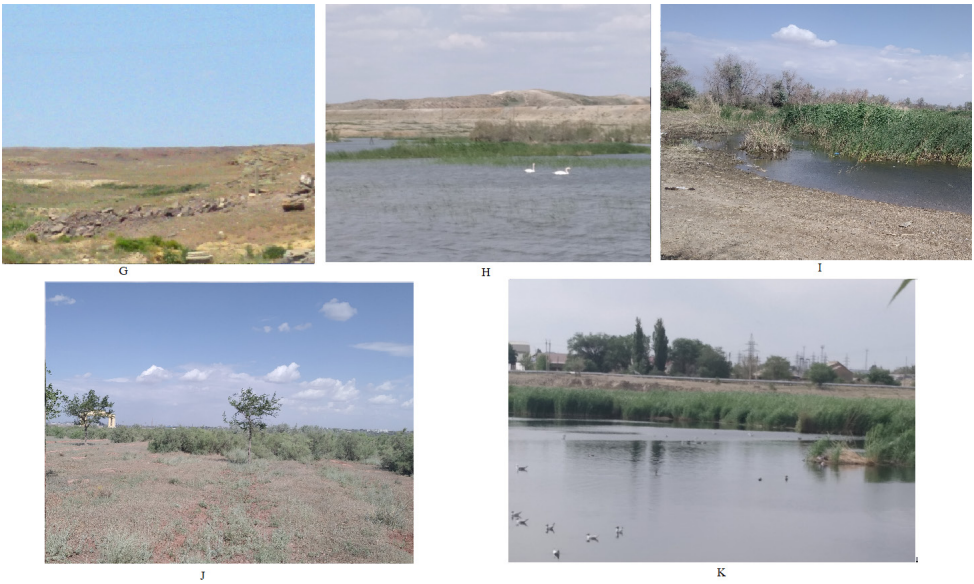

Figure 2. Habitats of click beetles of the Ulytau State National Natural Park and adjacent territories: neighborhoods of Ulytau village, birch-aspen grove (**A**), neighborhoods of Sarlyk village, flood meadow with tugai (**B**), neighborhoods of Korgasyn village, canyon with tugai (**C**), neighborhoods of Koskol village, steppe shore of the lake (**D**), neighborhoods of Zhezdy village, bank of river with tugai (**E**), neighborhoods of Terekty village, steppe area with rocky outcrops (**F**), neighborhoods of Baikonur village, rocky semi-desert area (**G**), neighborhoods of Karsakpai village, semi-desert shore of lake (**H**), Satpayev city, shore of lake Ainakol (**I**), neighborhoods of Talap village, clayey semi-desert area (**J**), Zhezkazgan city, shore of the Kengir reservoir (**K**).

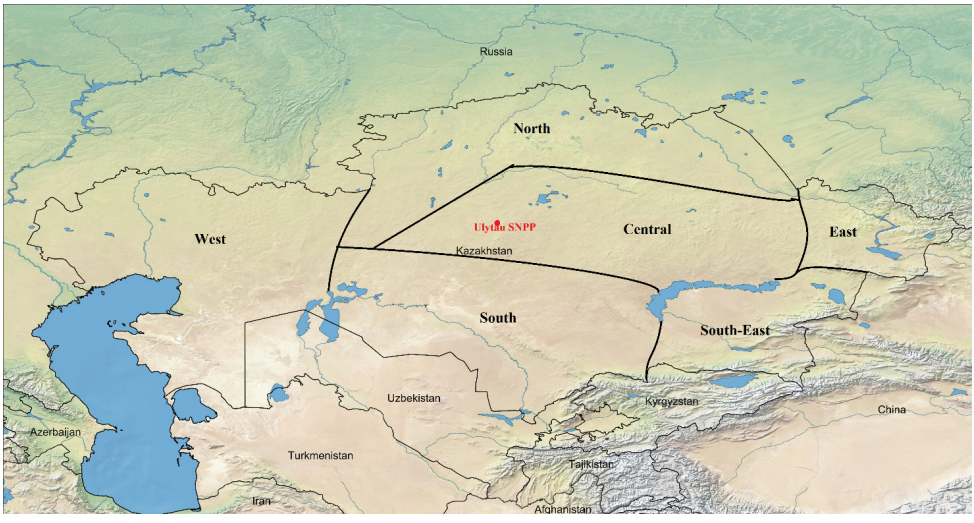

Figure 3. The division of the territory of Kazakhstan into regions.

Results

As a result of the study, a preliminary checklist of click beetles of the Ulytau State National Natural Park is prepared. Some of discussed species are shown in the images below (Fig. 4).

Superfamily Elateroidea Leach, 1815

Family Elateridae Leach, 1815

Subfamily Agrypninae Candèze, 1857

Tribe Agrypnini Candèze, 1857

Genus *Agrypnus* Eschscholtz, 1829

1. *Agrypnus murinus* (Linnaeus, 1758). Adults feed on flowers of herbaceous plants and shrubs. The larvae develop in soil and are primarily predators (Tsherepanov 1957; Dolin 1978).

Distribution in world: Albania, Andorra, Azerbaijan, Armenia, Austria, Belarus, Belgium, Bosnia Herzegovina, Bulgaria, China (Xinjiang), Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Great Britain, Georgia, Greece, Hungary, Iran, Ireland, Italy, Kazakhstan, Latvia, Liechtenstein, Lithuania, Luxembourg, Macedonia, Moldavia, Netherlands, Norway, Poland, Romania, Russia (Central, North and South European Territory, Far East, Siberia), Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine (Cate et al. 2007).

Distribution in Kazakhstan: North and South-East Kazakhstan (Ormanova 2024). Is firstly recorded for Central Kazakhstan.

Material examined. 2 ex. – 25.05.2023, UO, Ud, nei. Sarlyk v., flood meadow with tugai, on *Rosa spinosissima* L.; 3 ex. – 20.06.2023, UO, Ud, nei. Ulytau v., birch-aspen grove, on *Rosa canina* L.; 1 ex. – 24.08.2023, UO, Ud, nei. Korgasyn v., canyon with tugai, on *Sanguisorba officinalis* L.; 1 ex. – 15.05.2024, UO, Ud, nei. Ulytau v., on the rocks near the birch-aspen grove, on *Thymus serpyllum* L.

Genus *Aeoloderma* Fleutiaux, 1928

2. *Aeoloderma crucifer* (Rossi, 1790). Adults and larvae overwinter in the soil. In the south, they emerge in early April and remain flying until the second half of August. Adults are active in the evening and intensively attracted to light; in hot weather, they hide and burrow into the soil. The larvae damage underground parts of essential oil crops, cabbage, carrots, tomatoes, potatoes, wheat and tau-saghyz (Tsherepanov 1957; Gurjeva 1974). They were noted also as a pest of soybean crops (Temreshev et al. 2020).

Distribution in world: Albania, Algeria, Azerbaijan, Armenia, Azores Island, Bulgaria, Cyprus, Georgia, Greece, Egypt, France, Iran, Italy, Kazakhstan, Kyrgyzstan, Libya, Macedonia, Morocco, Pakistan, Portugal, Romania, Russia (Central and South European Territory), Spain, Syria, Tunisia, Turkey, Turkmenistan, Ukraine (Cate et al. 2007).

Distribution in Kazakhstan: West, South and South-East (Ormanova 2024).

Material examined. 1 ex. – 23.05.2023, UO, Ud, Zhezkazgan city, bus terminal area, lawn, manual collection; 1 ex. – 24.05.2023, UO, Ud, nei. of Karsakpai v., semi-desert shore of lake, under dry manure; 2 ex. – 25.05.2023, UO, Ud, nei. Zhezdy v., meadow on bank of river with tugai, on *Malva parviflora* L.; 4 ex. - 25.05.2023, UO, Ud, nei. Talap v., clayey semi-desert area, sweeping by a net; 3 ex. – 24.05.2023, UO, Ud, Satpayev city, shore of lake Ainakol, tugai, on *Tamarix gracilis* Willd.; 4 ex. – 19.06.2023, UO, Ud, nei. Baikonur v., meadow on the bank of stream, sweeping by a net; 5 ex. – 12.05.2024, UO, Ud, Zhezkazgan city, shore of the Kengir reservoir, soil traps; 2 ex. – 15.05.2024, UO, Ud, nei. Ulytau v., on the rocks near the birch-aspen grove, on *Caragana frutex* (L.) K. Koch.

Genus *Aeoloides* Schwarz, 1906

3. *Aeoloides grisescens* (Germar, 1844). Adults emerge in April and remain flying until July. They are active in the evening and at night, also attracted to light. The larvae develop in soil, primarily in areas with mesophilic vegetation. The larvae are known as pest of cotton plant roots (Samedov 1963; Gurjeva 1974).

Distribution in world: Afganistan, Afrotropical realm, Albania, Armenia, China (Inner Mongolia) Cyprus, Georgia, Greece, Egypt, Iran, Iraq, Kazakhstan, Kyrgyzstan, Libya, Mongolia, Morocco, Oman, Pakistan, Qatar, Russia (Central and South European Territory, West Siberia), Saudi Arabia, Syria, Tajikistan, Turkey, Turkmenistan, Ukraine, Uzbekistan (Cate et al. 2007).

Distribution in Kazakhstan: Sporadic throughout (Ormanova 2024).

Material examined. 2 ex. – 23.05.2023, UO, Ud, Zhezkazgan city, shore of the Kengir reservoir, meadow, sweeping by a net; 3 ex. – 24.05.2023, UO, Ud, Satpayev city, shore of lake Ainakol, meadow, sweeping by a net; 1 ex. – 25.05.2023, UO, Ud, nei. Zhezdy v., bank of river with tugai, manual collection; 1 ex. - 25.05.2023, UO, Ud, nei. Talap v., clayey semi-desert area, sweeping by a net; 2 ex. – 19.06.2023, UO, Ud, nei. Baikonur v., meadow on the bank of stream, sweeping by a net; 1 ex. – 25.05.2023, UO, Ud, nei. Sarlyk v., flood meadow with tugai, manual collection; 1 ex. – 25.05.2023, UO, Ud, nei. Koskol v., steppe shore of the lake, sweeping by a net; 2 ex. – 20.06.2023, UO, Ud, in Ulytau v., near the hotel, at light; 1 ex. – 24.08.2023, UO, Ud, nei. Korgasyn v., steppe near canyon with tugai, manual collection; 1 ex. – 12.05.2024, UO, Ud, Zhezkazgan city, shore of the Kengir reservoir, meadow, manual collection.

Genus *Aeolosomus* Dolin, 1982

4. *Aeolosomus rossii* (Germar, 1844). The beetles are active from April to October, during the day, and attracted to light at night. The beetles and larvae overwinter. The larvae develop in the soil along river valleys and in oxbow lakes, in the root part of plants (Broad-leaf cattail, reed, Asteraceae) (Gurjeva 1965, 1974).

Distribution in world: Armenia, Azerbaijan, Georgia, Iran, Kazakhstan, Kyrgyzstan, Russia (South European Territory), Tajikistan, Turkey, Turkmenistan, Ukraine, Uzbekistan.

Distribution in Kazakhstan: Sporadic throughout (Kazenas and Baizhanov 2009; Ormanova 2024).

Material examined. 1 ex. – 23.05.2023, UO, Ud, Zhezkazgan city, shore of the Kengir reservoir, meadow, sweeping by a net; 2 ex. - 25.05.2023, UO, Ud, nei. Talap v., clayey semi-desert area, sweeping by a net; 2 ex. – 19.06.2023, UO, Ud, nei. Baikonur v., meadow on the bank of stream, sweeping by a net; 1 ex. – 25.05.2023, UO, Ud, nei. Sarlyk v., flood meadow with tugai, manual collection; 1 ex. – 25.05.2023, UO, Ud, nei. Koskol v., steppe shore of the lake, sweeping by a net, IT; 2 ex. – 20.06.2023, UO, Ud, nei. Ulytau v., at light; 1 ex. – 24.08.2023, UO, Ud, nei. Korgasyn v., steppe near canyon with tugai, manual collection; 3 ex. – 23.07.2023, UO, Ud, nei. Terekty v., steppe area with rocky outcrops, under dry *Achnatherum sibiricum* (L.) Keng ex Tzvelev; 2 ex. – 12.05.2024, UO, Ud, Zhezkazgan city, shore of the Kengir reservoir, soil traps; 2 ex. – 13.05.2024, UO, Ud, Satpayev city, shore of lake Ainakol, meadow, sweeping by a net, IT; 2 ex. – 14.05.2024, UO, Ud, nei. Zhezdy v., bank of river with tugai, manual collection; 3 ex. – 15.05.2024, UO, Ud, Ulytau v., at light.

Genus *Drasterius* Eschscholtz, 1829

5. *Drasterius atricapillus* (Germar, 1824). The species occurs near oxbow lakes and depressions, in the root part of plants, under waste along river channels (Tsherepanov 1957).

Distribution in world: Armenia, Azerbaijan, China (Xinjiang), Georgia, Iran, Kazakhstan, Kyrgyzstan, Russia (Central and South European Territory), Tajikistan, Turkey, Turkmenistan, Ukraine, Uzbekistan (Cate et al 2007).

Distribution in Kazakhstan: West, South and South-East (Ormanova 2024).

Material examined. 1 ex. – 23.05.2023, UO, Ud, Zhezkazgan city, shore of the Kengir reservoir, tugai, under stone; 2 ex. – 24.05.2023, UO, Ud, Satpayev city, shore of lake Ainakol, under cardboard; 3 ex. – 25.05.2023, UO, Ud, nei. Zhezdy v., bank of little lake, under dry seaweed on the lake shore; 1 ex. - 25.05.2023, UO, Ud, nei. Talap v., clayey semi-desert area, under stone on the aryk shore; 1 ex. – 19.06.2023, UO, Ud, nei. Baikonur v., meadow on the bank of stream, under stone; 1 ex. – 12.05.2024, UO, Ud, Zhezkazgan city, shore of the Kengir reservoir, soil traps; 1 ex. – 13.05.2024, UO, Ud, Satpayev city, shore of lake Ainakol, meadow, dead under dry manure.

6. *Drasterius bimaculatus* (Rossi, 1790). The species inhabits mesophytic desert areas with dense soils, living along riverbanks under rocks, near the roots of plants, and in decaying plant debris, often in association with *A. crucifer* and *A. rossii*. Beetles fly from May to August, actively flying toward light. The larvae develop in the soil along river valleys and near bodies of water (Tsherepanov 1957; Ormanova and Temreshev 2014).

Distribution in world: Afganistan, Albania, Algeria, Armenia, Azerbaijan, Austria, Belgium, Bosnia Herzegovina, Bulgaria, Canary Islands, Croatia, Cyprus, Czech Republic, Egypt, France, Georgia, Germany, Greece, Hungary, Iran, Iraq, Israel, Italy, Jordan, Kazakhstan, Kyrgyzstan, Libya, Malta, Macedonia, Moldavia, Morocco, Poland, Portugal, Romania, Russia (Central and South European Territory), Slovakia, Slovenia, Spain, Syria, Switzerland, Tunisia, Turkey, Turkmenistan, Ukraine, Uzbekistan (Cate et al 2007).

Distribution in Kazakhstan: West, South and South-East (Ormanova 2024).

Material examined. 1 ex. – 23.05.2023, UO, Ud, Zhezkazgan city, shore of the Kengir reservoir, meadow, under stone; 1 ex. - 25.05.2023, UO, Ud, nei. Talap v., clayey semi-desert area, under stone on the aryk shore; 1 ex. – 25.05.2023, UO, Ud, nei. Sarlyk v., flood meadow with tugai, manual collection; 2 ex. – 25.05.2023, UO, Ud, nei. Koskol v., steppe shore of the lake, under dry seaweed on the lake shore; 1 ex. – 19.06.2023, UO, Ud, nei. Baikonur v., meadow on the bank of stream, under stone; 2 ex. – 20.06.2023, UO, Ud, nei. Ulytau v., aryk in birch-aspen grove, under stone on the aryk shore; 1 ex. – 23.07.2023, UO, Ud, nei. Terekty v., steppe area with rocky outcrops, under dry *A. sibiricum*; 1 ex. – 24.08.2023, UO, Ud, nei. Korgasyn v., canyon with tugai, under dry seaweed on the lake shore; 1 ex. – 12.05.2024, UO, Ud, Zhezkazgan city, shore of the Kengir reservoir, soil traps; 3 ex. – 13.05.2024, UO, Ud, Satpayev city, shore of lake Ainakol, tugai, under rotten *Eleagnus angustifolia* L.; 1 ex. – 14.05.2023, UO, Ud, nei. Zhezdy v., bank of little lake, under dry seaweed on the lake shore; 3 ex. – 15.05.2024, UO, Ud, nei. Ulytau v., birch-aspen grove, under rotten European birch.

Subfamily Elaterinae Leach, 1815

Tribe Agriotini Champion, 1894

Genus *Agriotes* Eschscholtz, 1829

7. *Agriotes caspicus* Heyden, 1883. The species inhabits mesophytic habitats, primarily in semi-desert zones. The beetles are active in the evenings from April to July, attracted to light. Overwintering occurs as beetles and larvae. The larvae damage roots of alfalfa, tobacco, grapes and grains (Gurjeva 1965, 1974).

Distribution in world: Afganistan, Armenia, Azerbaijan, Iran, Kazakhstan, Kyrgyzstan, Russia (South European Territory), Turkmenistan, Uzbekistan (Cate et al. 2007).

Distribution in Kazakhstan: West, Central, South and South-East (Kazenas and Baizhanov 2009; Ormanova 2024).

Material examined. 1 ex. – 23.05.2023, UO, Ud, Zhezkazgan city, shore of the Kengir reservoir, meadow, under stone; 1 ex. – 24.05.2023, UO, Ud, Satpayev city, shore of lake Ainakol, under cardboard; 1 ex. – 24.05.2023, UO, Ud, nei. of Karsakpai v., semi-desert shore of lake, under cardboard; 1 ex. – 25.05.2023, UO, Ud, nei. Zhezdy v., bank of river with tugai, under stone; 5 ex. - 25.05.2023, UO, Ud, nei. Talap v., clayey semi-desert area, under dry manure; 2 ex. – 19.06.2023, UO, Ud, nei. Baikonur v., rocky semi-desert area, under stone; 2 ex. – 12.05.2024, UO, Ud, Zhezkazgan city, shore of the Kengir reservoir, soil traps; 1 ex. – 13.05.2024, UO, Ud, Satpayev city, shore of lake Ainakol, tugai, under rotten *E. angustifolia*.

8. *Agriotes meticulosus* (Candèze, 1863). The species lives mainly on plains, but along river valleys it rises into the mountains to an altitude of up to 2500 m. It prefers irrigated lands, meadows along the banks of rivers, streams and lakes. The beetles are active in the evenings from April to August, attracted to light. Overwintering occurs as beetles and larvae. The larva damages grain crops, melons, perennial grasses and cotton (Samedov 1963; Gurjeva 1974).

Distribution in world: Afganistan, Armenia, Azerbaijan, Georgia, Iran, Iraq, Mongolia, Kazakhstan, Pakistan, Russia (South European Territory), Saudi Arabia, Syria, Tajikistan, Turkmenistan, Uzbekistan (Cate et al. 2007).

Distribution in Kazakhstan: Sporadic throughout in the desert zone (West, South, Central etc. Kazakhstan) (Ormanova 2024).

Material examined. 1 ex. – 23.05.2023, UO, Ud, Zhezkazgan city, shore of the Kengir reservoir, soil traps; 1 ex. – 24.05.2023, UO, Ud, Satpayev city, shore of lake Ainakol, meadow, sweeping by a net; 2 ex. – 24.05.2023, UO, Ud, nei. of Karsakpai v., semi-desert shore of lake, under dry manure; 1 ex. – 25.05.2023, UO, Ud, nei. Zhezdy v., steppe bank of river, manual collection; 4 ex. - 25.05.2023, UO, Ud, nei. Talap v., clayey semi-desert area, soil traps; 2 ex. – 19.06.2023, UO, Ud, nei. Baikonur v., rocky semi-desert area, manual collection; 1 ex. – 25.05.2023, UO, Ud, nei. Sarlyk v., flood meadow with tugai, manual collection; 1 ex. – 25.05.2023, UO, Ud, nei. Koskol v., steppe shore of the lake, dead in water; 3 ex. – 20.06.2023, UO, Ud, in Ulytau v., near the hotel, at light; 2 ex. – 23.07.2023, UO, Ud, nei. Terekty v., steppe area with rocky outcrops, under dry *A. sibiricum*; 1 ex. – 24.08.2023, UO, Ud, nei. Korgasyn v., steppe near canyon with tugai, manual collection; 1 ex. – 12.05.2024, UO, Ud, Zhezkazgan city, shore of the Kengir reservoir, meadow, under dry manure; 1 ex. – 13.05.2024, UO, Ud, Satpayev city, shore of lake Ainakol, under stone; 1 ex. – 15.05.2024, UO, Ud, nei. Ulytau v., birch-aspen grove, under rotten *Betula pendula* Roth.

9. *Agriotes obscurus* Linnaeus, 1758. The beetles are active in the evenings from April to July, attracted to light. Adults feed on herbaceous plants, mainly cereal leaves. Overwintering occurs as beetles and larvae. The larva damages almost all agricultural crops and tree seedlings (Gurjeva 1974).

Distribution in world: Armenia, Azerbaijan, Austria, Belgium, Bulgaria, Belarus, China (Gansu, Shaanxi, Shanxi, Xinjiang), Czech Republic, Denmark, Estonia, Finland, Great Britain, Georgia, Greece, Hungary, Ireland, Italy, Kazakhstan, Latvia, Liechtenstein, Lithuania, Mongolia, Norway, Poland, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Russia (Central, North and South European Territory, Far East, Siberia). Introduced in Nearctic Region (Canada, USA) (Cate et al 2007).

Distribution in Kazakhstan: Sporadic throughout in the steppe and desert zone, except the south (Ormanova 2024).

Material examined. 1 ex. – 23.05.2023, UO, Ud, Zhezkazgan city, shore of the Kengir reservoir, dead in water, IT; 2 ex. – 24.05.2023, UO, Ud, Satpayev city, shore of lake Ainakol, under stone; 3 ex. – 25.05.2023, UO, Ud, nei. Zhezdy v., dead on road; 3 ex. - 25.05.2023, UO, Ud, nei. Talap v., clayey semi-desert area, soil traps; 4 ex. – 19.06.2023, UO, Ud, nei. Baikonur v., rocky semi-desert area, under stone; 2 ex. – 25.05.2023, UO, Ud, nei. Sarlyk v., flood meadow with tugai, manual collection; 2 ex. – 25.05.2023, UO, Ud, nei. Koskol v., steppe shore of the lake, dead in water; 1 ex. – 20.06.2023, UO, Ud, nei. Ulytau v., under stone; 2 ex. – 24.08.2023, UO, Ud, nei. Korgasyn v., steppe, under rotten wood; 2 ex. – 12.05.2024, UO, Ud, Zhezkazgan city, shore of the Kengir reservoir, soil traps; 2 ex. – 13.05.2024, UO, Ud, Satpayev city, shore of lake Ainakol, meadow, dead in web of orb-weaving spider *Araneus angulatus* Clerck, 1758; 1 ex. – 15.05.2024, UO, Ud, in Ulytau v., near the hotel, at light.

10. *Agriotes sputator* (Linnaeus, 1758). An ecologically flexible steppe species, it inhabits steppe and meadow habitats, as well as forest belts. Beetles are active from April to July. Adults emerge from their hiding places in the afternoon, and flight occurs at sunset. Overwintering occurs as beetles and larvae. Damages all agricultural crops and tree seedlings (Samedov 1963; Gurjeva 1974).

Distribution in world: Albania, Algeria, Armenia, Azerbaijan, Austria, Belarus, Belgium, Bosnia Herzegovina, Bulgaria, China (Northern Territory, Xinjiang), Croatia, Czech Republic, Denmark, Estonia, France, Great Britain, Germany, Georgia, Greece, Hungary, Iran, Italy, Kazakhstan, Latvia, Liechtenstein, Lithuania, Luxembourg, Macedonia, Moldavia, Mongolia, Netherlands, Norway, Poland, Romania, Russia (Central, North and South European Territory, Far East, Siberia), Slovakia, Spain, Syria, Sweden, Switzerland, Turkey, Ukraine. Introduced in Nearctic Region (USA) (Cate et al. 2007).

Distribution in Kazakhstan: Sporadic throughout, except the south (Kazenas and Baizhanov 2009; Ormanova 2024).

Material examined. 1 ex. – 23.05.2023, UO, Ud, Zhezkazgan city, dead on road; 1 ex. – 24.05.2023, UO, Ud, Satpayev city, shore of lake Ainakol, under household garbage; 1 ex. – 25.05.2023, UO, Ud, nei. Zhezdy v., bank of river with tugai, dead in water; 3 ex. - 25.05.2023, UO, Ud, nei. Talap v., clayey semi-desert area, soil traps; 2 ex. – 19.06.2023, UO, Ud, nei. Baikonur v., meadow on the bank of stream, under rotten wood; 1 ex. – 25.05.2023, UO, Ud, nei. Sarlyk v., flood meadow with tugai,

under bark of rotten European birch; 1 ex. – 25.05.2023, UO, Ud, nei. Koskol v., steppe shore of the lake, under household garbage; 1 ex. – 20.06.2023, UO, Ud, nei. Ulytau v., on the rocks near the birch-aspen grove, under stone; 1 ex. – 24.08.2023, UO, Ud, nei. Korgasyn v., steppe near canyon with tugai, under rotten wood; 2 ex. – 12.05.2024, UO, Ud, Zhezkazgan city, shore of the Kengir reservoir, meadow, under household garbage; 1 ex. – 13.05.2024, UO, Ud, Satpayev city, shore of lake Ainakol, under stone; 1 ex. – 15.05.2024, UO, Ud, nei. Ulytau v., in little river birch-aspen grove, dead in water.

Genus *Dalopius* Eschscholtz, 1829

11. *Dalopius marginatus* (Linnaeus, 1758). The beetles damage hawthorn leaves. The larvae can damage seeds and seedlings of tree species, including fruit trees, and corn. They are also predatory, destroying pests, for example caterpillers of Geometrid moths (Gurjeva 1974).

Distribution in world: Albania, Austria, Belarus, China (Hebei, Gansu, Inner Mongolia), Czech Republic, Denmark, Estonia, Finland, France, Great Britain, Germany, Greece, Hungary, Ireland, Italy, Kazakhstan, Latvia, Liechtenstein, Lithuania, Mongolia, Norway, Portugal, Romania, Russia (Central, North and South European Territory, Far East, Siberia), Slovakia, Spain, Sweden, Switzerland, Turkey (Cate et al. 2007).

Distribution in Kazakhstan: West, North and East (Ormanova 2024).

Material examined. 1 ex. – 25.05.2023, UO, Ud, nei. Sarlyk v., flood meadow with tugai, on *Cotoneaster acutifolius* Turcz.; 1 ex. – 25.05.2023, UO, Ud, nei. Koskol v., tugai shore of the lake, dead under bark of rotten European birch; 1 ex. – 24.08.2023, UO, Ud, nei. Korgasyn v., canyon with tugai, manual collection; 1 ex. – 15.05.2024, UO, Ud, nei. Ulytau v., birch-aspen grove edge, on *Verbascum phoeniceum* L.

Tribe Ampedini Gistel, 1856

Genus *Ampedus* Dejean, 1833

12. *Ampedus balteatus* (Linnaeus, 1758). Forest-steppe species. The larvae develop in rotten wood and the wood dust of xylophagous insects under the loose bark of coniferous and deciduous trees (Gurjeva 1979; Dolin 1978).

Distribution in world: Austria, Belarus, Belgium, Bosnia Herzegovina, Bulgaria, Czech Republic, Denmark, Estonia, Finland, France, Great Britain, Germany, Hungary, Ireland, Italy, Kazakhstan, Latvia, Liechtenstein, Lithuania, Luxembourg, Mongolia, Norway, Romania, Russia (Central, North and South European Territory, Far East, Siberia), Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine (Cate et al 2007).

Distribution in Kazakhstan: North, Central and East (Ormanova 2024).

Material examined. 1 ex. – 25.05.2023, UO, Ud, nei. Sarlyk v., flood meadow with tugai, under bark of rotten aspen; 1 ex. – 24.05.2023, UO, Ud, nei. of Karsakpai v., park, under bark of Populus nigra L.; 2 ex. – 25.05.2023, UO, Ud, nei. Koskol v., tugai shore of the lake, dead under bark of rotten European birch; 1 ex. – 20.06.2023, UO, Ud, nei. Ulytau v., birch-aspen grove, under bark of rotten European birch; 1 ex. – 24.08.2023, UO, Ud, nei. Korgasyn v., canyon with tugai, under bark of rotten European birch; 2 ex. - 15.05.2024, UO, Ud, nei. Ulytau v., birch-aspen grove, under bark of aspen.

13. *Ampedus nigrinus* (Herbst, 1784). Species lives in the forest zone. Larva developed in both deciduous and coniferous trees, imago flies in June-July (Tugusheva 1968; Gurjeva 1979).

Distribution in world: Austria, Belarus, Belgium, Bulgaria, China (Jilin, Liaoning), Canada, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Great Britain, Germany, Georgia, Italy, Kazakhstan, Kyrgyzstan, Latvia, Liechtenstein, Mongolia, Netherlands, Norway, Poland, Romania, Russia (Central, North and South European Territory, Far East, Siberia), Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, USA (Cate et al. 2007).

Distribution in Kazakhstan: East (Ormanova 2024).

Material examined. 1 ex. – 25.05.2023, UO, Ud, nei. Sarlyk v., flood meadow with tugai, under bark of rotten aspen; 1 ex. – 20.06.2023, UO, Ud, nei. Ulytau v., birch-aspen grove, under bark of rotten European birch; 1 ex. – 24.08.2023, UO, Ud, nei. Korgasyn v., canyon with tugai, under bark of rotten European birch; 2 ex. – 15.05.2024, UO, Ud, nei. Ulytau v., birch-aspen grove, under bark of *Crataegus sanguinea* Pall.

14. *Ampedus pomorum* (Herbst, 1784). The larvae develop in heavily decayed wood of various tree species (Gurjeva 1979; Dolin 1978).

Distribution in world: Albania, Armenia, Azerbaijan, Austria, Belarus, Belgium, Bosnia Herzegovina, Bulgaria, China (Heilongjiang, Jilin), Croatia, Czech Republic, Denmark, Estonia, Finland, France, Great Britain, Germany, Georgia, Greece, Hungary, Ireland, Italy, Kazakhstan, Latvia, Liechtenstein, Lithuania, Luxembourg, Macedonia, Moldavia, Mongolia, Netherlands, Norway, Poland, Romania, Russia (Central, North and South European Territory, Far East, Siberia), Slovakia, Slovenia, Spain, Sweden, Switzerland, Ukraine (Cate et al. 2007).

Distribution in Kazakhstan: North, East and South-East (Ormanova 2024).

Material examined. 2 ex. – 25.05.2023, UO, Ud, nei. Sarlyk v., flood meadow with tugai, under bark of rotten aspen; 1 ex. – 25.05.2023, UO, Ud, nei. Koskol v., tugai shore of the lake, dead under bark of rotten European birch; 3 ex. – 20.06.2023, UO, Ud, nei. Ulytau v., birch-aspen grove, under bark of rotten European birch; 2 ex. – 24.08.2023, UO, Ud, nei. Korgasyn v., canyon with tugai, under bark of rotten European birch; 1 ex. – 15.05.2024, UO, Ud, nei. Ulytau v., birch-aspen grove, under bark of *Alnus glutinosa* (L.) Gaertn.

15. *Ampedus sanguineus* (Linnaeus, 1758). The larvae develop in rotten wood and under the bark of trees (Gurjeva 1979; Dolin 1978).

Distribution in world: Albania, Algeria, Azerbaijan, Austria, Belarus, Belgium, Bosnia Herzegovina, Bulgaria, China (Gansu), Croatia, Czech Republic, Denmark, Estonia, Finland, France, Great Britain, Germany, Georgia, Greece, Hungary, India (Kashmir), Iran, Italy, Kazakhstan, Latvia, Liechtenstein, Lithuania, Luxembourg, Moldavia, Mongolia, Morocco, Netherlands, Norway, Oriental Region, Portugal, Romania, Russia (Central, North and South European Territory, Far East, Siberia), Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine (Cate et al. 2007).

Distribution in Kazakhstan: North, East and South-East (Temreshv and Kazenas 2017, Ormanova 2024).

Material examined. 1 ex. – 25.05.2023, UO, Ud, nei. Sarlyk v., flood meadow with tugai, under bark of rotten aspen; 1 ex. – 25.05.2023, UO, Ud, nei. Koskol v., tugai shore of the lake, dead under bark of rotten European birch, IT; 1 ex. – 20.06.2023, UO, Ud, nei. Ulytau v., birch-aspen grove, under bark of rotten European birch; 1 ex. – 24.08.2023, UO, Ud, nei. Korgasyn v., canyon with tugai, under bark of rotten European birch; 2 ex. – 15.05.2024, UO, Ud, nei. Ulytau v., birch-aspen grove, under bark of *A. glutinosa*.

16. *Ampedus sanguinolentus* (Schrank, 1776). The larva inhabits rotten wood of a wide variety of trees (Gurjeva 1979; Dolin 1978).

Distribution in world: Albania, Armenia, Azerbaijan, Austria, Belarus, Belgium, Bosnia Herzegovina, Bulgaria, China (Heilongjiang, Jilin, Inner Mongolia), Croatia, Czech Republic, Denmark, Estonia, Finland, Great Britain, Germany, Georgia, Greece, Hungary, Iran, Italy, Japan, Kazakhstan, Latvia, Liechtenstein, Lithuania, Luxembourg, Macedonia, Moldavia, Mongolia, Morocco, Netherlands, Norway, Poland, Portugal, Romania, Russia (Central, North and South European Territory, Far East, Siberia), Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine (Cate et al. 2007).

Distribution in Kazakhstan: West, North, Central, East and South-East (Temreshv and Kazenas 2017; Ormanova 2024).

Material examined. 3 ex. – 25.05.2023, UO, Ud, nei. Sarlyk v., flood meadow with tugai, under bark of rotten aspen; 4 ex. – 25.05.2023, UO, Ud, nei. Koskol v., tugai shore of the lake, dead under bark of rotten European birch; 2 ex. – 20.06.2023, UO, Ud, nei. Ulytau v., birch-aspen grove, under bark of rotten European birch; 3 ex. – 24.08.2023, UO, Ud, nei. Korgasyn v., canyon with tugai, under bark of rotten European birch.

Subfamily Melanotinae Candèze, 1859

Tribe Melanotini Candèze, 1859

Genus *Melanotus* Eschscholtz, 1829

17. *Melanotus villosus* (Geoffroy, 1785). The larvae develop under the bark and in rotten wood of various trees (Dolin 1978).

Distribution in world: Albania, Algeria, Armenia, Azerbaijan, Austria, Belarus, Belgium, Bosnia Herzegovina, Bulgaria, China (Yunnan, "Manchuria"), Croatia, Czech Republic, Denmark, Estonia, Finland, France, Great Britain, Germany, Georgia, Greece, Hungary, Iran, Italy, Kazakhstan, Latvia, Liechtenstein, Lithuania, Luxembourg, Macedonia, Moldavia, Morocco, Netherlands, Norway, Poland, Portugal, Romania, Russia (Central, North and South European Territory), Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine (Cate et al. 2007).

Distribution in Kazakhstan: West, North and South (Ormanova 2024).

Material examined. 1 ex. – 24.05.2023, UO, Ud, birch-aspen grove, nei. Ulytau v., on aspen.

Subfamily Denticollinae Stein & J. Weise, 1877

Tribe Denticollini Stein & J. Weise, 1877

Genus *Denticollis* Piller & Mitterpacher, 1783

18. *Denticollis linearis* (Linnaeus, 1758). The larvae are predatory and mycetophagous, living in rotten wood and under the bark of dead trees (Dolin 1978).

Distribution in world: Austria, Belarus, Belgium, Bosnia Herzegovina, Bulgaria, China (Heilongjiang), Croatia, Czech Republic, Denmark, Estonia, Finland, France, Great Britain, Germany, Greece, Hungary, Iran, Italy, Kazakhstan, Latvia, Liechtenstein, Lithuania, Luxembourg, Macedonia, Moldavia, Mongolia, Netherlands, Norway, Poland, Romania, Russia (Central and North European Territory, Far East, Siberia), Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine (Cate et al. 2007).

Distribution in Kazakhstan: North (Ormanova 2024).

Material examined. 1 ex. – 24.05.2024, UO, Ud, nei. Ulytau v., birch-aspen grove, under bark of *C. sanguinea*, IT.

Genus *Limonius* Eschscholtz, 1829

19. *Limonius minutus* (Linnaeus, 1758). The beetles feed on flowering grasses and shrubs. The larvae are found in the soil under the forest canopy and in damp meadows. As a forest species that colonizes sunny scree slopes or stony slopes in hilly and foothill regions and can be found in the plains in areas of windblown sand or also

in forests with sandy soils (Samedov 1963; Gurjeva 1965; Dolin 1978; Greilberger and Polt 2025).

Distribution in world: Albania, Armenia, Azerbaijan, Austria, Belarus, Belgium, Bosnia Herzegovina, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Great Britain, Germany, Georgia, Greece, Hungary, Iran, Italy, Kazakhstan, Latvia, Liechtenstein, Lithuania, Luxembourg, Macedonia, Moldavia, Netherlands, Poland, Romania, Russia (Central and South European Territory), Slovakia, Slovenia, Spain, Syria, Sweden, Switzerland, Turkey, Ukraine (Cate et al. 2007).

Distribution in Kazakhstan: West, North, Central and South-East (Kazenas and Baizhanov 2009; Ormanova 2024).

Material examined. 1 ex. – 25.05.2023, UO, Ud, nei. Sarlyk v., flood meadow with tugai, on *Tanacetum achilleifolium* (M. Bieb.) Sch. Bip., IT; 2 ex. – 25.05.2023, UO, Ud, nei. Koskol v., tugai shore of the lake, sweeping by a net; 1 ex. – 20.06.2023, UO, Ud, nei. Ulytau v., village edge, on *T. ramosissima*; 1 ex. – 24.08.2023, UO, Ud, nei. Korgasyn v., canyon with tugai edge, on *Melilotus officinalis* (L.) Lam.; 1 ex. – 16.05.2024, UO, Ud, nei. Ulytau v., birch-aspen grove edge, on *Sisymbrium assoanum* Loscos & J. Pardo.

Genus *Tropihypnus* Reitter, 1905

20. *Tropihypnus bimargo* Reitter, 1896. The beetles are active from May to July and are common; the larvae are necrosaprophagous, sometimes predatory, sedentary, and capable of surviving prolonged periods in water. The beetles have also been observed under rocks and on cereal crops (Dolin 1978).

Distribution in world: China (Xizang), Kazakhstan, Kyrgyzstan (Cate et al. 2007).

Distribution in Kazakhstan: East and South-East (Ormanova 2024).

Material examined. 1 ex. – 26.05.2023, UO, Ud, nei. Ulytau v., dead under stone on shore of the reservoir.

Tribe Ctenicerini Fleutiaux, 1936

Genus *Ctenicera* Latreille, 1829

21. *Ctenicera pectinicornis* (Linnaeus, 1758). The flight period is from late May to July. Beetles are common in meadows, clearings, on flowering vegetation, most often on umbelliferous plants. They have also been observed on the shoots of young pine trees. The larvae develop in moist, often quite waterlogged meadow soils. They have also been observed in the soil at the edge of birch forests and once in a rotten pine stump in a pine forest. The larvae are omnivorous; both beetles and larvae overwinter (Gurjeva 1965; Tugusheva 1968; Medvedev 2005; Ormanova 2024).

Distribution in world: Albania, Armenia, Austria, Belarus, Belgium, Bulgaria, China (Jilin, Shanxi), Czech Republic, Denmark, Estonia, Finland, France, Georgia,

Germany, Great Britain, Hungary, Italy, Kazakhstan, Latvia, Liechtenstein, Lithuania, Luxembourg, Macedonia, Netherlands, Norway, Portugal, Poland, Romania, Russia (Central, North and South European Territory, Siberia), Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine (Cate et al. 2007).

Distribution in Kazakhstan: North-West, East (Ormanova 2024).

Material examined. 1 ex. – 16.05.2024, UO, Ud, nei. Ulytau v., birch-aspen grove edge, on *S. assoanum*.

Genus *Liotrichus* Kiesenwetter, 1858

22. *Liotrichus affinis* (Paykull, 1800). It inhabits lowland coniferous and mountain forests, and also climbs into high mountain forests (Gurjeva 1989).

Distribution in world: Austria, Belarus, Bosnia Herzegovina, Bulgaria, China (Heilongjiang, Jilin), Czech Republic, Finland, France, Germany, Italy, Kazakhstan, Latvia, Lithuania, Mongolia, Norway, Poland, Romania, Russia (Central and North European Territory, Far East, Siberia), Slovakia, Slovenia, Sweden, Switzerland, Ukraine (Cate et al. 2007).

Distribution in Kazakhstan: East (Ormanova 2024).

Material examined. 1 ex. – 25.05.2023, UO, Ud, in Ulytau v., near the hotel, on *Pinus sylvestris* L.

Note. Since coniferous trees are not native to the forests but are introduced into villages for landscaping, this species was apparently accidentally introduced along with them. Further research is needed to determine whether it could have become established in the area.

Genus *Paraphotistus* Kishii, 1966

23. *Paraphotistus impressus* (Fabricius, 1792). Beetles are found on woody and shrubby vegetation, including in floodplain biotopes (Tsherepanov 1957).

Distribution in world: Austria, Belarus, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Great Britain, Germany, Hungary, Italy, Japan, Kazakhstan, Korea, Latvia, Liechtenstein, Lithuania, Mongolia, Netherlands, Norway, Poland, Romania, Russia (Central and North European Territory, Far East, Siberia), Slovakia, Slovenia, Sweden, Switzerland, Ukraine (Cate et al. 2007).

Distribution in Kazakhstan: West and North (Ormanova 2024).

Material examined. 1 ex. – 22.05.2023, UO, Ud, nei. Ulytau v., shore of the reservoir, on *Phragmites australis* (Cav.) Trin. ex Steud.; 1 ex. – 25.05.2023, UO, Ud, Ulytau v., near the hotel, dead in web of orb-weaving spider *Larinioides ixobolus* (Thorell, 1873); 2 ex. – 25.05.2023, UO, Ud, nei. Sarlyk v., flood meadow with tugai, on *Salix alba* (Crawford, 1914) Crawford, 1914; 1 ex. – 25.05.2023, UO, Ud, nei. Koskol v., tugai shore of the lake, sweeping by a net; 1 ex. – 24.08.2023, UO, Ud, nei. Korgasyn v., canyon with tugai edge, on *M. officinalis*; 1 ex. – 16.05.2024, UO, Ud, nei. Ulytau v., on the rocks near birch-aspen grove, on *Aster alpinus* L.

Genus *Selatosomus* Stephens, 1830

24. *Selatosomus aeneus* (Linnaeus, 1758). The larvae cause serious damage to many agricultural and forest crops, damaging sown seeds, roots, and the root portion of rye, wheat, barley, corn, sunflower, tobacco, beets, fruit trees, and potato tubers. The beetles are found on Rosacea flowers, feeding on pollen. The larvae develop in soil and rotting wood, often in forest biotopes (Tsherepanov 1957; Dolin 1978).

Distribution in world: Albania, Armenia, Austria, Belarus, Belgium, Bosnia Herzegovina, Bulgaria, China (Heilongjiang, Jilin, Xizang), Croatia, Czech Republic, Denmark, Estonia, Finland, France, Great Britain, Germany, Georgia, Greece, Hungary, Italy, Kazakhstan, Latvia, Liechtenstein, Lithuania, Luxembourg, Macedonia, Moldavia, Mongolia, Netherlands, Norway, Poland, Romania, Russia (Central and North European Territory, Siberia), Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine (Cate et al. 2007).

Distribution in Kazakhstan: West, North, East and Central (Ormanova 2024).

Material examined. 1 ex. – 25.05.2023, UO, Ud, nei. Korgasyn v. 1, mowing with a net; 2 ex. – 25.08.2023, UO, Ud, nei. Ulytau v., birch-aspen grove, on *Rosa canina*; 1 ex. – 26.05.2023, UO, Ud, nei. Sarlyk v., flood meadow with tugai, on *C. acutifolius*; 1 ex. – 26.05.2023, UO, Ud, nei. Koskol v., tugai shore of the lake, mowing with a net; 2 ex. – 16.05.2024, UO, Ud, nei. Ulytau v., on the rocks near birch-aspen grove, on *Aster alpinus* L.

25. *Selatosomus latus* (Fabricius, 1801). The beetles are active in April-May (mainly in the evenings) and are often found in the steppe zone. They are found among shrubby vegetation, feeding on the pollen of Asteraceae, Rosaceae, Euphorbiacea and Apiaceae. One of the main polyphagous pests in the steppe and forest-steppe zones, the larvae damage the underground parts of all agricultural crops, especially grain and vegetable crops, and young tree seedlings (Tsherepanov 1957; Samedov 1963; Gurjeva 1965; Dolin 1978).

Distribution in world: Albania, Armenia, Azerbaijan, Austria, Belarus, Belgium, Bosnia Herzegovina, Bulgaria, China (Heilongjiang, Jilin, Inner Mongolia, Ningxia), Croatia, Czech Republic, Estonia, France, Germany, Georgia, Greece, Hungary, Iran, Italy, Kazakhstan, Latvia, Lithuania, Luxembourg, Macedonia, Moldavia, Mongolia, Netherlands, Poland, Portugal, Romania, Russia (Central and South European Territory, Far East, Siberia), Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine (Cate et al. 2007).

Distribution in Kazakhstan: Everywhere except the South (Kazenas and Baizhanov 2009; Ormanova 2024).

Material examined. 1 ex. – 23.07.2023, UO, Ud, nei. Terekty v., shore of dry pond, on *Ph. australis*; 2 ex. – 24.05.2023, UO, Ud, nei. of Karsakpai v., semi-desert shore of lake, dead in water; 1 ex. – 25.08.2023, UO, Ud, nei. Ulytau v., birch-aspen grove, dead on bank of stream; 2 ex. – 26.05.2023, UO, Ud, nei. Koskol v., under dry manure; 2 ex. – 22.07.2023, UO, Ud, nei. Korgasyn v., canyon with tugai, dead under

stone; 2 ex. – 23.07.2023, UO, Ud, nei. Terekty v., shore of dry pond, on *Matricaria chamomilla* L.

26. *Selatosomus melancholicus* (Fabricius, 1798). Damage to corn roots by larvae was noted. The beetles are active from May to July, and are found during the day on the flowers of umbelliferous, rose-colored plants, and on cereal vegetation, feeding on pollen (Tsherepanov 1957).

Distribution in world: Armenia, Azerbaijan, Austria, Belarus, China (Inner Mongolia), Finland, France, Germany, Georgia, Kazakhstan, Kyrgyzstan, Ireland, Italy, Mongolia, Norway, Romania, Russia (North, Central and South European Territory, Far East, Siberia), Sweden, Switzerland, Turkey, Ukraine (Cate et al. 2007).

Distribution in Kazakhstan: West, North, Central, East and South-East (Ormanova 2024).

Material examined. 1 ex. – 22.05.2023, UO, Ud, Zhezkazgan city, shore of the Kengir reservoir, tugai, on *Rosa persica* Michx. ex J.F. Gmel.; 2 ex. – 25.05.2023, UO, Ud, nei. Korgasyn v. 1, meadow near birch-aspen grove, on *T. achilleifolium*; ex. – 25.08.2023, UO, Ud, nei. Ulytau v., birch-aspen grove edge, on *T. achilleifolium*; 3 ex. – 26.05.2023, UO, Ud, nei. Sarlyk v., flood meadow with tugai, on *Achillea millefolium* L.; 1 ex. – 26.05.2023, UO, Ud, nei. Koskol v., steppe shore of the lake, on *M. chamomilla*; 1 ex. – 16.05.2024, UO, Ud, nei. Ulytau v., on the rocks near the birch-aspen grove, on *Ruta graveolens* L.

Subfamily Cardiophorinae Candèze, 1860

Tribe Cardiophorini Candèze, 1860

Genus *Cardiophorus* Eschscholtz, 1829

27. *Cardiophorus discicollis* (Herbst, 1806). The beetles are found on poplar, apple tree branches and flowers, milkweed and spirea, and often gnaw on the flowers of fruit crops. The larvae develop in the soil (Samedov 1963; Dolin 1978).

Distribution in world: Austria, Bosnia Herzegovina, Bulgaria, China (Xizang), Croatia, Czech Republic, Germany, Georgia, Greece, Hungary, Israel, Italy, Kazakhstan, Macedonia, Moldavia, Poland, Romania, Russia (Central and South European Territory, Siberia), Slovakia, Slovenia, Switzerland, Syria, Tajikistan, Turkey, Ukraine (Cate et al. 2007).

Distribution in Kazakhstan: West, North, Central, East and South-East (Kazenas and Baizhanov 2009; Ormanova 2024).

Material examined. 1 ex. – 25.05.2023, UO, Ud, nei. Ulytau v., shore of the reservoir, on *S. alba*; 1 ex. – 25.05.2023, UO, Ud, nei. Koskol v., tugai shore of the lake, on *S. alba*; 1 ex. – 25.05.2023, UO, Ud, nei. Korgasyn v. 1, meadow near birch-aspen grove, mowing with a net; 5 ex. – 22.06.2023, UO, Ud, Zhezkazgan city, shore of the Kengir reservoir, tugai, on *S. alba* and *P. tremula*; 2 ex. – 20.07.2023, UO, Ud,

nei. Sarlyk v., flood meadow with tugai, on *S. alba*; 1 ex. – 15.05.2024, UO, Ud, nei. Ulytau v., birch-aspen grove, on aspen.

28. *Cardiophorus ebeninus* (Germar, 1824). The beetles are most often found on flowering spirea and other grasses, feeding on pollen. The larvae live in the soil (Dolin 1978).

Distribution in world: Austria, Belarus, Bulgaria, Croatia, Czech Republic, Estonia, France, Germany, Georgia, Greece, Hungary, Italy, Kazakhstan, Latvia, Lithuania, Macedonia, Mongolia, Poland, Romania, Russia (Central and South European Territory, East Siberia), Slovakia, Switzerland, Turkey, Ukraine (Cate et al. 2007).

Distribution in Kazakhstan: North, Central, East and South-East (Kazenas and Baizhanov 2009; Ormanova 2024).

Material examined. 1 ex. – 25.05.2023, UO, Ud, nei. Ulytau v., birch-aspen grove edge, on *M. officinalis*, IT; 2 ex. – 25.05.2023, UO, Ud, nei. Sarlyk v., mowing with a net, flood meadow with tugai; 4 ex. – 25.05.2023, UO, Ud, nei. Koskol v., tugai shore of the lake, on *S. alba*; 1 ex. – 25.05.2023, UO, Ud, nei. Koskol v., steppe shore of the lake, dead under household rubbish, in web of white-spotted false widow spider *Steatoda albomaculata* (De Geer, 1778); 2 ex. – 25.05.2023, UO, Ud, nei. Korgasyn v. 1, meadow near birch-aspen grove, mowing with a net; 1 ex. – 16.05.2024, UO, Ud, nei. Ulytau v., on the rocks near the birch-aspen grove, on *C. frutex*.

29. *Cardiophorus vestigialis* Erichson, 1840. The beetles are found on sea buckthorn and rose hips, as well as on fruit and berry trees, where they gnaw at the flowers. The larvae develop in the soil (Dolin 1978).

Distribution in world: Albania, Algeria, Armenia, Azerbaijan, Austria, Belgium, Bosnia Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Egypt, Estonia, Finland, France, Great Britain, Germany, Georgia, Greece, Hungary, Iran, Italy, Kazakhstan, Lybia, Moldavia, Mongolia, Morocco, Norway, Poland, Portugal, Romania, Russia (North, Central and South European Territory, Far East, Siberia), Slovakia, Slovenia, Spain, Sweden, Switzerland, Tunisia, Turkey, Turkmenistan, Ukraine (Cate et al. 2007).

Distribution in Kazakhstan: West, North, Central, East and South-East (Ormanova 2024).

Material examined. 3 ex. – 26.05.2023, UO, Ud, nei. Korgasyn v., mowing with a net; 1 ex. – 26.05.2023, UO, Ud, nei. Sarlyk v., flood meadow with tugai, on *A. millefolium*; 2 ex. – 26.05.2023, UO, Ud, nei. Koskol v., mowing with a net; 1 ex. – 22.06.2023, UO, Ud, nei. Koskol v., tugai shore of the lake, dead in water; 2 ex. – 16.05.2024, UO, Ud, nei. Ulytau v., on the rocks near the birch-aspen grove, on *C. frutex*.

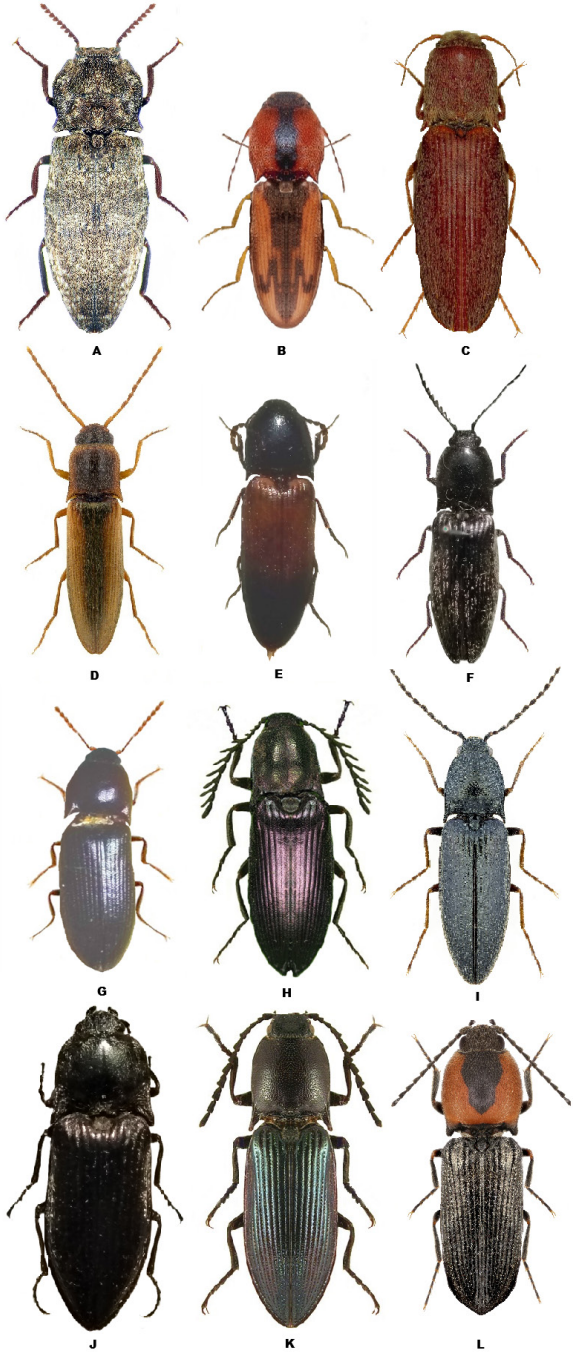

Figure 4. Some species of the click beetles from Ulytau State National Natural Park (Central Kazakhstan): *Agrypnus murinus* (**A**); *Aeoloderma crucifer* (**B**); *Agriotes meticulosus* (**C**); *Dalopius marginatus* (**D**); *Ampedus balteatus* (**E**); *Melanotus villosus* (**F**); *Tropihypnus bimargo* (**G**); *Ctenicera pectinicornis* (**H**); *Liotrichus affinis* (**I**); *Paraphotistus impressus* (**J**); *Selatosomus melancholicus* (**K**); *Cardiophorus discicollis* (**L**).

Conclusion

Based on the results of primary studies of the fauna of click beetles (Coleoptera, Elateridae) in the Ulytau State National Natural Park and in the surrounding areas, a total of 6 subfamilies, 12 tribes, 19 genera and 29 species have been recorded. In the territory of the National park, 28 species of Elateridae belonging to 18 genera have been recorded. For the adjacent territories, 12 species of click beetles belonging to 7 genera were recorded. For two species, most likely brought to the park with planting material for landscaping, the possibility of introduction there has not yet been proven. This shows the need for further study of the click beetles fauna of both Central Kazakhstan as a whole and of Ulytau State National Natural Park. New interesting finds cannot be excluded.

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