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THE GENUS *ATHETA* (COLEOPTERA, STAPHYLINIDAE, ALEOCHARINAE) IN THE UKRAINIAN CARPATHIANS

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The Genus Atheta (Coleoptera, Staphylinidae, Aleocharinae) in the Ukrainian Carpathians. Glotov, S., Hushtan, K., Hushtan, H., Koval, N., Diedus, V. — The Carpathian species of the genus *Atheta* Thomson, 1858 are reviewed. The list contains 65 species, of which 8 species: *Atheta kochi* Roubal, 1937, *A. intermedia* (Thomson, 1852), *A. setigera* (Sharp, 1869), *A. foveicollis* (Kraatz, 1856), *A. luctuosa* (Mulsant & Rey, 1853), *A. cribrata* (Kraatz, 1856), *A. mortuorum* Thomson, 1867, *A. picipes* (Thomson, 1856), are recorded for Ukraine for the first time. Species composition, data on bionomics and distribution genus *Atheta* in the studied region are discussed.
Key words: Coleoptera, Staphylinidae, Aleocharinae, Atheta, new records, Ukraine, Carpathians.

Introduction

The rove beetle genus *Atheta* Thomson, 1858, includes 1900 described species in the world fauna (Orlov, 2019). Of them, 1500 species are known from the Palaearctic Region (Schülke & Smetana, 2015); including 78 species in the fauna of Ukraine (Glotov, 2021).

The taxonomic and faunistic knowledge of *Atheta* is extremely fragmentary both at the global and Palaearctic scale. The fauna of Northern and Central Europe is better studied, with comprehensive papers including keys to species known to occur in these territories (Münster, 1925; Brundin, 1954 a, b, c, d; Strand & Vik 1964; Palm, 1972; Lohse, 1974). The Eastern and Southern Europe is less studied. There were no special publications on the fauna of this genus in Ukraine. The present paper is an attempt to fill the gap in the local knowledge of *Atheta*, an ecologically notable genus of the rove beetles. The aim of this paper is to overview species composition of *Atheta* in the Ukrainian Carpathians.

As a result of extensive field investigation of rove beetles (Coleoptera, Staphylinidae) in the Ukrainian Carpathians in the last ten years more than 150 species were added to the list. This paper provides an overview of the genus *Atheta* species in the Ukrainian Carpathians.

An analysis of all available collection and literature information on the findings of species of the genus Atheta has shown that 65 species were known in the fauna of the Ukrainian Carpathians. They belong to 19 subgenera (*Anopleta* — 2 species, *Atheta* — 22 species, *Badura* — 3 species, *Bessobia* — 2 species, *Chaetida* — 1 species, *Coprothassa* — 1 species, *Datomicra* — 4 species, *Dimetrota* — 11 species, *Microdota* — 7 species, *Mycetota* — 1 species, *Oreostiba* — 1 species, *Oxypodera* — 1 species, *Pachyatheta* — 2 species, *Rhagocneme* — 1 species, *Tetropla* — 2 species, *Thinobaena* — 1 species, *Traumoecia* — 1 species, *Trochanterella* — 1 species, *Xenota* — 1 species). Among the 65 species of the genus *Atheta*, presence of 45 species is confirmed by the collection material and 20 species were known for the region only from literature data, among them 8 species (*Atheta kochi* (Roubal, 1937), *A. intermedia* (Thomson, 1852), *A. setigera* (Sharp, 1869), *A. foveicollis* (Kraatz, 1856), *A. luctuosa* (Mulsant & Rey, 1853), *A. cribrata* (Kraatz, 1856), *A. mortuorum* (Thomson, 1867), *A. picipes* (Thomson, 1856) are reliably recorded for Ukraine for the first time in this paper.

The first fundamental contribution on the list of the genus *Atheta* was made by A. Łomnicki (1868, 1884, 1890, 1891, 1913), who at that time actively studied the beetle fauna of Western Ukraine and provided a list of 42 species for the Ukrainian Carpathians, including: *Atheta corvina* (Thomson, 1856), *A. aquatica* (Thomson, 1852), *A. brunneipennis* (Thomson, 1852), *A. castanoptera* (Mannerheim, 1830), *A. crassicornis* (Fabricius, 1792), *A. divisa* (Märkel, 1844), *A. hypnorum* (Kiesenwetter, 1850), *A. fungicola* (Thomson, 1852), *A. graminicola* (Gravenhorst, 1806), *A. euryptera* (Stephens, 1832), *A. laevicauda* (J. Sahlberg, 1876), *A. oblita* (Erichson, 1839), *A. pilicornis* (Thomson, 1852), *A. ravilla* (Erichson, 1839), *A. vaga* (Heer, 1839), *A. xanthopus* (Thomson, 1856), *A. cauta* (Erichson, 1837), *A. occulta* (Erichson, 1837), *A. monticola* (Thomson, 1852), *A. longicornis* (Gravenhorst, 1802), *A. melanaria* (Mannerheim, 1830), *A. celata* (Erichson, 1837), *A. sordidula* (Erichson, 1837), *A. zosterae* (Thomson, 1856), *A. atramentaria* (Gyllenhal, 1810), *A. cadaverina* (Brisout de Barneville, 1860), *A. europaea* (Likovský, 1984), *A. intermedia* (Thomson, 1852), *A. laevana* (Mulsant & Rey, 1852), *A. marcida* (Erichson, 1837), *A. nigripes* (Thomson, 1856), *A. putrida* (Kraatz, 1856), *A. subtilis* (Scriba, 1866), *A. amicula* (Stephens, 1832), *A. atomaria* (Kraatz, 1856), *A. foveicollis* (Kraatz, 1856), *A. laticollis* (Stephens, 1832), *A. tibialis* (Heer, 1839), *A. cribrata* (Kraatz, 1856), *A. subsinuata* (Erichson, 1839), *A. nigritula* (Gravenhorst, 1802), *A. vestita* (Gravenhorst, 1806), *A. picipes* (Thomson, 1856), *A. cribripennis* (J. Sahlberg, 1890).

Information about the findings of the genus *Atheta* in the Ukrainian Carpathians in the territories of modern Lviv and Ivano-Frankivsk Regions are contained in the works of L. Miller (1868), who studied beetles in Kolomyia, Kosiv, Verkhovyna, Bystrets River and in Gadzhyna District and recorded five species: *A. castanoptera* Mannerheim, 1830, *A. fungicola* (Thomson, 1852), *A. euryptera* (Stephens, 1832), *A. tibialis* (Heer, 1839), *A. nigritula* (Gravenhorst, 1802).

In addition, M. Nowicki (1873), recorded five species of *Atheta* in the territories covering the north-eastern macroslope of the Ukrainian Carpathians: *Atheta castanoptera* (Mannerheim, 1830), *A. fungicola* (Thomson, 1852), *A. euryptera* (Stephens, 1832), *A. tibialis* (Heer, 1839), *A. nigritula* (Gravenhorst, 1802) and 3 species are cited by J. Weise (1876): *Atheta castanoptera* (Mannerheim, 1830), *A. longicornis* (Gravenhorst, 1802), *A. tibialis* (Heer, 1839). M. Rybiński (1903) mentioned three species: *Atheta laevicauda* (J. Sahlberg, 1876), *A. atramentaria* (Gyllenhal, 1810), *A. nigripes* (Thomson, 1856), and E. Lokay (1912) eight species: *Atheta allocera* (Eppelsheim, 1893), *A. autumnalis* (Erichson, 1839), *A. diversa diversa* (Sharp, 1869) *A. hypnorum* (Kiesenwetter, 1850) *A. laevicauda* (J. Sahlberg, 1876), *A. macrocera* (Thomson, 1856), *A. laevana* (Mulsant & Rey, 1852), *A. cribripennis* (J. Sahlberg, 1890) and four species are cited in the works of J. Fleischer and co-authors (Fleischer et al., 1922, 1924, 1925) including: *Atheta aquatica* (Thomson, 1852), *A. contristata* (Kraatz, 1856), *A. cadaverina* (Brisout de Barneville, 1860), *A. subtilis* (Scriba, 1866).

C. Hormuzaki (1888, 1891) listed six species *Atheta* from the south-western macroslope of the Ukrainian Carpathians and Transcarpathian Region: *Atheta occulta* (Erichson, 1837), *A. melanaria* (Mannerheim, 1830), *A. celata* (Erichson, 1837), *A. sordidula* (Erichson, 1837), *A. amicula* (Stephens, 1832), *A. laticollis* (Stephens, 1832). D. Kuthy (1896) recorded additional six species from this territory: *Atheta boletophila* (Thomson, 1856), *A. oblita* (Erichson, 1839), *A. melanaria* (Mannerheim, 1830), *A. fimorum* (Brisout de Barneville, 1860), *A. subsinuata* (Erichson, 1839), *A. liturata* (Stephens, 1832). The most significant work for this area of the modern territory of Slovakia and Transcarpathia (Subcarpathian Rus') was made by J. Roubal (1930), in which he mentioned 17 species belonging to the genus *Atheta*: *A. aquatica* (Thomson, 1852), *A. hypnorum* (Kiesenwetter, 1850), *A. hypnorum* (Kiesenwetter, 1850), *A. incognita* (Sharp, 1869), *A. pilicornis* (Thomson, 1852), *A. vaga* (Heer, 1839), *A. spatula* (Fauvel, 1875), *A. sordidula* (Erichson, 1837), *A. zosterae* (Thomson, 1856), *A. cadaverina* (Brisout de Barneville, 1860), *A. europaea* (Likovský, 1984), *A. laevana* (Mulsant & Rey, 1852), *A. putrida* (Kraatz, 1856), *A. subrugosa* (Märkel & Kiesenwetter, 1848), *A. aegra* (Heer, 1841), *A. excelsa* (Bernhauer, 1911), *A. tibialis* (Heer, 1839). O. Marcu (1936) listed 5 species: *Atheta divisa* (Märkel, 1844), *A. oblita* (Erichson, 1839), *A. ravilla* (Erichson, 1839), *A. monticola* (Thomson, 1852), *A. subtilis* (Scriba, 1866). More recently, O. Mateleshko (2008) recorded three additional species: *Atheta crassicornis* (Fabricius, 1792), *A. oblita* (Erichson, 1839), *A. vaga* (Heer, 1839).

Material and methods

The material consists of 311 examined specimens deposited in the following collections examined through the kindness of: State Museum of Natural History of the National Academy of Sciences of Ukraine, Lviv (SMNH); I. I. Schmalhausen Institute of Zoology National Academy of Sciences of Ukraine, Kyiv (SIZK);

Zoological Museum of Taras Shevchenko National University, Kyiv (ZMTSNU); collection of V. O. Chumak, Uzhgorod (KCHM); collection of N. P. Koval, Velykyi Bereznyi (KKOV); collection of Yu. V. Kanarsky deposited in SMNH. Vast comparative material from Western Europe was studied through the kindness of A. Solodovnikov Natural History Museum of Denmark (ZMUC), Copenhagen.

Current taxonomic status, nomenclature of the species and distribution follow the "Catalogue of Palaearctic Coleoptera" (Schülke & Smetana, 2015) taking into account taxonomic changes based on the molecular phylogenetic analysis (Elven et al., 2010, 2012).

Abbreviations of the collecting localities with their coordinates are as follows: **Ivano-Frankivsk Region** (**IFR**): **Anheliv tract** — Rozhniativskyi District, Osmoloda village (48.672552 N, 24.039903 E); **Kosiv —** Kosiv town (48.319828 N, 25.097768 E); **mountain Dantsyzh** — Nadvirnianskyi District, Vorokhta village (48.135544 N, 24.530363 E); **mountain range Pozhyzhevska** — Nadvirnianskyi District, Vorokhta village (48.144413 N, 24.523402 E); **mountain Rebrovach —** Nadvirnianskyi District, Vorokhta village (48.298046 N, 24.605371 E); **Pistyn** — Kosivskyi District, Pistyn village (48.356373 N, 25.019105 E); **Tatariv** — Nadvirnianskyi District, Tatariv village (48.343931 N, 24.572832 E); **Vorokhta** — Nadvirnianskyi District, Vorokhta village (48.284073 N, 24.559030 E).

Lviv Region (**LWI**): **Bibrka** — Peremyshlianskyi District, Bibrka town (49.639129 N, 24.293517 E); **Ditkivtsi —** Brodivskyi District, Ditkivtsi village (50.082033 N, 25.187976 E); **Ivano-Frankove —** Yavorivskyi District, Ivano-Frankove village (49.921699 N, 23.722952 E); **Pasiky-Zubrytski** — Pustomytivskyi District, Pasiky-Zubrytski village (49.7728439 N, 24.0712486 E); **Roztochia Biosphere Reserve** — Yavorivskyi District, Ivano-Frankove village (49.947253 N, 23.655512 E); **Zubra** — Pustomytivskyi District, Zubra village (49.771909 N, 24.051012 E); **Lviv** — **Lviv** City (49.839337 N, 24.030204 E); **Holosko —** Lviv City (49.870974 N, 24.018913 E); **Kryvchytsi —** Lviv City (49.849492 N, 24.084754 E); **Pohulanka**, Lviv City (49.8245 N, 24.0650 E); **Riasne —** Lviv City (49.869202 N, 23.953784 E); **Sykhiv** — Lviv City (49.790710 N, 24.064629 E); **Zamarstyniv** — Lviv City (49.8634595 N, 24.0193791 E).

Transcarpathian Region (**ZAK**): **mountain range Chornohora** (48.160040 N, 24.500105 E), **Mala Uholka —** Tiachivskyi District, Mala Uholka village (48.2637 N, 23.6232 E); **mountain Yavirnyk —** Volovetskyi District, Skotarske village, south-western slope, the outskirts of the mountain, beech derivative forest, 60 years old, litter (48.759725 N, 23.26430 E); **Stinka mountain range** — Velykoberezniankyi District, Kniahynia village, 961 m, mountain meadow, (48.999267 N, 22.506984 E), **mountain range Yavirnyk** — Velykoberezniankyi District, Mochar village, 1010 m, mountain meadow (48.911741 N, 22.556342 E), **Polianskyi —** Rakhiv District, Dilove village, Maramaros Mts, Mt Polianskyi, 850 m a. s. l., fir-beech forest 160–180 years old (47.936723 N, 24.132009 E); **Kuzii —** Rakhiv District, Luh village, Maramaros Mts, Kuzii site, 380 a. s. l., derivate beech forest mixed with fir and spruce 60–80 years old (47.934847 N, 24.125106 E).

Chernivtsi Region (**CER**): **Chernivtsi City** (48.317560 N, 25.917437 E).

Results

Genus ***Atheta*** Thomson, 1858

Diagnosis. Body ovoid or subparallel, rather loosely articulated, length 2.5–4.8 mm in most species; color: dark brown to black, integument usually with meshed microsculpture; pronotum with pubescence on disc forming distinct pattern, usually directed lateroposteriad from midline, but with specific patterns in different subgenera; hypomera completely visible in lateral view; mesocoxae narrowly separated; process of mesoventrite slender; tarsal formula 4–5–5; athetine bridge located in dorso-basal part of median lobe of aedeagus; spermatheca with club-shaped capsule and long stem that is narrowly looped posteriorly in most species (there are many spermathecal forms presented in *Atheta*).

This genus is treated here as *Atheta* sensu lato, and embraces a wide range of species with diverse morphology forming the *Atheta* complex. It includes several more or less clearly defined subgenera that are not sufficiently delimited to justify elevating them to generic status, and such an act would bring only more confusion.

The subgenera of *Atheta* are listed below in alphabetical order because the relationships between them are not clear. For species identification, dissection and examination of genital structures is necessary (Klimaszeski et al., 2018).

Subgenus *Anopleta* Mulsant & Rey, 1874

Atheta corvina (Thomson, 1856)

Material. 1 ex. **IFR.:** Pistyn [Pistyń], date not specified, 1 ex. (SMNH).

Distribution. Europe, Siberia (Schülke & Smetana, 2015); Ukrainian Carpathians: Ivano-Frankivsk Region, between Pistyn (Glotov & Hushtan, 2020). "Poland", without indication of region (Łomnicki, 1913)

Bionomics. The species occurs in mixed and deciduous forests, in the mountains, where they live in forest litter, decaying organic residues, and in moss (Nikitskij et al., 1996; Semenov, 2007). Adults occur in V–VII (Ganglbauer, 1895).

Atheta kochi Roubal, 1937

Material. 7 ex. **ZAK:** Mala Uholka, 15.08.2017, 5 ex., same locality, 05.09.2017, 2 ex., leg. V. Chumak (KCHM).

Distribution. Central and South Europe (Schülke & Smetana, 2015); **Ukraine (first record).**

Bionomics. Biology has not been studied. The entire material is collected with the help of window traps.

Subgenus ***Atheta*** Thomson, 1858

Atheta allocera Eppelsheim, 1893

Material. Literature data only.

Distribution. Europe, East Siberia, Mongolia, Japan (Schülke & Smetana, 2015); in the Ukrainian Carpathians known from Ivano-Frankivsk Region, mountain Dantsyzh (Lokay, 1912).

Bionomics. The species occurs in lowlands and foothills along rivers and reservoirs, in forest litter and in remains of plants.

Atheta aquatica (Thomson, 1852)

Material. **27 ex. ZAK:** Mala Uholka, 15.07.2017, 14 ex., same locality, 15.08.2017, 11 ex., same locality, 15.09.2017, 2 ex., leg. V. Chumak (KCHM).

Distribution. Europe, Asia Minor, Siberia, Central Asia (Schülke & Smetana, 2015); in the Ukrainian Carpathians known from Transcarpathian Region, mountain Hoverla (Fleischer et al., 1924), Kuzii tract (Roubal, 1930), "Poland", without indication of region (Łomnicki, 1913).

Bionomics. The species occurs in lowlands and foothills along rivers and reservoirs, in swampy areas and in places of accumulation of moisture, in sediments and in remains of plants (Roubal, 1930; Glotov, 2021).

Atheta autumnalis (Erichson, 1839)

Material. 1 ex. **CER:** Chernivtsi [Bucowina. Czernowitz], data not specified, 1 ex. (ZMTSNU).

Distribution. Europe (Schülke & Smetana, 2015); in the Ukrainian Carpathians known from Ivano-Frankivsk Region, between Vorokhta and Tatarov (Lokay, 1912).

Bionomics. The remains of plants species occurs in lowlands and foothills, in forest litter and in remains of plants.

Atheta boletophila Thomson, 1856

Material. Literature data only.

Distribution. Europe, Far East (Schülke & Smetana, 2015); in the Ukrainian Carpathians known from Transcarpathian Region, Rakhiv (Kuthy, 1896).

Bionomics. The species occurs in lowlands and in foothills where they are widespread in *Inonotus obliquus* (Pers.) Pil., sometimes found on other fungi (Bogdanov, 1985; Semenov, 2007).

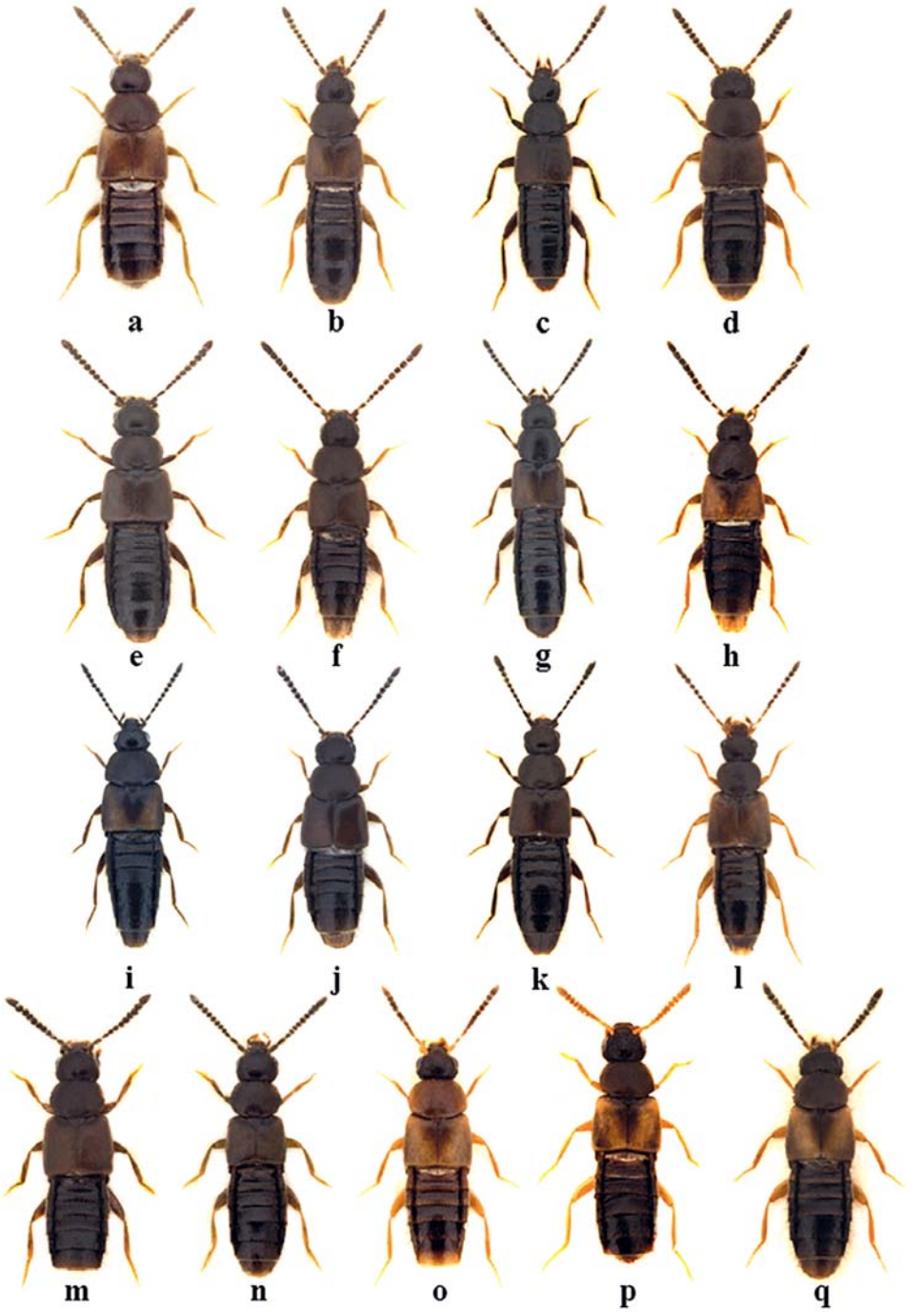

Fig. 1. Habitus: a — *Atheta coriaria* (Kraatz, 1856); b — *A. divisa* (Märkel, 1844); c — *A. graminicola* (Gravenhorst, 1806); d — *A. oblita* (Erichson, 1839); e — *A. ravilla* (Erichson, 1839); f — *A. macrocera* (Thomson, 1856); g — *A. occulta* (Erichson, 1837); h — *A. longicornis* (Gravenhorst, 1802); i — *A. melanaria* (Mannerheim, 1830); j — *A. zosterae* (Thomson, 1856); k — *A. atramentaria* (Gyllenhal, 1810); l — *A. marcida* (Erichson, 1837); m — *A. subtilis* (Scriba, 1866); n — *A. amicula* (Stephens, 1832); o — *A. laticollis* Stephens, 1832; p — *A. liturata* (Stephens, 1832); q — *A. nigritula* (Gravenhorst, 1802).

Atheta brunneipennis (Thomson, 1852)

Material. Literature data only.

Distribution. Europe, Eastern Siberia, Far East (Schülke & Smetana, 2015); "Poland", without indication of region (Łomnicki, 1913).

Bionomics. The species occurs in lowlands and foothills in forest litter and in remains of plants (Glotov, 2021).

Atheta castanoptera Mannerheim, 1830

Material. **13 ex. IFR:** Vorokhta [Worochta. Cp. or.], 24.6. [19]11, 1 ex., leg. Dr. Lokay, coll. Grolle, same locality but, 1 ex., same locality but, leg. Stoeekel, 4 ex. **LWI:** Bibrka [Bobr], 9.7. [year not specified], 1 ex.; Ditkivtsi [D], 26.8. [year not specified], 1 ex.; Lviv [ok. Lwowa], date not specified, 5 ex., coll. Grolle. (SMNH); Roztochia Biosphere Reserve, 24.08.1988, 4 ex., leg. A. Petrenko (SIZK).

Distribution. Palaearctic (Schülke & Smetana, 2015); in the Ukrainian Carpathians known from Ivano-Frankivsk Region, Bystrets (Miller, 1868), Verkhovyna (Łomnicki, 1868) and Transcarpathian Region, mountain range Chornohora (Nowicki, 1873; Weise, 1876). Without specifying the territory is given in the catalogs of "Galicia and Poland" (Łomnicki, 1884, 1913).

Bionomics. The species occurs in lowlands and foothills where they live along rivers and in remains of plants (Glotov, 2021).

Atheta contristata (Kraatz, 1856)

Material. Literature data only.

Distribution. West and South Europe (Schülke & Smetana, 2015); in the Ukrainian Carpathians known from Transcarpathian Region, mountain Blyznytsia (Fleischer et al., 1924).

Bionomics. The species occurs in lowlands and foothills where they live in forest litter and in remains of plants (Fleischer et al., 1924).

Atheta coriaria (Kraatz, 1856) (fig. 1, a)

Material. 1 ex. **LWI:** Lviv, Riasne [Rzęsna], 14.4.1918, 1 ex., det. Dr. Lokay. (SMNH).

Distribution. Cosmopolitan (Schülke & Smetana, 2015); **first record for the Ukrainian Carpathians**.

Bionomics. The species occurs in lowlands and in foothills where they live in forest litter (Semenov, 2007).

Atheta crassicornis (Fabricius, 1792)

Material. **54 ex. CER:** Chernivtsi [Bucowina. Czernowits], data not specified, 3 ex. (ZMTSNU). **IFR:** Vorokhta [Worochta], date not specified, 6 ex.; same locality but, date not specified, 1 ex., coll. Grolle. **LWI:** Ivano-Frankove [Janów], 10.4. [year not specified], 1 ex., leg. A. Stoeckel, same locality but, date not specified, 2 ex.; Roztochia Biosphere Reserve, 24.08.1988, 1 ex., leg. A. Petrenko (SIZK). Lviv [Lwów], 18.3. [1]925, 1 ex.; same locality but, 28.3. [1]925, 1 ex.; same locality but, 24.4. [1]925, 1 ex.; same locality but, date not specified, 3 ex.; same locality but, 29.3. [year not specified], 2 ex., coll. Grolle; same locality but, [ok. Lwowa], date not specified, 1 ex., coll. Grolle; same locality but, Holosko [H], 13.9. [year not specified], 1 ex.; same locality but, Pohulanka [Pohulanka], 14.4. 1917, 1 ex.; same locality but, 5.5. [19]16, 1 ex., leg. Grolle, coll. Grolle; locality not specified, 25.7. [year not specified], 1 ex. (SMNH). **ZAK:** Mala Uholka, 16.10.1984, 4 ex., leg. V. Chumak; same locality but, 13.08.1990, 3 ex., leg. V. Chumak (SIZK); mountain Yavirnyk, 21.05. — 02.07.2009, 1 ex., leg. Yu. Kanarskyi; Polianskyi, 14.05–19.06.2009, 1 ex., leg. Yu. Kanarskyi; Kuzii, 15.04. — 15.05.2009, 1 ex., leg. Yu. Kanarskyi; same locality, 15.05–20.06.2009, 1 ex., leg. Yu. Kanarskyi (SMNH); Stinka mountain range, ecotone, 21.06.2018, 7 ex.; same locality but, ecotone, 23.08.2018, 3 ex., same locality but, forest, 18.05.2019, 2 ex., mountain range Yavirnyk, mountain meadow, 27.06.2018, 9 ex., same locality but, ecotone, 29.08.2018, 2 ex. leg. N. Koval (KKOV).

Distribution. Palaearctic (excluding Far East) (Schülke & Smetana, 2015). In the Ukrainian Carpathians known from the Ukrainian Carpathian Mountains (Mateleshko, 2008), Transcarpathian Region, Kuzii locality, Mountain Polianskyi (Glotov et al., 2020) and Lviv Region, Pohulanka, Klepariv, Holosko (Łomnicki, 1890; 1891). "Poland", without indication of region (Łomnicki, 1913).

Bionomics. The species occurs in lowlands, in foothills as well as high in the mountains in deciduous and mixed forests, in meadows and in artificial plantations, in forest litter, along rivers and reservoirs, under wet leaves and in plant remains, as well as in many agaric and pore fungi (Łomnicki, 1891; Glotov, 2021).

Atheta diversa diversa (Sharp, 1869)

Material. 1 ex. **IFR:** Vorokhta [Worochta. Cp. or.], 24.6. [19]11, 1 ex., leg. Dr. Lokay, coll. Grolle. (SMNH).

Distribution. Europe (Schülke & Smetana, 2015); in the Ukrainian Carpathians known from Ivano-Frankivsk Region, between Vorokhta and Tatarov 9.08. (Lokay, 1912).

Bionomics. The species occurs in lowlands and in foothills of coniferous and deciduous forests, where they live in forest litter, mosses and fungi, in particular it is noted on *Ganoderma lipsiense* (Batsch) G. F. Atk. (= *applanatum* (Pers.) Pat.) (Semenov, 2007).

Atheta divisa (Märkel, 1844) (fig. 1, b)

Material. 7 ex. **LWI:** Ivano-Frankove [Janów], 22.7. [1]917, 2 ex.; Lviv [ok. Lwowa], 22.5. [year not specified], 5 ex. (SMNH).

Distribution. Europe (Schülke & Smetana, 2015). In the Ukrainian Carpathians known from Chernivtsi Region, Chernivtsi, Convent of the Nativity of the Virgin "Horecea", Zhuchka (Marcu, 1936). "Poland", without indication of region (Łomnicki, 1913).

Bionomics. The species occurs in wet places in remains of plant and animal origin, on the flowing sap of trees. At dusk, they fly to light.

Atheta hypnorum (Kiesenwetter, 1850)

Material. Literature data only.

Distribution. Europe, Asia Minor, West Siberia, Mongolia (Schülke & Smetana, 2015). In the Ukrainian Carpathians known from Ivano-Frankivsk Region, mountain Dantsyzh (Lokay, 1912) and Transcarpathian Region (Roubal, 1930). "Poland", without indication of region (Łomnicki, 1913).

Bionomics. The species occurs in lowlands and highlands where they live in the forest litter, on the banks of rivers and reservoirs, in mosses and under the bark of trees as well as in rotten wood (Roubal, 1930).

Atheta fungicola Thomson, 1852

Material. Literature data only.

Distribution. Europe, Asia Minor (Schülke & Smetana, 2015). In the Ukrainian Carpathians known from Ivano-Frankivsk Region, Bystrets (Miller, 1868), Verkhovyna (Łomnicki, 1868) and Transcarpathian Region, mountain range Chornohora (Nowicki, 1873). Without specifying the territory is given in the catalog of Galicia (Łomnicki, 1884).

Bionomics. The species occurs in lowlands and in foothills of coniferous and deciduous forests, where they live in the forest litter, in fungi, in particular it is noted in fungi of the genus *Russula* (Semenov, 2007).

Atheta graminicola (Gravenhorst, 1806) (fig. 1, c)

Material. **10 ex. LWI:** Ivano-Frankove [Janów], date not specified, 4 ex.; Lviv [L], [132], date not specified, 1 ex.; same locality but, 6.9. [year not specified], 1 ex.; same locality but, Sykhiv [Sichów], date not specified, 1 ex.; Zubra [Zubra], 7.5. [year not specified], 1 ex. (SMNH). **ZAK:** Mala Uholka, 13.08.1990, 2 ex., leg. V. Chumak (SIZK).

Distribution. Palaearctic (excluding North Africa) (Schülke & Smetana, 2015). Without specifying the territory is given in the catalogs of Galicia and Poland (Łomnicki, 1884, 1913); **first record for Ukrainian Carpathians.**

Bionomics. The species occurs in lowlands and foothills in deciduous and mixed forests, in swamps, along rivers and reservoirs, where they live in cover and coastal sediments, in mosses, in sedge and cereal mounds, in dry grass; in warm evenings, they often gather in mowing around vegetation. At dusk, they fly to light (Semenov, 2007; Glotov, 2021).

Atheta euryptera (Stephens, 1832)

Material. 1 ex. **LWI:** Lviv [Lw], 5.5. [year not specified], 1 ex. (SMNH).

Distribution. Palaearctic (excluding North Africa) (Schülke & Smetana, 2015); in the Ukrainian Carpathians known from Ivano-Frankivsk Region, Bystrets (Miller, 1868), Verkhovyna (Łomnicki, 1868), Transcarpathian Region, mountain range Chornohora (Nowicki, 1873) and Lviv Region, Lviv, Vulka (Łomnicki, 1890). Without specifying the territory is given in the catalogs of Galicia and Poland (Łomnicki, 1884, 1913).

Bionomics. The species occurs in lowlands and foothills in deciduous and mixed forests, where they live in forest litter, on fresh and fermented sap of birches, oaks, elms, willows and other deciduous trees, sometimes occur in rotten fungi and rotten plant remains (Łomnicki, 1890; Semenov, 2007).

Atheta incognita (Sharp, 1869)

Material. Literature data only.

Distribution. Europe, Asia Minor (Schülke & Smetana, 2015); in the Ukrainian Carpathians known from Transcarpathian Region, Yesenia 3 km SW, Diana tract (Roubal, 1930).

Bionomics. The species occurs in foothills and highlands in deciduous and mixed forests, where they live in forest litter, under bark and rotten wood and in fungi (Roubal, 1930).

Atheta laevicauda J. Sahlberg, 1876

Material. Literature data only.

Distribution. Europe (Schülke & Smetana, 2015); in the Ukrainian Carpathians known from Transcarpathian Region, mountain range Chornohora, mountain Hoverla (Rybiński, 1903) and Ivano-Frankivsk Region, mountain Dantsyzh (Lokay, 1912). "Poland", without indication of region (Łomnicki, 1913).

Bionomics. The species occurs in foothills and highlands in deciduous and mixed forests, where they live in fungi (Roubal, 1930).

Atheta oblita (Erichson, 1839) (fig. 1, d)

Material. 5 ex. **Ukraine: CER:** Chernivtsi [Bucowina. Czernowitz], data not specified, 4 ex. (ZMTSNU); **LWI:** Lviv, Holosko [H], 21.10. [year not specified], 1 ex. (SMNH).

Distribution. Europe, Caucasus, Asia Minor, Iran, Syria, Mongolia (Schülke & Smetana, 2015); in the Ukrainian Carpathians known from the Ukrainian Carpathian Mountains (Mateleshko, 2008), Chernivtsi Region, Chernivtsi, mountain Tsetsyno (Marcu, 1936), Lviv Region, Holosko (Łomnicki, 1890, 1891) and Transcarpathian Region, Uzhhorod (Kuthy, 1896). "Poland", without indication of region (Łomnicki, 1913).

Bionomics. The species occurs in foothills and highlands in deciduous and mixed forests, where they live in forest litter, in rotten wood and in remains of plants, as well as in the nests of small mammals, often found in fungi: *Laetiporus sulphureus* (Bull.) Murr., *Inonotus dryadeus* (Pers.) Murr. та *Polyporus squamosus* Huds. (Roubal, 1930; Semenov, 2007; Glotov, 2021).

Atheta pilicornis (Thomson, 1852)

Material. Literature data only.

Distribution. Europe, East Siberia (Schülke & Smetana, 2015); in the Ukrainian Carpathians known from Lviv Region, Lviv, Pohulanka (Łomnicki, 1890, 1891) and Transcarpathian Region, Kozmeschik tract (Roubal, 1930). "Poland", without indication of region (Łomnicki, 1913).

Bionomics. The species occurs in foothills and mountain forests, where they live in fungi (Roubal, 1930).

Atheta ravilla (Erichson, 1839) (fig. 1, e)

Material. **12 ex. CER:** Chernivtsi [Bucowina. Czernowitz], data not specified, 4 ex. (ZMTSNU). **IFR:** Vorokhta [Worochta], date not specified, 2 ex.; **LWI:** Lviv [Lwów], 7.04.1925, 1 ex.; same locality but, [L], 27.3. [year not specified], 1 ex.; Zubra [Zubra], date not specified, 1 ex.; Pasiky-Zubritski [Pasieki], 6.05. 1917, 1 ex.; same locality but, 12.05. [1]917, 2 ex. (SMNH).

Distribution. Europe, Caucasus, North Africa (Schülke & Smetana, 2015). In the Ukrainian Carpathians known from Lviv Region, Lviv (Łomnicki, 1890, 1891), Lviv and Chernivtsi Region, Chernivtsi, mountain Tsetsyno (Marcu, 1936). "Poland", without indication of region (Łomnicki, 1913).

Bionomics. The species occurs in foothills and mountain forests, where they live mainly in the burrows and nests of mammals, in remains of plants, sometimes found on the flowing sap of trees and in fungi: *Phallus impudicus* Pers., *Laetiporus sulphureus* (Bull.) Murr. (Łomnicki, 1890; Semenov, 2007).

Atheta vaga (Heer, 1839)

Material. 5 ex. **ZAK:** Stinka mountain range, 18.05.2019, 1 екз.; same locality but, 30.06.2019, 1 ex., leg. N. Koval; Yavirnyk mountain range, 27.05.2019, 1 ex.; same locality but, 19.06.2019, 2 ex., leg. N. Koval (KKOV).

Distribution. Europe, Caucasus, North Africa, Siberia, Mongolia (Schülke & Smetana, 2015). In the Ukrainian Carpathians known from Carpathian Mountains (Mateleshko, 2008) and Transcarpathian Region, mountain range Chornohora; mountain Sheshul and Uzhhorod (Roubal, 1930). "Poland", without indication of region (Łomnicki, 1913).

Bionomics. The species occurs from lowlands to highlands in deciduous and mixed forests, in meadows, along rivers and reservoirs in coastal sediments, in remains of plant and animal origin, in mammals' burrows and in birds' nests, on fermented birch sap, in rotten fungi (Roubal, 1930; Semenov, 2007).

Atheta xanthopus (Thomson, 1856)

Material. 5 ex. **LWI:** Ivano-Frankove [Janów], date not specified, 1 ex.; same locality but, Sykhiv [Sichów], date not specified, 2 ex.; Zubra [Zubra], 1 ex., same locality but, 24.4. [year not specified], 1 ex. (SMNH).

Distribution. Europe, North Africa (Schülke & Smetana, 2015). "Poland", without indication of region (Łomnicki, 1913).

Bionomics. The species occurs in lowlands and foothills in deciduous and mixed forests, where they live in forest litter and in remains of plants (Semenov, 2007).

Subgenus *Badura* Mulsant & Rey, 1873
Atheta cauta (Erichson, 1837)

Material. Literature data only.

Distribution. Europe, Asia Minor, Siberia, Far East (Schülke & Smetana, 2015); "Poland", without indication of region (Łomnicki, 1913).

Bionomics. The species occurs in lowlands and foothills in deciduous and mixed forests, where they live in forest litter, in remains of plants as well as in manure (Semenov, 2007).

Atheta macrocera (Thomson, 1856) (fig. 1, f)

Material. Literature data only.

Distribution. Europe, Caucasus, Kazakhstan (Schülke & Smetana, 2015); in the Ukrainian Carpathians known from Ivano-Frankivsk Region, between Vorokhta and Tatarov (Lokay, 1912).

Bionomics. The species occurs in lowlands and foothills in deciduous and mixed forests, where they live in manure, plant and animal remains, on tree sap, rotten fungi, especially in *Laetiporus sulphureus* (Bull.) Murr. (Semenov, 2007; Glotov, 2021).

Atheta spatula (Fauvel, 1875)

Material. Literature data only.

Distribution. Central and South Europe (Schülke & Smetana, 2015); in the Ukrainian Carpathians known from Transcarpathian Region, Lazeshchyna 8 km SSE, Kozmeschik tract (Roubal, 1930).

Bionomics. The species occurs mainly in foothills and high in the mountains, in deciduous and mixed forests, in plains where they live in intact forests in forest litter, but more often it occurs in fungi (Roubal, 1930).

Subgenus *Bessobia* Thomson, 1858
Atheta occulta (Erichson, 1837) (fig. 1, g)

Material. **30 ex. CER:** Chernivtsi [Bucowina. Czernowitz], data not specified, 4 ex. (ZMTSNU). **LWI:** Lviv [Lwiw], date not specified, 4 ex.; same locality but, 23.4[19]16, 1 ex.; same locality but, 28.4[1]925, 1 ex.; same locality but, 2.4. [year not specified], 1 ex.; same locality but, [Lm], 8.4. [year not specified], 1 ex.; same locality but, [Lm], 6.4. [year not specified], 1 ex.; same locality but, Sykhiv [Sichów], date not specified, 1 ex. (SMNH). **ZAK:** Stinka mountain range, forest, 23.08.2018, 2 ex.; same locality but, ecoton, 18.05.2019, 1 ex., same locality but, ecotone, 04.06.2019, 2 ex., same locality but, mountain meadow, 19.07.2019, 2 ex., mountain range Yavirnyk, ecotone, 05.06.2018, 1 ex., same locality but, ecotone, 27.06.2018, 2 ex., same locality but, mountain meadow, 12.05.2019, 2 ex., same locality but, mountain meadow, 08.07.2019, 4 ex., leg. Koval N. (KKOV).

Distribution. Europe, Caucasus, Asia Minor, North Africa, Siberia, Far East (Schülke & Smetana, 2015); in the Ukrainian Carpathians known from Chernivtsi Region, Chernivtsi, in spring under leaves (Hormuzaki, 1891) and Lviv Region, Lviv, Lychakiv District

(Łyczakowskie przedmieście) (Łomnicki, 1890). Without specifying the territory is given in the catalogs of Galicia and Poland (Łomnicki, 1884, 1913).

Bionomics. The species occurs in lowlands and foothills in deciduous and mixed forests on forest glades, meadows, in forest litter and on animal cadavers (Semenov, 2007).

Atheta monticola (Thomson, 1852)

Material. 1 ex. **IFR:** Vorokhta [Worochta], data not specified, 1 ex. (SMNH).

Distribution. Europe (Schülke & Smetana, 2015). In the Ukrainian Carpathians known from Chernivtsi Region, Chernivtsi, mountain Tsetsyno (Marcu, 1936). "Poland", without indication of region (Łomnicki, 1913).

Bionomics. The species occurs in lowlands and foothills in deciduous and mixed forests, where they live in remains of animal origin, on animal cadavers (Semenov, 2007).

Subgenus *Chaetida* Mulsant & Rey, 1873
Atheta longicornis (Gravenhorst, 1802) (fig. 1, h)

Material. 6 ex. **LWI:** Lviv [Lwów], 22.9. [1]917, 1 ex.; same locality but, 1.5. [1]917, 1 ex., same locality but, 23.4. [year not specified], 1 ex.; same locality but, Holosko [H], 23.7. [year not specified], 1 ex. (SMNH). **ZAK:** Mala Uholka, 05.05.2017, 2 ex., leg. V. Chumak (KCHM).

Distribution. Palaearctic, Oriental Regions, North America (Schülke & Smetana, 2015). In the Ukrainian Carpathians known from Lviv Region, Lviv, Znesinnia, in the second half of July (Łomnicki, 1890) and Transcarpathian Region, mountain range Chornohora (Weise, 1876). Without specifying the territory is given in the catalogs of Galicia and Poland (Łomnicki, 1884, 1913).

Bionomics. The species occurs mainly in foothills and high in the mountains, in deciduous and mixed forests where they live in forest litter, in manure, in remains of plant and animal origin, in rotten fungi, as well as on the fermented sap of trees (Roubal, 1930; Semenov, 2007).

Subgenus ***Coprothassa*** Thomson, 1859
Atheta melanaria (Mannerheim, 1830) (fig. 1, i)

Material. 4 ex. **LWI:** Lviv [Lwów], 22.9. [1]917, 1 ex.; same locality but, date not specified, 2 ex. (SMNH). **ZAK:** Mala Uholka, 13.08.1990, 1 ex., leg. V. Chumak (SIZK).

Distribution. Palaearctic, Oriental Regions (Schülke & Smetana, 2015). In the Ukrainian Carpathians known from Chernivtsi Region, Chernivtsi (Hormuzaki, 1888), Lviv Region, the vicinity of Lviv (Łomnicki, 1886, 1890) and Transcarpathian Region, Berehovo (Kuthy, 1896). Without specifying the territory is given in the catalogs of Galicia and Poland (Łomnicki, 1884, 1913).

Bionomics. The species occurs in lowlands and foothills in the manure of cattle and wild mammals (Roubal, 1930; Semenov, 2007).

Subgenus *Datomicra* Mulsant & Rey, 1874
Atheta canescens (Sharp, 1869)

Material. 2 ex. **LWI:** Ivano-Frankove [Janów], 9. [1]899, 1 ex.; same locality but, date not specified, 1 ex. (SMNH).

Distribution. Europe, Siberia, Mongolia (Schülke & Smetana, 2015).

Bionomics. The species occurs in lowlands and in foothills, in deciduous and mixed forests, in meadows, along rivers and reservoirs, where they live in forest litter, in sediments, in manure, in remains of plant and animal origin, on animal cadavers (Semenov, 2007).

Atheta celata (Erichson, 1837)

Material. 5 ex. **IFR:** Vorokhta [Worochta], date not specified, 1 ex.; same locality but, 20.6. [19]11, 1 ex., leg. Dr. Lokay; **LWI:** Lviv [ok. Lwowa], 22.5. [year not specified], 1 ex.; same locality but, Pohulanka, 4.5. [year not specified], 2 ex. (SMNH).

Distribution. Holarctic (Schülke & Smetana, 2015). In the Ukrainian Carpathians known from Chernivtsi Region, Chernivtsi (Hormuzaki, 1888). Without specifying the territory is given in the catalogs of Galicia and Poland (Łomnicki, 1884, 1913).

Bionomics. The species occurs in lowlands and foothills, in deciduous and mixed forests, in meadows, along rivers and reservoirs, where they live in forest litter, rotten wood and hay, in rotten fungi, in coastal sediments, sometimes on animal cadavers and in manure (Semenov, 2007; Glotov, 2021).

Atheta sordidula (Erichson, 1837)

Material. 5 ex. **LWI:** Ivano-Frankove [Janów], date not specified, 2 ex.; same locality but, 4.9. [1]917, 1 ex.; same locality but, 9.9. [1]917, 1 ex.; Lviv [Lw], 16.7. [year not specified], 1 ex. (SMNH).

Distribution. Europe, Caucasus, Asia Minor, Kazakhstan, Siberia, Far East, Oriental Regions (Schülke & Smetana, 2015). In the Ukrainian Carpathians known from Chernivtsi Region, Chernivtsi (Hormuzaki, 1888, 1889) and Transcarpathian Region, Uzhhorod (Roubal, 1930). Without specifying the territory is given in the catalogs of Galicia and Poland (Łomnicki, 1884, 1913).

Bionomics. The species occurs both in lowlands and high in the mountains, in deciduous and mixed forests, meadows and mountain meadow, along rivers and reservoirs, where they live in forest litter, in rotten wood, in rotten hay and grass, on the flowing sap of trees, in mature and in rotten fungi, in coastal deposits, sometimes on animal cadavers and in manure, and burrows and nests of mammals (Roubal, 1930; Semenov, 2007).

Atheta zosterae (Thomson, 1856) (fig. 1, j)

Material. 7 ex. **IFR:** Pistyn [Pištyn], date not specified, 1 ex.; **LWI:** Ivano-Frankove [Janów], date not specified, 1 ex.; Lviv [ok. Lwowa], 22.5. [year not specified], 3 ex.; same locality, [Lwiw], date not specified, 2 ex. (SMNH).

Distribution. Europe, North Africa, Asia Minor, Kazakhstan (Schülke & Smetana, 2015). In the Ukrainian Carpathians known from Transcarpathian Region, Uzhhorod (Roubal, 1930). Without specifying the territory is given in the catalogs of Galicia and Poland (Łomnicki, 1884, 1913).

Bionomics. The species occurs in forests and on open steppe and meadow areas, at foothills and high in the mountains, where they live in forest litter, in decaying plant residues, in fungi, in holes of rodents, in nests of birds, in ant hills, and on flowing sap of trees. Adults occur in V–IX (Bogdanov 1985; Semenov, 2007; Glotov, 2021).

Subgenus *Dimetrota* Mulsant & Rey, 1873

Atheta atramentaria (Gyllenhal, 1810) (fig. 1, k)

Material. 2 ex. **IFR:** Vorokhta [Worochta], date not specified, 2 ex. (SMNH).

Distribution. Holarctic, Afrotropical and Oriental Regions (Schülke & Smetana, 2015). In the Ukrainian Carpathians known from Transcarpathian Region, mountain Hoverla (Rybiński, 1903). "Poland", without indication of region (Łomnicki, 1913).

Bionomics. The species occurs both in lowlands and high in the mountains, almost exclusively in open, unforested areas, in meadows, forest glades and meadows, or on border of forests and meadows in the manure of cattle and wild animals (Semenov, 2007).

Atheta cadaverina (Brisout de Barneville, 1860)

Material. 3 ex. **IFR:** Vorokhta [Worochta], date not specified, 1 ex.; **LWI:** Lviv [Lwów], 9.4. [19]24, 1 ex.; same locality but, [L], 22.3. [year not specified], 1 ex. (SMNH).

Distribution. Europe (Schülke & Smetana, 2015). In the Ukrainian Carpathians known from Transcarpathian Region, mountain Blyznytsia (Fleischer et al., 1924), Uzhhorod (Roubal, 1930). "Poland", without indication of region (Łomnicki, 1913).

Bionomics. A rare species, which occurs both in lowlands and high in the mountains in remains of plant and animal origin, on animal cadavers, in cattle manure and in underground nests of mammals (Roubal, 1930; Semenov, 2007).

Atheta europaea Likovský, 1984

Material. 5 ex. **LWI:** Ivano-Frankove [Janów], date not specified, 2 ex.; Lviv [Lwów], date not specified, 1 ex.; same locality but, [ok. Lwowa], 11.4. [1]917, 1 ex.; Zubra [Zubra], date not specified, 1 ex. (SMNH).

Distribution. West and South Europe (Schülke & Smetana, 2015). In the Ukrainian Carpathians known from Transcarpathian Region, mountain Sheshul (Roubal, 1930). "Poland", without indication of region (Łomnicki, 1913).

Bionomics. The species occurs both in lowland and high in the mountains in deciduous and mixed forests, in meadows and mountain meadows, in floodplains, on forest glades in forest litter, in remains of plants, in coastal sediments, in manure of cattle and wild animals as well as in fungi (Roubal, 1930; Semenov, 2007).

Atheta intermedia (Thomson, 1852)

Material. 4 ex. **IFR:** Vorokhta [Worochta], date not specified, 1 ex.; same locality but, 5. [1]926, 1 ex.; same locality but, 10. [1]926, 1 ex.; **LWI:** Lviv [Lwów], 28.3. [1]925, 1 ex. (SMNH).

Distribution. Europe, East Siberia, Far East (Schülke & Smetana, 2015). Without indication for the territory is given in the catalog of Poland (Łomnicki, 1913); **Ukraine (first record).**

Bionomics. The species occurs in lowlands and in foothills, in deciduous and mixed forests, in meadows, on the banks of rivers and reservoirs, where they live in forest litter, in sediments, in manure, in remains of plant and animal origin, on animal cadavers (Semenov, 2007).

Atheta laevana (Mulsant & Rey, 1852)

Material. 7 ex. **IFR:** mountain Rebrovach [Rebrowac Cp. or.], date not specified, 1 ex., leg. Dr. Lokay. **LWI:** Ivano-Frankove [Janów], date not specified, 5 ex.; Lviv, Pohulanka [Pohulanka], 6.4. [1]917, 1 ex. (SMNH).

Distribution. Europe, North Africa, Asia Minor, Siberia (Schülke & Smetana, 2015). In the Ukrainian Carpathians known from Ivano-Frankivsk Region, mountain Rebrovach (Lokay, 1912) and Transcarpathian Region, mountain range Chornohora, mountain Sheshul (Roubal, 1930). Without specifying the territory is given in the catalogs of Galicia and Poland (Łomnicki, 1884, 1913).

Bionomics. The species occurs mainly in mountains in deciduous and mixed forests, in meadows and mountain meadows, in forest litter, in coastal sediments, in hay and rotten grass as well as in manure (Roubal, 1930).

Atheta marcida (Erichson, 1837) (fig. 1, l)

Material. Literature data only.

Distribution. Europe, North Africa (Schülke & Smetana, 2015); "Poland", without indication of region (Łomnicki, 1913).

Bionomics. The species occurs mainly in lowlands and in foothills in deciduous and mixed forests in forest litter (Glotov, 2020).

Atheta nigripes (Thomson, 1856)

Material. 1 ex. **IFR:** Kosiv [Kossiw], date not specified, 1 ex. (SMNH).

Distribution. Europe, Mongolia, North Korea (Schülke & Smetana, 2015). In the Ukrainian Carpathians known from Transcarpathian Region, mountain Hoverla (Rybiński, 1903). "Poland", without indication of region (Łomnicki, 1913).

Bionomics. Mixed and deciduous forests. The species occurs mainly in lowlands and in foothills in deciduous and mixed forests in forest litter (Glotov, 2020).

Atheta putrida (Kraatz, 1856)

Material. 7 ex. **CER:** Chernivtsi [Bucovina. Czernowitz], data not specified, 2 ex. (ZMTSNU). **IFR:** Vorokhta [Worochta], date not specified, 1 ex.; **LWI:** Lviv [Lwiw], date not specified, 1 ex.; same locality but, Pohulanka [Pohulanka], 6.4. [1]917, 1 ex.; same locality but, Sykhiv [Sichów], 1 ex., Pasiky-Zubrycki [Pasieki], 6.5. [1]917, 1 ex. (SMNH).

Distribution. Central and South Europe, Asia Minor (Schülke, Smetana, 2015). In the Ukrainian Carpathians known from Lviv Region, Lviv, Pohulanka, in July (Łomnicki, 1890; 1891) and Transcarpathian Region, mountain Sheshul (Roubal, 1930). "Poland", without indication of region (Łomnicki, 1913).

Bionomics. The species occurs mainly in lowlands and in foothills in deciduous and mixed forests in forest litter and in rotten wood, in coastal sediments, sometimes they occur with ants *Lasius fuliginosus* Latr. (Roubal, 1930).

Atheta setigera (Sharp, 1869)

Material. 3 ex. **IFR:** mountain Rebrovach [Rebrowac], date not specified, 1 ex., leg. A. Stöeckel; mountain range Pozhyzhevska [Pożyżewska Cp. or.], 11.9. [19]08, 2 ex. (SMNH).

Distribution. Europe (Schülke & Smetana, 2015); **Ukraine (first record).**

Bionomics. The species occurs mainly in foothills and high in the mountains in deciduous and mixed forests, in mountain meadows in the forest litter and in remains of plants.

Atheta subrugosa (Märkel & Kiesenwetter, 1848)

Material. Literature data only.

Distribution. Central Europe, Mongolia (Schülke, Smetana, 2015); in the Ukrainian Carpathians known from Transcarpathian Region, mountain Hoverla; Dubove 8 km E, mountain Apetska (Roubal, 1930).

Bionomics. The species occurs mainly in mountains in deciduous and mixed forests, in mountain meadows in cattle manure, in forest litter, in rotten wood and in remains of plants (Roubal, 1930).

Atheta subtilis (Scriba, 1866) (fig. 1, m)

Material. 2 ex. **LWI:** Lviv [Lwiw], date not specified, 1 ex.; same locality but, Pohulanka [Pohulanka], 6.4. 1917, 1 ex. (SMNH). **ZAK:** mountain Yavirnyk, 03.05–21.05.2009, 1 ex., leg. Yu. Kanarskyi (SMNH).

Distribution. Europe, Asia Minor, Mongolia (Schülke & Smetana, 2015). In the Ukrainian Carpathians known from Chernivtsi Region, Chernivtsi, mountain Tsetsyno,

Bila (Marcu, 1936) and Transcarpathian Region, mountain Pop Ivan (Fleischer et al., 1925). "Poland", without indication of region (Łomnicki, 1913).

Bionomics. The species occurs mainly in lowlands and foothills in deciduous and mixed forests in forest litter and in rotten wood, in coastal sediments, in rotten fungi, on fermented birch sap, in straw and on animal cadavers (Semenov, 2007).

Subgenus *Microdota* Mulsant & Rey, 1873

Atheta aegra (Heer, 1841)

Material. Literature data only.

Distribution. Europe, Asia Minor, Syria (Schülke & Smetana, 2015). In the Ukrainian Carpathians known from Transcarpathian Region, Kuzii tract (Roubal, 1930).

Bionomics. The species occurs mainly in lowlands and foothills, in deciduous, mostly oak and beech forests, in forest litter and in remains of plants (Roubal, 1930).

Atheta amicula (Stephens, 1832) (fig. 1, n)

Material. 15 ex. **LWI:** Ivano-Frankove [Janów], date not specified, 1 ex.; Lviv, Sykhiv [Sichów], date not specified, 1 ex.; Zubra [Zubra], date not specified, 1 ex. (SMNH). **ZAK:** Mala Uholka, 20.06.2017, 12 ex., leg. V. Chumak (KCHM).

Distribution. Palaearctic, Nearctic and Neotropical Regions (Schülke & Smetana, 2015). In the Ukrainian Carpathians known from Chernivtsi Region, Chernivtsi, Convent of the Nativity of the Virgin Horecea, under leaves in the forest (Hormuzaki, 1888). Without specifying the territory is given in the catalogs of Galicia and Poland (Łomnicki, 1884, 1913).

Bionomics. The species occurs mainly in foothills and high in the mountains, in forest litter and in remains of plant and animal origin (Glotov, 2021).

Atheta atomaria (Kraatz, 1856)

Material. Literature data only.

Distribution. Europe (Schülke & Smetana, 2015); "Poland", without indication of region (Łomnicki, 1913).

Bionomics. The species occurs mainly in foothills and high in the mountains, in forest litter and in remains of plant and animal origin.

Atheta foveicollis (Kraatz, 1856)

Material. 1 ex. **IFR:** mountain Dantsyzh [Pod Dancerzem Cp. Or.], 17.6. [19]11, 1 ex., coll. Grolle. (SMNH).

Distribution. Central Europe, Asia Minor (Schülke & Smetana, 2015); without indication for the territory is given in the catalog of Poland (Łomnicki, 1913); **Ukraine (first record).**

Bionomics. The species occurs mainly in foothills and high in the mountains, in forest litter and in remains of plants (Łomnicki, 1913).

Atheta excelsa Bernhauer, 1911

Material. Literature data only.

Distribution. Europe, East Siberia (Schülke & Smetana, 2015); in the Ukrainian Carpathians known from Transcarpathian Region, mountain range Chornohora, mountain Hoverla (Roubal, 1930).

Bionomics. The species occurs mainly high in the mountains in forests and mountain meadows, in cover and remains of plant and animal origin, on animal cadavers and in the manure of wild and domestic animals (Roubal, 1930; Semenov, 2007).

Atheta luctuosa (Mulsant & Rey, 1853)

Material. 3 ex. **LWI:** Ivano-Frankove [Janów], date not specified, 1 ex.; Lviv [Lwów], 28.3. [1]925, 2 ex. (SMNH).

Distribution. West and South Europe, North Africa, Asia Minor (Schülke & Smetana, 2015); **Ukraine (first record).**

Bionomics. The species occurs mainly in lowlands and in foothills, on the banks of rivers and reservoirs, in sediments and forest litter and in remains of plant and animal origin.

Atheta palleola (Erichson, 1837)

Material. Literature data only.

Distribution. Europe, East Siberia, North Korea (Schülke & Smetana, 2015). Without specifying the territory is given in the catalogs of Galicia and Poland (Łomnicki, 1884, 1913).

Bionomics. Biology has not been studied. The entire material is collected without specifying collection methods.

Subgenus *Mycetota* Ádám, 1987
Atheta laticollis Stephens, 1832 (fig. 1, o)

Material. 10 ex. **IFR:** Tatariv [Tatarów Cp. or.], 8.9. [19]08, 1 ex. **LWI**: Ivano-Frankove [Janów], 9.9. [1]925, 2 ex.; Lviv, Pohulanka [Pohulanka], 6.4. 1917, 2 ex.; Zubra [Zubra], data not specified, 3 ex.; Pasiky-Zubrytski [Pasieki], 6.5. [1]917, 2 ex. (SMNH).

Distribution. Palaearctic (excluding Far East) (Schülke & Smetana, 2015). In the Ukrainian Carpathians known from Chernivtsi Region, Chernivtsi (Hormuzaki, 1888) and Lviv Region, Bohdanivka (Łomnicki, 1890). Without specifying the territory is given in the catalogs of Galicia and Poland (Łomnicki, 1884, 1913).

Bionomics. Biology has not been studied. The entire material is collected without specifying collection methods.

Subgenus *Oreostiba* Ganglbauer, 1895
Atheta tibialis Heer, 1839

Material. 5 ex. **IFR:** mountain Dantsyzh [Pod Dancerzem Cp. Or.], 17.6. [19]11, 1 ex., coll. Grolle. **LWI:** Lviv [L] [92], date not specified, 1 ex., same locality but, Kryvchytsi [Kr], 3.7. [year not specified], 1 ex.; same locality but, Zamarstyniv [Zm], 20.7. [year not specified], 1 ex. **ZAK:** mountain range Chornohora [Czarnohora], 3.7. [year not specified], 1 ex. (SMNH).

Distribution. Europe, North Africa, Asia Minor (Schülke & Smetana, 2015); in the Ukrainian known from the Carpathian Mountains. High alpine in damp places, close to the edges of the snow fields (Miller, 1868), Ivano-Frankivsk Region, Bystrets 6 km W, Gadzhyna locality (Łomnicki, 1868; 1886) and Transcarpathian Region, mountain Sheshul (Roubal, 1930), mountain range Chornohora (Nowicki, 1873; Weise, 1876), mountain range Chornohora, mountain Rebra-Hoverla (Łomnicki, 1868), mountains Rebra, Szpyci (Łomnicki, 1886). Without specifying the territory is given in the catalogs of Galicia and Poland (Łomnicki, 1884, 1913).

Bionomics. The species occurs mainly in foothills and high in the mountains in forests and mountain meadows, in cover and plant remains, in mosses, on animal cadavers and in the manure of wild and domestic animals as well as in mammal burrows: *Marmota bobak* (Rybinski, 1902; Roubal, 1930).

Subgenus *Oxypodera* Bernhauer, 1915
Atheta fimorum (Brisout de Barneville, 1860)

Material. Literature data only.

Distribution. Europe, Asia Minor (Schülke & Smetana, 2015); in the Ukrainian Carpathians known from Transcarpathian Region, Uzhhorod (Kuthy, 1896).

Bionomics. The species occurs mainly in lowlands and in foothills, in forest litter and plant remains, in mosses, fungi and manure (Roubal, 1930).

Subgenus *Pachyatheta* Munster, 1925
Atheta cribrata (Kraatz, 1856)

Material. 1 ex. **LWI:** Lviv [Lw], 20.4. [year not specified], 1 ex. (SMNH).

Distribution. Europe (Schülke & Smetana, 2015); without indication for the territory is given in the catalog of Poland (Łomnicki, 1913); **Ukraine (first record).**

Bionomics. The species occurs mainly in lowlands and foothills, in forest litter and in mosses (Semenov, 2007).

Atheta mortuorum Thomson, 1867

Material. 2 ex. **IFR:** Vorokhta [Worochta], date not specified, 2 ex. (SMNH).

Distribution. Europe, North Africa, Siberia, North Korea (Schülke & Smetana, 2015); **Ukraine (first record).**

Bionomics. The species occurs mainly in lowlands and foothills, in forest litter.

Subgenus *Rhagocneme* Munster, 1923
Atheta subsinuata Erichson, 1839

Material. 1 ex. **IFR:** Vorokhta [Worochta], date not specified, 1 ex. (SMNH).

Distribution. Europe, North America (Schülke & Smetana, 2015). In the Ukrainian Carpathians known from Transcarpathian Region, Berehovo (Kuthy, 1896). "Poland", without indication of region (Łomnicki, 1913).

Bionomics. The species occurs mainly in lowlands and foothills, in forest litter, in rotten wood and in mosses.

Subgenus *Tetropla* Mulsant & Rey, 1873
Atheta liturata (Stephens, 1832) (fig. 1, p)

Material. 3 ex. **CER:** Chernivtsi [Bucowina. Czernowits], data not specified, 3 ex. (ZMTSNU).

Distribution. Europe (Schülke & Smetana, 2015). In the Ukrainian Carpathians known from Transcarpathian Region, mountain Hoverla (Kuthy, 1896)

Bionomics. The species occurs mainly in foothills and high in the mountains in forests and mountain meadows, mainly in young mature and rotten fungi, mainly in *Laetiporus sulphureus* (Bull.) Murr., as well as in forest litter (Roubal, 1930; Glotov, 2020).

Atheta nigritula (Gravenhorst, 1802) (fig. 1, q)

Material. **10 ex. CER:** Chernivtsi [Bucowina. Czernowits], data not specified, 4 ex. (ZMTSNU). **IFR:** Vorokhta [Worochta], date not specified, 1 ex.; **LWI:** Lviv, Riasne [Rzęsna], 11.4. [1]925, 1 ex.; same locality but, Sykhiv [Schihow], date not specified, 1 ex.; Zubra [Zubra], date not specified, 1 ex.; Pasiky-Zubrytski [Pasieki], 12.5. [1]917, 1 ex.; locality not specified, 11.4. [year not specified], 1 ex. (SMNH).

Distribution. Europe, North Africa, Asia Minor, East Siberia, North America (Schülke & Smetana, 2015). In the Ukrainian Carpathians known from Ivano-Frankivsk Region, Bystrets (Miller, 1868) and Transcarpathian Region, mountain range Chornohora (Nowicki, 1873). "Poland", without indication of region (Łomnicki, 1913).

Bionomics. The species occurs in lowlands and in foothills, mainly in agaric mushrooms, as well as in forest litter (Semenov, 2007).

Subgenus *Thinobaena* Thomson, 1859
Atheta vestita Gravenhorst, 1806

Material. 3 ex. **IFR:** Kosiv [Kossiw], date not specified, 1 ex. **LWI:** Zubra [Zubra], 8.4. [year not specified], 1 ex., same locality but, 6.4. [year not specified], 1 ex. (SMNH).

Distribution. Europe, North America (Schülke & Smetana, 2015). "Poland", without indication of region (Łomnicki, 1913).

Bionomics. The species occurs in forests and on open steppe and meadow areas, at foothills and high in the mountains, on alkalized plots, along the banks of rivers and reservoirs, on nearshore area, where they live in decaying organic residues. Adults occur in V–VIII (Klimaszeski et al., 2007, 2011).

Subgenus *Traumoecia* Mulsant & Rey, 1873
Atheta picipes (Thomson, 1856)

Material. 1 ex. **LWI:** Lviv [Lwów], date not specified, 1 ex. (SMNH).

Distribution. Europe, East Siberia (Schülke & Smetana, 2015). Without indication for the territory is given in the catalog of Poland (Łomnicki, 1913); **Ukraine (first record).**

Bionomics. The species occurs in lowlands and in foothills in forest litter, in rotten wood and under the bark of trees affected by fungi, are found mainly in fungi: *Fomes fomentarius* (L.) Fr., *Piptoporus betulinus* (Bull.) Karst., *Polyporus squamosus* Huds.: Fr., *Trametes hirsuta* (Wulf.) Pil., *Pleurotus ostreatus* (Jack.) Kumm. (Nikitskij et al., 1996; Semenov, 2007).

Subgenus *Trochanterella* Brundin, 1954
Atheta cribripennis J. Sahlberg, 1890

Material. Literature data only.

Distribution. Europe, West Siberia (Schülke & Smetana, 2015); in the Ukrainian known from the Carpathian Mountains (Łomnicki, 1911) and Ivano-Frankivsk Region, mountain range Chornohora, mountain Dantsyzh (Lokay, 1912).

Bionomics. The species occurs in lowlands and in foothills in forest litter and remains of plants.

Subgenus *Xenota* Mulsant & Rey, 1873
Atheta lativentris (Sahlberg, 1876)

Material. 11 ex. **IFR:** Anheliv tract [Ay], 18.9. [year not specified], 1 ex., **LWI:** Lviv [Lwów], 5.5. [1] 922, 1 ex., leg. A. Stöeckel; same locality but, date not specified, 3 ex.; same locality but, date not specified, 6 ex., coll. Grolle. (SMNH).

Distribution. Europe, Altai (Schülke & Smetana, 2015). In the Ukrainian Carpathians

known from Transcarpathian Region, coniferous forests (Roubal, 1930). "Poland", without indication of region (Łomnicki, 1913).

Bionomics. The species occurs in lowlands and in foothills in forest litter, in fungi, and in ant hills (Roubal, 1930).

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