



Assemblage structure of rove beetles (Coleoptera, Staphylinidae) in beech and mixed forests of the Gorgany Mountain Massif (Ukrainian Carpathians)

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The assemblages of rove beetles (Staphylinidae) in mixed and beech forests of the Gorgany mountain massif are represented by 69 species belonging to 35 genera and 13 subfamilies. The identified species constitute 0.1% of the global fauna. The highest species diversity was observed in the subfamilies Staphylininae, Tachyporinae, Steninae, and Omaliinae, which together account for 81.5% of all recorded species. The subfamily Staphylininae comprises the largest number of genera – 14 in total – with 27 species. The genus *Philonthus* is the most species-rich, including 8 species. The genera *Oxyopus*, *Tasgius*, *Staphylinus*, *Quedius*, and *Xantholinus* are each represented by two species, while the genera *Othius*, *Deleaster*, *Platydracus*, *Emus*, and *Megalinius* each include only one species. The subfamily Tachyporinae includes four genera: *Tachynus* (5 species), *Tachyporus* (4 species), *Lordithon* (4 species), and *Sepedophilus* (2 species). Steninae is represented by a single genus, *Stenus*, with 5 recorded species. Omaliinae includes four genera: *Eusphalerus* (3 species), *Omalius* (2 species), and *Acrulia* and *Amphichroum*, each with one species. The lowest number of species was recorded in the subfamilies Olisthaerinae, Micropeplinae, and Phloeocharinae, each represented by a single species. A total of 28 species were common to both analyzed ecosystem types, including *Omalius caesum*, *Atrecus longiceps*, *Philonthus decorus*, *Ph. nitidus*, *Ph. marginatus*, *Ph. longicornis*, *Ph. splendens*, *Othius punctulatus*, *Deleaster dichrous*, *Staphylinus erythropterus*, *S. caesareus*, *Nudobius lentus*, *Oxytelus sculptus*, *Stenus comma*, *S. carpathicus*, *S. humilis*, *S. nitens*, *Tachyporus chrysomelinus*, *T. formosus*, *Lordithon lunulatus*, *L. trimaculatus*, *Bryaxis carpathicus*, *Oxyporus maxillosus* and *O. rufus*. Dominance structure analysis revealed one dominant species in mixed ecosystems (*Philonthus splendens*) and three dominants in beech forest assemblages (*Philonthus splendens*, *Ph. marginatus*, and *Staphylinus erythropterus*). The proportion of subdominants in the analyzed assemblages was 18.3% and 14.6%, respectively. The checklist includes species found in forest litter, under stones, in plant and animal remains, animal dung, compost heaps, and fruiting bodies of fungi. In terms of trophic specialization, most species are predators, with some zoo-nematophagous and zoo-mycetophagous species also present. Certain species (*Deleaster dichrous*) show winter activity. Additionally, one species, *Emus hirtus*, is listed in the Red Data Book of Ukraine.

Keywords: faunistic diversity; forest ecosystems; Carpathians; biodiversity; ecological distribution.

Introduction

The global fauna of rove beetles (Staphylinidae) includes 66,928 species, making this family the largest among all beetles (Newton, 2022). Representatives of this family occur on all continents except Antarctica and play important ecological roles. Staphylinids inhabit all types of terrestrial ecosystems and use a wide range of substrates: plant and animal debris, compost, dung, moss, under stones, gravel, sand, and fungal fruiting bodies (Yin et al., 2018). The trophic groups of rove beetles (Staphylinidae) are also quite diverse. Among the representatives of the analyzed family, the following groups are encountered: mycophagy, phytophagy, predation, saprophagy, algophagy, and pollenophagy (Stocker et al., 2022; Spiessberger et al., 2024).

The analysis of staphylinid beetle communities in the Ukrainian Carpathians has been addressed in numerous scientific works. The first studies of predatory beetles were conducted by Polish naturalists Łomnicki and Nowicki. One of the earliest works analyzing rove beetles is "Przyczynek do owadniczej fauny Galicyi", which documents 18 genera from 7 subfamilies: Staphylininae (5), Aleocharinae (4), Omaliinae (3), Tachyporinae (2), Oxytelinae (2), Steninae (1), and Paederinae (1) (Nowicki M., 1864). A more comprehensive list appears in "Verzeichniss galizischer Käfer", with 100 genera from 11 subfamilies. The most species-rich were Aleocharinae, Staphylininae, Omaliinae, and Paederinae, covering 75 genera in total (Nowicki, 1873).

In 1866, Łomnicki published the first annotated list of beetles in the region. His research identified 275 species from eight subfamilies,

with Staphylininae and Paederinae accounting for 35% of all recorded species (Łomnicki, 1866).

During the 20th century, significant contributions were made by O. Y. Mateleshko, who studied both the species diversity and ecological characteristics of staphylinids. In "Faunistic Records of Rove Beetles from Transcarpathia", he analyzed the biotopic distribution of 82 species, half of which were new to the Ukrainian fauna (Mateleshko, 2007).

Ecological features are most thoroughly addressed in "Beetles inhabiting tree hollows in the Ukrainian Carpathians", where Mateleshko studied seasonal dynamics, habitat interactions, and associations with other organisms. In summer, particularly during droughts, hollows in deciduous trees (oak, beech) were dominated by *Nudobius lentus*, *Xantholinus decorus*, *Quedius xanthopus*, and *Sepedophilus testaceus*; in winter – by *Quedius fulgidus*. *Quedius ventralis* and *Q. brevicornis* were consistent species across various tree hollows (Mateleshko, 2008).

Mateleshko also explored the mycetophilous relationships of staphylinids, especially in sulfur-yellow polypore fruiting bodies. Young fungi hosted *Scaphidium quadrimaculatum*, *Scaphisoma agaricium*, *S. subalpinum*. In mature fungi, diversity expanded to include *Omalius rivulare*, *Oxytelus piceus*, several *Lordithon* species, *Sepedophilus testaceus*, and others. Overripe fungi included *Proteinus* spp., *Hapalaraea pygmaea*, *Philonthus* and *Quedius* species.

Subsequent research in the Ukrainian Carpathians has been fragmented, focused mainly on species composition without ecological analysis. Researchers (Glotov, 2020–2022, 2020, 2021; Glotov et al., 2020) analyzed staphylinid diversity, but their works covered large

areas without focusing on regional zones such as primeval forests, where stable communities develop. One such area is the Gorgany massif.

The Gorgany massif is a protected area on the northeastern slope of the Ukrainian Carpathians (Ivano-Frankivsk and partially Zakarpattia oblasts), covering 5344.2 hectares. It features mid-mountain landscapes, subalpine and alpine screes with dwarf pine, and steep slopes covered with spruce, fir-spruce, and beech-fir-spruce primeval forests.

The purpose of this article is to highlight the features of rove beetle communities in the mixed and beech forests of the lower mountain zone of the Gorgany massif. It is based on both literature sources and field studies conducted between 2020 and 2024, analyzing the beetles' distribution by substrate type and their ecological characteristics.

Materials and methods

The material forming the basis of this article was collected during 2020–2024 on permanent sampling plots located within the lower forest belt of the Gorgany mountain massif. The analyzed area includes beech forests and mixed forests (fir–spruce–Norway spruce–beech types).

The sampling plot in mixed forests was located in the “Elmy” tract. Its total area was 0.02 ha, situated at an elevation of 1100–1200 m a.s.l. The plant association present was *Abieto (albae)–Piceeto (abietis)–Fagetum (sylvaticae) rubosum (hirti)*. The forest stand is two-layered, with a total projective cover of 80%. The upper layer is represented by Norway spruce (*Picea abies* L.) – 20%, while the lower layer consists of European beech (*Fagus sylvatica* L.) – 40%, silver fir (*Abies alba* L.) – 20%, and sycamore maple (*Acer pseudoplatanus* L.). In the undergrowth, red elderberry (*Sambucus racemosa* L.), fly honeysuckle (*Lonicera xylostereum* L.), European beech (*Fagus sylvatica* L.), and silver fir (*Abies alba* L.) are found.

The projective cover of the herb-shrub layer is 60%. The dominant species include bramble (*Rubus hirtus* L.) – 50%, and white wood-rush (*Luzula luzuloides* Dandy & Wilmott) – 5%. Other species present are narrow buckler-fern (*Dryopteris carthusiana* Fuchs), lady fern (*Athyrium filix-femina* L.), Braun's holly fern (*Polystichum braunii* Fée), purple lettuce (*Prenanthes purpurea* L.), bulbous toothwort (*Dentaria bulbifera* L.), false lily of the valley (*Maianthemum bifolium* F. W. Schmidt) 5%, narrow-leaved lungwort (*Pulmonaria obscura* Dumort), common speedwell (*Veronica officinalis* L.), and wood sorrel (*Oxalis acetosella* L.).

This vegetation cover is formed on dark brown forest soils. These soils are characterized by high acidity: salt pH – 4.5–5.0, water pH – 5.5, hydrolytic acidity – 22.76 mg-eq./100 g of soil. The site is located in a moderately cold climatic zone, with a sum of active temperatures reaching 1800–2400 °C (Tokmakov, 1957; Stoiko, 2003; Stoiko, 2008; Zapotochnyi, 2014).

In the beech forest ecosystem, the sampling plot was situated near the confluence of the Zubrivka and Fedotsyl rivers. Its total area was 0.03 ha, located at an elevation of 780 m a.s.l. The plant cover was represented by the association *Fagetum (sylvaticae) aegoposium (podagrariae)*. The forest stand is single-layered, monodominant, with a projective cover of 70%. In addition to the dominant species, the tree layer also includes European hornbeam (*Carpinus betulus* L.) and sycamore maple (*Acer pseudoplatanus* L.).

The undergrowth is poorly developed, and the projective cover of the herbaceous layer reaches 80%. The dominant species is ground elder (*Aegopodium podagraria* L.) – 60%. Other recorded species include male fern (*Dryopteris filix-mas* L.), stinging nettle (*Urtica dioica* L.), heartleaf comfrey (*Symphytum cordatum* Waldst. et Kit. ex Willd), sweet woodruff (*Galium odoratum* L.), perennial mercury (*Mercurialis perennis* L.), red campion (*Melandrium dioicum* L.), narrow-leaved lungwort (*Pulmonaria obscura* Dumort), spiked ram-

pion (*Phyteuma spicatum* L.), and purple lettuce (*Prenanthes purpurea* L.).

Among spring ephemerals, the following species were noted: spring snowflake (*Leucojum vernum* L.) – 30%, glandular toothwort (*Dentaria glandulosa* O. Schwarz) – 10%, wood anemone (*Anemone nemorosa* L.) – 10%, and two-leaf squill (*Scilla bifolia* L.).

The vegetation cover develops on light brown forest soils, characterized by the following acidity levels: salt pH – 4.0–4.3, water pH – 4.9, hydrolytic acidity – 7.9 mg-eq./100 g of soil.

The site is located in a temperate climatic zone, with a sum of active temperatures ranging from 1800 to 2400 °C (Table 1) (Tokmakov, 1957; Stoiko, 2003, 2008; Zapotochnyi, 2014).

Table 1
Sampling coordinates of rove beetles

Forest type	Point ID	Latitude	Longitude
Mixed forest	A	N48.424971	E24.396890
Mixed forest	B	N48.424950	E24.396877
Mixed forest	C	N48.424925	E24.396865
Mixed forest	D	N48.424980	E24.396920
Mixed forest	E	N48.424981	E24.396971
Mixed forest	F	N48.424957	E24.396983
Mixed forest	G	N48.424933	E24.396990
Mixed forest	K	N48.424917	E24.396978
Mixed forest	L	N48.424891	E24.396971
Mixed forest	M	N48.424886	E24.396951
Beech forest	N	N48.425833,	E24.425965
Beech forest	O	N48.425831,	E24.426032
Beech forest	P	N48.425847	E24.426115
Beech forest	R	N48.425879	E24.426078
Beech forest	S	N48.425883	E24.425874
Beech forest	T	N48.425817	E24.425815
Beech forest	U	N48.425837	E24.425748
Beech forest	Q	N48.425798	E24.426481
Beech forest	Y	N48.425837	E24.426473
Beech forest	W	N48.425873	E24.426462

For collecting specimens, Barber pitfall traps were used. Each trap consisted of a 300 mL plastic container buried flush with the substrate surface. At the bottom of each trap, 10–15 mL of ethylene glycol served as a preservative. Each sampling plot contained 10 traps spaced 15 m apart to maintain statistical reliability. Samples were collected every 10–14 days. Traps were deployed annually from early April to early November. Throughout the study, data from 800 traps were processed.

Specimen identification was performed using a Nikon stereomicroscope. When necessary, mandibles or genitalia were dissected and mounted using fine entomological pins. In specific cases, specimens were cleared by boiling in 10% NaOH solution. Prepared microscopic slides were mounted with Canada balsam. In total, 1245 specimens were examined. Taxonomic identification was supported by standard taxonomic keys, and nomenclature followed the Catalogue of Palaearctic Coleoptera (Shavrin, 2024; Reyes-Hernández et al., 2025).

Species dominance was assessed using the Stecker-Bergman classification, which is based on the percentage of each species relative to the total number of individuals collected (Krebs, 1998).

Results

As a result of the conducted research, 69 species of rove beetles were identified, belonging to 35 genera and distributed across 13 subfamilies. The highest levels of species diversity were found in the subfamilies Staphylininae, Tachyporinae, Omaliinae, and Steninae, which together account for 81.5% of all identified species. The lowest proportion was observed in the subfamilies Olistarinae, Micropeplinae, and Phloeocharinae, which collectively represent only 4.5% of the total species (Table 2).

Table 2
Annotated list of rove beetles

Subfamily	Species	Dominance groups in insect communities		Trophic specialization	Ecological group	Substrate															
		Mixed forests	Beech forests			Forest litter															
						Plants	Coniferous forests	Broadleaf forests	Mixed forests	Pastures	Orchards	Tree bark	Fruiting bodies of fungi	Plant debris	Animal remains	Animal feces	Compost heaps	Sandy soils	Saline soils	Swamps	Peat
Omaliinae	<i>Omalius caesum</i> Gravenhorst, 1806	R	SR	Z-S	E	-	-	+	+	-	+	-	-	-	-	-	-	+	+	+	+
	<i>Omalius rivulare</i> Paykull, 1789	-	R	Z	E	-	-	+	-	-	-	-	-	+	-	-	-	-	-	-	-
	<i>Acrulia inflata</i> (Gyllenhal, 1813)	-	SR	Z-M	S	-	+	+	-	-	-	+	+	-	-	-	-	-	-	-	-
	<i>Eusphalerum anale</i> (Erichson, 1840)	SR	-	Z	S	+	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-
	<i>Eusphalerum lapponicum</i> (Mannerheim, 1831)	SR	-	Z	S	+	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-
	<i>Eusphalerum primulae</i> (Stephens, 1834)	SR	-	Z	S	+	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-
	<i>Amphichroum candiculatum</i> (Erichson, 1841)	SR	-	Z	S	-	+	+	+	-	-	-	-	-	-	-	-	-	-	-	
Staphylininae	<i>Atreus longiceps</i> Fauvel, 1873	R	SD	Z	E	-	-	+	+	-	-	+	-	+	-	-	-	-	-	-	-
	<i>Platydracus fulvipes</i> (Scopoli, 1763)	SR	-	Z	S	-	-	+	-	-	-	-	-	-	-	-	-	-	-	+	+
	<i>Philonthus decorus</i> (Gravenhorst, 1802)	SR	SD	Z-N	E	-	-	+	+	-	-	-	-	+	+	-	-	-	-	-	+
	<i>Philonthus caucasicus</i> Nordmann, 1837	R	-	Z	S	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-
	<i>Philonthus nitidus</i> (Fabricius, 1787)	SD	SD	Z	S	-	-	+	+	-	-	-	-	-	+	-	-	-	-	-	-
	<i>Philonthus rubripennis</i> Stephens, 1832	SR	SR	Z	S	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	+
	<i>Philonthus marginatus</i> Muller, 1764	SD	D	Z	E	-	-	+	+	-	-	-	+	-	-	-	-	-	+	+	-
	<i>Philonthus ventralis</i> (Gravenhorst, 1802)	SR	-	Z	E	-	-	+	-	-	-	-	-	+	+	+	-	-	-	-	-
	<i>Philonthus longicornis</i> Stephens, 1832	R	R	Z	S	-	-	+	+	-	-	-	-	+	+	-	-	-	-	-	-
	<i>Philonthus splendens</i> Fabricius, 1792	D	D	Z	S	-	-	+	+	-	-	-	-	+	+	-	-	-	-	-	-
	<i>Othius punctulatus</i> (Goeze, 1777)	R	SD	Z	E	-	-	+	+	+	-	-	-	-	-	-	-	+	+	-	-
	<i>Deleaster dichrous</i> Gravenhorst, 1802	R	R	Z	S	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	+
	<i>Ontholestes haroldi</i> (Eppel, 1884)	-	R	Z	E	-	-	+	-	+	-	-	+	-	-	-	-	+	+	-	-
	<i>Ontholestes tessellatus</i> (Geoffroy, 1785)	SD	SD	Z	E	-	-	+	+	-	-	-	+	-	+	-	-	-	-	-	-
	<i>Ocypus macrocephalus</i> (Gravenhorst, 1802)	SR	-	Z	S	-	-	+	-	+	-	-	-	-	-	-	-	-	-	-	-
	<i>Ocypus nitens nitens</i> (Schrank, 1781)	R	-	Z	E	-	-	+	-	-	+	-	-	-	-	-	+	+	+	+	-
	<i>Emus hirtus</i> (Linnaeus, 1758)	-	SR	Z	E	-	-	+	-	-	-	-	-	-	+	+	+	-	-	-	-
	<i>Tasgius melanarius</i> Heer, 1839	R	-	Z	S	-	-	+	-	-	-	-	-	-	-	-	+	-	-	-	-
	<i>Tasgius morsitans compressus</i> Marshaam, 1802	SR	-	Z	S	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-
	<i>Staphylinus erythropterus</i> (Linnaeus, 1758)	SD	D	Z	E	-	-	+	+	+	-	-	-	-	-	-	-	+	+	-	-
	<i>Staphylinus caesareus</i> Cederhjelms, 1798	SD	SD	Z	E	-	-	+	+	-	+	-	-	-	-	-	-	+	+	-	-
	<i>Quedius xanthopus</i> Erich., 1839	-	SR	Z	E	-	+	-	+	-	-	-	+	-	+	+	-	-	-	-	-
	<i>Quedius paradisiatus</i> Heer., 1839	-	SR	Z	S	-	+	-	+	-	-	-	-	-	+	-	-	-	-	-	-
<i>Nudobius lentus</i> (Gravenhorst, 1806)	-	R	Z	S	-	+	-	+	+	-	+	-	-	-	-	-	-	-	-	-	
<i>Xantholinus tricolor</i> (Fabricius, 1787)	R	-	Z-S	S	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>Xantholinus linearis</i> (Olivier, 1794)	SD	-	Z	S	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	+	
<i>Megalinius glabratus</i> (Gravenhorst, 1802)	SR	-	Z	S	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	+	
Oxytelinae	<i>Oxytelus sculptus</i> Gravenhorst, 1806	SR	R	N	S	-	-	+	+	-	-	-	-	-	-	+	-	-	-	-	
	<i>Platystethus arenarius</i> (Geoffroy, 1785)	SR	-	Z-S	S	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	
Steninae	<i>Stenus comma</i> LeConte, J. L., 1863	R	SR	Z	S	+	-	+	+	-	-	-	-	-	-	-	-	-	-	-	
	<i>Stenus carpathicus</i> Ganglbauer, 1896	R	R	Z	S	+	-	+	+	-	-	-	-	-	-	-	-	-	-	+	
	<i>Stenus geniculatus</i> Gravenhorst, 1806	SR	R	Z	S	+	-	+	+	-	-	-	-	-	-	-	-	-	-	+	
	<i>Stenus humilis</i> Erichson, 1839	R	SR	Z	S	+	-	+	+	-	-	-	-	-	-	-	-	-	-	-	
	<i>Stenus nitens</i> Stephens, 1833	R	R	Z	S	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	
Olisthaerinae	<i>Olisthaerus substriatus</i> (Paykull, 1790)	-	SR	Z	S	-	-	-	+	-	+	-	-	-	-	-	-	-	-	-	
Tachyporinae	<i>Tachyporus chrysolimius</i> (Linnaeus, 1758)	SD	SD	Z	S	-	-	+	+	-	-	-	-	-	-	-	-	-	-	+	
	<i>Tachyporus hypnorum</i> (Fabricius, 1775)	-	R	Z	S	-	-	+	+	-	-	-	-	-	-	-	-	-	-	+	
	<i>Tachyporus formosus</i> Matthews, A. H., 1838	SD	R	Z	S	-	-	+	+	-	-	-	-	-	-	-	-	-	+	-	
	<i>Tachyporus nitidulus</i> (Fabricius, 1781)	SD	-	Z-M	S	-	-	+	-	-	-	+	-	-	-	-	-	-	+	-	
	<i>Sepedophilus testaceus</i> (Fabricius, 1792)	-	SR	Z-M	S	-	-	+	-	-	-	+	-	-	-	-	-	-	-	-	
	<i>Sepedophilus bipustulatus</i> (Gravenhorst, 1802)	-	SR	Z	S	-	-	+	-	-	-	-	-	+	-	-	-	-	-	-	
	<i>Tachinus elongatus</i> Gyllenhal, 1810	R	R	Z	S	-	-	+	+	+	-	-	-	-	+	+	-	-	-	-	
	<i>Tachinus humeralis</i> Gravenhorst, 1802	R	-	Z	S	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	
	<i>Tachinus subterraneus</i> (Linnaeus, 1758)	SR	-	Z-S	S	-	-	+	-	+	-	-	-	-	-	+	-	-	-	-	
	<i>Tachinus rufipes</i> (Linnaeus, 1758)	R	-	Z-M	S	-	-	+	-	-	+	+	-	-	-	-	-	-	-	-	
	<i>Lordithon humulatus</i> (Linnaeus, 1760)	R	R	Z	S	-	-	+	+	-	-	-	-	-	-	-	-	-	-	+	
	<i>Lordithon exoletus</i> (Erichson, 1839)	R	R	Z	S	-	-	+	+	-	+	+	-	-	-	-	-	-	-	-	
	<i>Lordithon trinotatus</i> (Erichson, 1839)	-	R	Z	S	-	-	+	-	-	+	+	-	-	-	-	-	-	-	-	
<i>Lordithon trimaculatus</i> (Fabricius, 1792)	R	R	Z	S	-	-	+	+	-	+	+	-	-	-	-	-	-	-	-		
Micropeplinae	<i>Micropeplus fulvipes</i> Kerst., 1964.	-	SR	Z	S	-	-	-	+	-	-	-	+	-	-	-	-	-	-	-	
Piestinae	<i>Siagonium humerale</i> Germar, 1836	-	SR	Z	S	-	-	+	-	-	+	-	-	-	-	-	-	-	-	-	
	<i>Siagonium quadricorne</i> Kirby & Spence, 1815	SR	-	Z	S	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	
Pselaphinae	<i>Bryaxis carpathicus</i> (Saulcy, 1875)	SR	SR	Z	S	-	-	+	-	-	+	+	-	-	-	-	-	-	-	-	
	<i>Bryaxis reitteri</i> (Saulcy, 1875)	-	SR	Z	S	-	-	+	-	-	+	+	-	-	-	-	-	-	-	-	
	<i>Bryaxis ruthenus</i> (Saulcy, 1875)	-	SR	Z	S	-	-	+	-	-	+	+	-	-	-	-	-	-	-	-	
Oxyporinae	<i>Oxyporus maxillosus</i> Fabricius, 1792	SR	SR	Z-M	S	-	-	+	+	-	-	+	-	-	-	-	-	-	-	-	
	<i>Oxyporus rufus</i> (Linnaeus, 1758)	SR	R	Z-M	S	-	-	+	+	-	-	+	-	-	-	-	-	-	-	-	
Scaphidiinae	<i>Scaphidium assimile</i> Olivier, 1790	-	SR	Z	C	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	
	<i>Scaphidium quadrimaculatum</i> Olivier, AG, 1790	-	SR	Z	C	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	
Scidmaeninae	<i>Phloeostiba plana</i> (Paykull, 1792)	-	SR	Z	-	-	-	+	-	-	+	-	-	-	-	-	-	-	-	-	
	<i>Phloeonomus minimus</i> (Erichson, 1839)	SR	-	Z	-	-	-	+	-	-	+	-	-	-	-	-	-	-	-	-	
Phloeocharinae	<i>Phloeocharis subtilissima</i> Mannerheim, 1830	-	SR	Z	-	-	-	+	-	-	+	-	-	-	-	-	-	-	-	-	

Note: dominance groups in insect communities: dominant species (D), subdominant species (SD), recedent species (R), subrecedent species (SR); trophic specialization: zoophagous, zoo-saprophage, zoo-mycetophage, saprophage, nematophage; ecological groups: E – eurybiont, S – stratobiont, * – specimens are found in this type of substrate according to literature data.

Subfamily Omaliinae

1. *Omalius caesum* Gravenhorst, 1806

Synonyms: *Omalius corticinum* Motschulsky, 1858h; *Omalius flavicorne* Roubal, 1930a; *Omalius impressum* Heer, 1839; *Omalius peloponnesiacum* Scheerpeltz, 1962b.

Collection sites: 48.424925° N 24.396865° E 10.05.2021 1 ♀ for. lit.; 48.424950° N 24.396877° E 30.05.2021 3 ♀♀♂ for. lit.; 48.424971° N 24.396890° E 19.05.2022 2 ♀♂ for. lit.; 28.05.2023 3 ♀♂♂ for. lit.; 48.424933° N 24.396990° E 13.05.2023 1 ♀ for. lit.; 48.425817° N 24.425815° E 05.05.2023 2 ♂ for. lit.

Species' range: European continent, as well as in Armenia, Georgia, Kazakhstan, Nagorno-Karabakh, Russia (European part), Siberia, and Tunisia.

2. *Omalius rivulare* Paykul, 1789

Synonyms: *Omalius cursor* O. Müller, 1776; *Staphylinus cursor* O. Müller, 1776; *Omalius foraminosum* W. Scriba, 1867b; *Omalius incisum* Gravenhorst, 1806; *Omalius nitidicolle* Poppius, 1904c; *Omalius obscuricorne* Poppius.

Collection sites: 48.425831° N 24.426032° E 28.04.2023 2 ♀♀♂, 21.05.2021 2 ♀ 1 ♂ for. lit.; 48.425879° N 24.426078° E 21.05.2021 2 ♀♀♂, for. lit.; 48.425879° N 48.425847° E 10.05.2022, 1 ♂ mush.-for. fung.; 48.425837° N 24.426473° E 30.05.2021 2 ♀♂ for. lit.; 19.05.2022 3 ♀♂♂ for. lit.; 48.425833° N, 24.425965° E 26.04.2023 1 ♂ mush.-for. fung.

Species' range: European continent, as well as in Azerbaijan, Armenia, Egypt, Iceland, Israel, Kazakhstan, Canada, various states of the USA, and the Orkney and Shetland Islands.

3. *Acrulia inflata* Gyllenhal, 1813

Synonyms: *Omalius inflata* Gravenhorst, 1806; *Proteinus egregia* L. Redtenbacher, 1874; *Proteinus longicollis* Gredler, 1874.

Collection sites: 48.425873° N 24.426462° E 05.06.2022 1 ♂ decaying plant remains, 48.425817° N 24.425815° E 29.06.2023 2 ♀♀♂ for. lit.; 48.425837° N 24.425748° E 06.06.2024 1 ♀ for. lit.

Species' range: Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Great Britain, Greece, Hungary, Ireland, Italy, Kazakhstan, Latvia, Lithuania, Netherlands, Norway, Poland, Romania, Serbia, Siberia, Slovenia, Sweden, Switzerland, and Ukraine.

4. *Eusphalerum anale* (Erichson, 1840)

Synonyms: *Anthobium difficile* Rosenhauer, 1856; *Anthobium longulum* Kiesenwetter, 1847b; *Anthobium rhododendri* Motschulsky, 1858h; *Eusphalerum difficile* Rosenhauer, 1856; *Eusphalerum subangusticolle* Coiffait, 1959e; *Eusphalerum sinuatum* Fauvel, 1871c; *Omalius nivale* Heer, 1841.

Collection sites: 48.424917° N 24.396978° E 07.06.2021 1 ♀ on flow. *Sorbus aucuparia*; 48.424971° N 24.396890° E 18.06.2023 1 ♀ on flow. *Meladrium album*; 48.424957° N 24.396983° E 16.06.2024 1 ♂ on flow. *Sorbus aucuparia*.

Species' range: England, Estonia, Finland, Germany, Latvia, Lithuania, Norway, Poland, Switzerland, and the Czech Republic.

5. *Eusphalerum lapponicum* (Mannerheim, 1831)

Synonyms: *Anthobium flavipenne* Erichson, 1840; *Anthobium granulipenne* J. Sahlberg, 1871b; *Omalius lapponicum* (Mannerheim, 1831).

Collection sites: 48.424933° N 24.396990° E 07.06.2021 1 ♂ for. lit.; 18.06.2023 2 ♀♀ for. lit.; 48.424917° N 24.396978° E 29.06.2024 1 ♀ for. lit.; 48.424891° N 24.396971° E 29.06.2024 1 ♂ for. lit.

Species' range: England, Estonia, Finland, Germany, Latvia, Lithuania, Norway, Poland, Switzerland, and the Czech Republic.

6. *Eusphalerum primulae* (Stephens, 1834)

Synonyms: *Eusphalerum cribrorum* Heer, 1841; *Omalius cribrorum* Heer, 1841; *Omalius nigricolle* Stephens, 1834; *Anthobium triviale* Erichson, 1839b.

Collection site: 48.424886° N 24.396951° E 30.06.2020 1 ♀ for. lit.

Species' range: Austria, Armenia, Belarus, Belgium, Czech Republic, Denmark, England, France, Georgia, Germany, Hungary, Ireland, Italy, Latvia, Lithuania, Netherlands, Poland, Romania, Switzerland, Turkey, and Ukraine.

7. *Amphichroum canaliculatum* (Erichson, 1841)

Synonyms: *Deleaster dryophilum* Gistel, 1857; *Lathrimaeum canaliculatum* Erichson, 1840; *Omalius dentipes* Heer, 1839; *Omalius eunipes* Heer, 1839.

Collection sites: 48.424933° N 24.396990° E 30.06.2020 1 ♀ for. lit.; 08.07.2022 2 ♀♂ for. lit.

Species' range: Albania, Austria, Croatia, Czech Republic, France, Germany, Greece, Hungary, Italy, Luxembourg, North Macedonia, Poland, Romania, Serbia, Slovenia, Switzerland, and Ukraine.

Subfamily Staphylininae

8. *Atrecus longiceps* Fauv, 1873

Synonyms: *Baptolinus longiceps* Fauvel, 1873, *Othius proximus* Gistel, 1857.

Collection sites: 48.424971° N 24.396890° E 11.04.2020 2 ♀♀ dead wood; 25.04.2022 1 ♀ 2 ♂ for. lit.; 06.06.2024 1 ♀ 1 ♂ for. lit.; 48.424950° N 24.396877° E 09.07.2024 2 ♀♀ for. lit.; 48.424925° N 24.396865° E 07.04.2020 2 ♀♂ dead wood; 21.05.2021 1 ♀ dead wood, 2 ♀♂ for. lit.; 48.424933° N 24.396990° E 26.04.2023 1 ♂ for. lit.; 48.425833° N 24.425965° E 09.07.2024 2 ♀♂ for. lit.; 48.425831° N 24.426032° E 06.06.2024 2 ♀♂ for. lit.; 48.425879° N 24.426078° E 05.05.2024 2 ♂♂ dead wood; 48.425847° N 24.426115° E 06.06.2024 1 ♀ 1 ♂ dead wood, 2 ♀♂ for. lit.; 48.425817° N 24.425815° E 27.06.2021 3 ♀♀♂ for. lit.; 48.425837° N 24.425748° E 17.04.2022 4 ♀ 1 ♂ for. lit.; 48.425798° N 24.426481° E 17.04.2022 3 ♀♂♂ for. lit.; 48.425837° N 24.426473° E 11.04.2020 2 ♀ dead wood, 3 ♂ for. lit.; 05.07.2021 3 ♂ for. lit.

Species' range: European continent.

9. *Platydracus fulvipes* (Scopoly, 1763)

Synonyms: *Staphylinus fulvipes* (Scopoly, 1763), *Staphylinus azureus* Geblert, 1830, *Staphylinus bicinctus* Rossi, 1792, *Staphylinus cingulus* Comolli, 1837, *Staphylinus erythropus* Paykull, 1800, *Emus figulus* Gistel, 1857, *Staphylinus tricolor* Gravenhorst.

Collection sites: 48.424950° N 24.396877° E 10.05.2022 2 ♀♀♂ for. lit.; 48.424917° N 24.396978° E 10.05.2022 2 ♂♂ for. lit.; 48.424886° N 24.396951° E 28.05.2023 1 ♂ for. lit.

Species' range: Albania, Altai, Austria, Belarus, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, England, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Macedonia, Netherlands, Norway, Poland, Portugal, Slovenia, Spain, Switzerland, Sweden, Turkey, Ukraine.

10. *Philonthus decorus* (Gravenhorst, 1802)

Synonyms: *Staphylinus decorus* (Gravenhorst, 1802), *Sectophilonthus rossicus* Coiffait, 1965f.

Collection sites: 48.424950° N 24.396877° E 19.05.2022 1 ♀ 1 ♂ coast. zone; 48.424917° N 24.396978° E 29.05.2022 2 ♂; 48.424886° N 24.396951° E 26.04.2023 1 ♀; 48.424933° N 24.396990° E 25.04.2022 2 ♀♂ for. lit.; 48.424891° N 24.396971° E 25.04.2022 2 ♀ 1 ♂ for. lit.; 48.425879° N 24.426078° E 29.05.2022 2 ♀ for. lit.; 48.425817° N 24.425815° E 08.07.2022 3 ♀ 2 ♂ for. lit.; 48.425837° N 24.425748° E 17.07.2022 3 ♂ for. lit.; 48.425883° N 24.425874° E 28.05.2023 5 ♀; 48.425837° N 24.426473° E 26.04.2023 3 ♂; 48.425873° N 24.426462° E 09.07.2024 1 ♀ 4 ♂ for. lit.; 48.425879° N 24.426078° E 18.07.2024 3 ♀ for. lit.; 48.425883° N 24.425874° E 07.08.2024 2 ♀♂ coast. zone; 48.425837° N 24.426473° E 15.08.2024 1 ♂; 48.425833° N 24.425965° E 29.06.2024 1 ♀ coast. zone.

Species' range: the entire European continent, Kazakhstan and Eastern Siberia.

11. *Philonthus caucasicus* Nordmann, 1837

Synonyms: *Philonthus apicalis* Leinberg, 1900, *Staphylinus dimidiatus* C. R. Sahlberg, 1830, *Philonthus heinemanni* Bernhauer, 1913, *Philonthus rutilipennis* Hochhuth, *Philonthus unicolor* Leinberg, 1900.

Collection sites: 48.424933° N 24.396990° E 30.05.2021 1 ♀ 2 ♂ for. lit.; 48.424891° N 24.396971° E 21.05.2021 1 ♂ for. lit.; 05.06.2022 1 ♂ for. lit.; 48.424886° N 24.396951° E 19.05.2022 2 ♀♀ for. lit.; 48.424910° N 24.396978° E 29.05.2022 3 ♂; 08.07.2022 1 ♀;

15.08.2022 2♀♂, for. lit.; 48.424925° N 24.396865° E 19.07.2023 1♀ for. lit.; 48.424980° N 24.396920° E 29.07.2023 1♂ for. lit.

Species' range: the entire European continent, Georgia, Iraq, Iran, India, Kazakhstan, Mongolia, Siberia, Syria, individual US states (Idaho, Washington, Wisconsin, California, Connecticut, Massachusetts, Minnesota, Montana, Nevada, New York, Oregon), Tajikistan, Turkmenistan, Turkey.

12. *Philonthus nitidus* (Fabricius, 1787)

Synonyms: *Staphylinus nitidus* (Fabricius, 1787), *Staphylinus coenosus* Gravenhorst, *Philonthus scansor* Gistel, 1857.

Collection sites: 48.424957° N 24.396983° E 29.05.2020 1♂ for. lit.; 48.424971° N 24.396890° E 29.05.2020 1♀ an. drop.; 48.424950° N 24.396877° E 29.05.2020 1♂ for. lit.; 48.424925° N 24.396865° E 29.05.2020 1♀ for. lit.; 48.424980° N 24.396920° E 29.05.2020 1♂ for. lit.; 48.424981° N 24.396971° E 10.07.2023 2♀♂ an. drop.; 48.424957° N 24.396983° E 10.07.2023 1♀ for. lit.; 48.424933° N 24.396990° E 08.07.2022 2♀ an. drop.; 48.424917° N 24.396978° E 19.07.2023 2♀♂ an. drop.; 48.424891° N 24.396971° E 10.07.2023 2♂♂ for. lit.; 48.424886° N 24.396951° E 29.07.2023 2♀♂ for. lit.; 48.424981° N, 24.396971° E 18.06.2023 2♀♀ for. lit.; 48.424957° N 24.396983° E 29.07.2023 1♀ 3♂ an. drop.; 48.425817° N 24.425815° E 16.05.2020 2♀♂ an. drop.; 48.425837° N 24.425748° E 16.05.2020 2♀♀ 1♂ an. drop.; 48.425798° N 24.426481° E 30.05.2021 3♂ for. lit.; 48.425879° N 24.426078° E 30.05.2021 1♀ for. lit.; 48.425883° N 24.425874° E 07.06.2021 1♂ for. lit.; 48.425833° N 24.425965° E 10.07.2023 1♂ for. lit.; 48.425831° N 24.426032° E 10.07.2023 2♀ for. lit.; 48.425873° N 24.426462° E 19.07.2023 2♀♂ for. lit.

Species' range: Armenia, Austria, Czech Republic, Estonia, European part of Russia, England, Denmark, Germany, Hungary, Italy, Kazakhstan, Latvia, Lithuania, Mongolia, Netherlands, Norway, Poland, Romania, Spain, Sweden, Switzerland, Siberia, France, Ukraine, Finland.

13. *Philonthus rubripennis* Stephens, 1832

Synonyms: *Philonthus obscuripes* Brisout de Barneville, *Philonthus rufimanus grebennikovi* Khachikov, *Staphylinus fulvipes* Fabricius, 1792, *Staphylinus mendax* Runde, 1835, *Quedius castanopterus* Stephens, 1832.

Collection sites: 48.424971° N 24.396890° E 16.06.2022 2♀♂ for. lit.; 48.424950° N 24.396877° E 16.06.2022 2♂ for. lit.; 48.424980° N 24.396920° E 29.06.2022 2♀ for. lit.; 48.424971° N 24.396890° E 09.07.2024 1♂ for. lit.; 48.424950° N 24.396877° E 18.07.2024 2♀ for. lit.; 48.424925° N 24.396865° E 30.07.2024 1♀ for. lit.; 48.425817° N 24.425815° E 29.07.2023 1♀ 2♂ for. lit.; 48.425837° N 24.425748° E 10.07.2023 2♀♂ for. lit.

Species' range: Algeria, Azerbaijan, the entire European continent, Georgia, Iran, Morocco, Siberia, Turkey.

14. *Philonthus marginatus* Muller, 1764

Collection sites: 48.424971° N 24.396890° E 21.05.2021 2♀♂; 30.05.2021 1♀ for. lit.; 48.424981° N 24.396971° E 21.05.2021 1♂ for. lit.; 48.424891° N 24.396971° E 21.05.2021 1♀ for. lit.; 48.424917° N 24.396978° E 29.06.2022 3♂; 09.06.2023 1♂ for. lit.; 48.424950° N 24.396877° E 09.06.2023 1♀ an. drop.; 48.424957° N 24.396983° E 16.06.2024 3♀♂♂; 09.07.2024 1♀ an. drop.; 48.424891° N 24.396971° E 18.07.2024 3♀; 30.07.2024 1♂ for. lit.; 48.425879° N 24.426078° E 21.05.2021 2♀ 3♂ for. lit.; 07.06.2021 3♀ an. drop.; 48.425817° N 24.425815° E 30.05.2021 1♀ an. drop.; 4♂ an. drop.; 29.06.2022 4♀ 6♂ an. drop.; 48.425837° N 24.425748° E 29.05.2022 7♀ 3♂; 48.425837° N 24.426473° E 29.05.2022 6♀ for. lit.; 48.425833° N 24.425965° E 29.05.2022 4♀♂ for. lit.; 48.425847° N 24.426115° E 18.06.2023 2♀♂ for. lit.; 48.425879° N 24.426078° E 18.06.2023 2♀ for. lit.; 48.425873° N 24.426462° E 19.07.2023 2♂ an. corps.; 48.425837° N 24.426473° E 09.08.2023 3♀; 18.08.2023 2♂ an. corps.; 48.425837° N 24.425748° E 27.08.2023 2♂ an. corps.; 03.09.2024 3♂ for. lit.; 48.425817° N 24.425815° E 25.08.2024 5♂ an. corps.; 48.425833° N 24.425965° E 06.09.2023 1♀ for. lit.; 48.425873° N 24.426462° E 15.09.2023 4♀ for. lit.; 48.425837° N 24.425748° E 06.10.2024 2♂ an. drop.

Species' range: the entire European continent, as well as Kazakhstan, Kyrgyzstan, the Chinese province of Heilongjiang, Siberia, Turkmenistan.

15. *Philonthus ventralis* (Gravenhorst, 1802)

Synonyms: *Bisnius rotundiceps* Stephens, 1833, *Bisnius simplex* Stephens, 1833, *Bisnius fulvipes* Stephens, 1833b, *Bisnius fuscicornis* Stephens, 1833b, *Staphylinus anthrax* Gravenhorst, 1802, *Staphylinus celer* Gravenhorst, 1806, *Philonthus flandrianus* Cameron, 1952b, *Philonthus fortunatus* Wollaston, 1865, *Staphylinus immundus* Gravenhorst, *Quedius picicollis* Stephens, *Philonthus proximus* Wollaston, 1857.

Collection sites: 48.424886° N 24.396951° E 29.06.2022 3♀♂♂ for. lit.; 48.424933° N 24.396990° E 17.06.2022 1♀ an. drop.; 48.424957° N 24.396983° E 08.07.2022 1♂ an. drop.; 48.424925° N 24.396865° E 06.08.2021 2♀♂ for. lit.; 19.08.2021 3♀ for. lit.

Species' range: the entire Palearctic, Australia, the Azores and Galapagos Islands, Canada, Cuba, Mexico, Puerto Rico, New Zealand, New Caledonia, Jamaica.

16. *Philonthus longicornis* Steph., 1832

Synonyms: *Cafius laetabilis* Olliff, 1887, *Philonthus algiricus* Motschulsky, 1858i, *Philonthus asemus* Kraatz, 1859a, *Philonthus bestialis* Bernhauer, 1939b, *Philonthus cervicalis* Casey, 1915, *Philonthus eremus* Gistel, 1857a, *Philonthus fumosus* Solsky, 1868, *Philonthus fuscicornis* Nordmann, 1837, *Philonthus linkei* Bernhauer, 1908b, *Philonthus othomanes* Gistel, 1857a, *Philonthus pedestris* Walker, 1859, *Philonthus promptus* Erichson, 1840, *Philonthus scutellatus* Casey, 1915, *Philonthus scybalarius* Nordmann, 1837.

Collection sites: 48.424933° N 24.396990° E 09.06.2023 3♀ 1♂ an. drop.; 48.424917° N 24.396978° E 10.07.2023 1♀ for. lit.; 48.424957° N 24.396983° E 09.06.2023 1♀ for. lit.; 48.424980° N 24.396920° E 18.07.2024 1♂ for. lit.; 48.424925° N 24.396865° E 18.07.2024 1♂ an. corps.; 48.425798° N 24.426481° E 17.07.2022 1♀ an. drop.; 48.425837° N 24.426473° E 17.07.2022 1♀ an. drop.; 48.425879° N 24.426078° E 26.07.2022 3♂ an. corps.; 48.425831° N 24.426032° E 09.08.2023 2♀ 2♂ an. corps.; 48.425833° N 24.425965° E 09.08.2023 2♂ an. corps.

Species' range: the entire Palearctic, Australia, the Azores and Galapagos Islands, Canada, Cuba, Mexico, Puerto Rico, New Zealand, New Caledonia, Jamaica.

17. *Philonthus splendens splendens* Fabricius, 1792

Synonyms: *Staphylinus splendens splendens* Fabricius, 1792, *Staphylinus niger* O. Müller, 1764.

Collection sites: 48.424971° N 24.396890° E 30.05.2021 2♀ 1♂ an. corps.; 48.424950° N 24.396877° E 30.05.2021 2♀♂ an. corps.; 48.424925° N 24.396865° E 21.05.2021 3♀♂ an. corps.; 48.424980° N 24.396920° E 30.05.2021 3♀ 1♂ for. lit.; 48.424981° N 24.396971° E 30.05.2021 4♀ for. lit.; 48.424957° N 24.396983° E 17.06.2021 3♂ for. lit.; 48.424933° N 24.396990° E 18.07.2021 3♀ for. lit.; 48.424891° N 24.396971° E 18.07.2021 1♀ an. corps.; 48.424917° N 24.396978° E 08.07.2022 1♀ 2♂ for. lit.; 48.424886° N 24.396951° E 17.07.2022 2♀ 1♂ an. corps.; 48.424925° N 24.396865° E 19.07.2023 3♂ an. corps.; 48.424980° N 24.396920° E 08.07.2022 3♀ for. lit.; 48.424981° N 24.396971° E 08.07.2022 2♀♂ for. lit.; 48.424957° N 24.396983° E 08.07.2022 2♀♂ an. corps.; 48.424933° N 24.396990° E 04.08.2022 3♂ an. corps.; 48.424917° N 24.396978° E 08.07.2022 1♀ 2♂ an. corps.; 48.424891° N 24.396971° E 18.08.2023 2♀♂; 48.424957° N 24.396983° E 18.08.2023 4♀; 48.424950° N 24.396877° E 27.08.2023 1♀ 3♂; 48.424886° N 24.396951° E 09.08.2023 1♂; 27.08.2023 1♀; 48.424933° N 24.396990° E 27.08.2023 1♂; 48.425879° N 24.426078° E 21.05.2021 1♀ 4♂; 48.425883° N 24.425874° E 21.05.2021 4♂; 48.425817° N 24.425815° E 21.05.2021 5♀ an. drop.; 48.425837° N 24.425748° E 30.05.2021 3♀ an. drop.; 48.425833° N 24.425965° E 08.07.2022 4♀ an. drop.; 48.425831° N 24.426032° E 08.07.2022 3♀ 3♂ an. corps.; 48.425847° N 24.426115° E 17.08.2022 4♀ an. corps.; 48.425879° N 24.426078° E 10.07.2023 3♂ an. drop.; 48.425883° N 24.425874° E 19.07.2023 1♀ 4♂ an. drop.; 48.425817° N 24.425815° E 29.07.2023 4♀ an. drop.; 48.425837° N 24.425748° E 29.07.2023 3♂ for. lit.; 48.425798° N 24.426481° E 30.07.2024 2♀♂; 07.08.2024 1♂;

25.08.2024 4♀ for. lit.; 48.425837° N 24.426473° E 03.09.2024 2♀ 3♂ an. drop.; 48.425817° N 24.425815° E 08.10.2020 1♀ 2♂ an. drop.; 48.425837° N 24.426473° E 08.10.2020 4♂ for. lit.; 48.425873° N 24.426462° E 16.10.2021 3♀ 2♂ for. lit.

Species' range: Algeria, Armenia, the Chinese province of Jilin, Georgia, all countries of the European continent, Iran, Kazakhstan, Morocco, Siberia, Turkey, Turkmenistan.

18. *Othius punctulatus* (Goeze, 1777)

Synonyms: *Othiellus arisanus* Shibata, 1973b, *Othius goui* F.-K. Zheng, 1995c, *Othius puncticeps* Bernhauer, 1916b.

Collection sites: 48.424933° N 24.396990° E 09.06.2023 2♀ 2♂ for. lit.; 48.424917° N 24.396978° E 09.06.2023 1♀ for. lit.; 48.424957° N 24.396983° E 18.06.2023 1♂ for. lit.; 48.424980° N 24.396920° E 16.06.2024 1♀ for. lit.; 48.424925° N 24.396865° E 20.07.2024 1♀ for. lit.

Species' range: Albania, Algeria, Armenia, Austria, Azerbaijan, Belgium, Bulgaria, Belarus, Canary Islands, Czech Republic, England, Georgia, Germany, Greece, Denmark, Ireland, Italy, Kazakhstan, Latvia, Lithuania, Macedonia, Morocco, Netherlands, Norway, Poland, Portugal, Romania, Siberia, Spain, Sweden, Switzerland, Tunisia, Ukraine, Turkey, France.

19. *Deleaster dichrous* Gravenhorst, 1802

Synonyms: *Anthophagus dichrous* Gravenhorst, 1802, *Deleaster adustus* Küster, 1846, *Deleaster erichsoni* Hochhuth, 1851, *Staphylinus brassicae* Scopoli, 1763, *Lesteva leachii* Curtis, 1830.

Collection sites: 48.424957° N 24.396983° E 21.05.2021 1♂ an. drop.; 30.05.2021 3♀ pl. drop.; 48.424925° N 24.396865° E 09.06.2023 2♂ an. drop.; 48.424971° N 24.396890° E 17.07.2022 3♀ for. lit.; 48.424886° N 24.396951° E 03.09.2022 1♂ for. lit.; 48.425817° N 24.425815° E 21.05.2021 1♀ 2♂ for. lit.; 48.425837° N 24.425748° E 07.06.2021 1♀ 1♂ for. lit.; 48.425798° N 24.426481° E 05.06.2022 2♀ 1♂; 17.06.2022 2♀ an. drop.; 48.425833° N 24.425965° E 05.06.2022 3♂ an. drop.; 48.425831° N 24.426032° E 05.07.2021 2♀ 2♂; 48.425847° N 24.426115° E 26.07.2022 1♀; 04.08.2022 2♂ for. lit.; 48.425879° N 24.426078° E; 09.06.2023 3♀ for. lit.; 48.425883° N 24.425874° E 09.06.2023 2♂ for. lit.

Species' range: the entire European continent, Algeria, Armenia, Azerbaijan, Canada, Georgia, Iran, Morocco, Turkey, Turkmenistan, and Tunisia.

20. *Ontholestes haroldi* (Eppel, 1884)

Synonyms: *Leistotrophus haroldi* Eppelsheim, 1884c.

Collection sites: 48.425833° N 24.425965° E 20.04.2021 2♀♂ an. drop.; 48.425831° N 24.426032° E 07.04.2020 2♀ an. drop.; 48.425847° N 24.426115° E 29.05.2020 1♀ 2♂ an. drop.; 48.425879° N 24.426078° E 18.07.2021 2♂; 06.08.2021 1♀ for. lit.; 48.425883° N 24.425874° E 07.04.2022 1♀; 19.05.2022 2♀ for. lit.; 17.08.2022 1♀ 2♂ an. drop.

Species' range: Austria, Bulgaria, France, Great Britain, Germany, Hungary, Italy, Latvia, Poland, Switzerland, Ukraine.

21. *Ontholestes tessellatus* (Geoffroy, 1785)

Synonyms: *Staphylinus hybridus* Marsham, 1802, *Staphylinus nebulosus* Fabricius, 1792b.

Collection sites: 48.424950° N 24.396877° E 25.04.2020 4♀ an. drop.; 48.424925° N 24.396865° E 05.05.2020 1♂ an. drop.; 48.424980° N 24.396920° E 05.05.2020 2♀ an. drop.; 48.424981° N 24.396971° E 16.05.2020 1♂ pl. drop.; 48.424957° N 24.396983° E 17.06.2020 2♀ an. drop.; 48.424933° N 24.396990° E 17.06.2020 1♀ 2♂ pl. drop.; 48.424971° N 24.396890° E 05.07.2021 3♀; 29.07.2021 2♀ for. lit.; 48.424980° N 24.396920° E 17.07.2022 3♀ for. lit.; 48.424981° N 24.396971° E 17.07.2022 2♀ 1♂ for. lit.; 48.424957° N 24.396983° E 26.07.2022 2♀ 1♂ pl. drop.; 48.425837° N 24.426473° E 07.04.2020 1♀; 48.425873° N 24.426462° E 07.04.2020 1♂ pl. drop.; 48.425817° N 24.425815° E 11.04.2020 2♀ pl. drop.; 48.425831° N 24.426032° E 25.04.2020 1♀ 1♂ pl. drop.; 48.425879° N 24.426078° E 20.04.2020 1♀ pl. drop.; 48.425883° N 24.425874° E 10.07.2020 3♀ pl. drop.; 48.425817° N 24.425815° E 30.06.2020 1♂ pl. drop.; 48.425837° N 24.425748° E 30.05.2020 2♀ pl. drop.; 48.425798° N 24.426481° E 21.05.2021 2♀ pl. drop.; 48.425833° N 24.425965° E 07.06.2021 1♀ 1♂ for. lit.;

48.425831° N 24.426032° E 17.04.2022 3♂ for. lit.; 48.425847° N 24.426115° E 05.06.2022 1♀ 1♂ for. lit.; 48.425879° N 24.426078° E 05.06.2022 2♀ for. lit.; 48.425817° N 24.425815° E 10.07.2023 2♂ for. lit.; 48.425837° N 24.426473° E 10.07.2023 2♀ pl. drop.; 48.425798° N 24.426481° E 19.07.2023 1♀ 1♂ pl. drop.; 48.425837° N 24.425748° E 07.08.2024 1♀ pl. drop.

Species' range: China, Croatia, Czech Republic, Denmark, Estonia, European part of Russia, France, Great Britain, Germany, Hungary, Ireland, Latvia, Lithuania, Luxembourg, Mongolia, Middle East, Netherlands, Norway, Poland, Portugal, Romania, Siberia, Slovenia, Spain, Sakhalin, Switzerland, Sweden, Ukraine.

22. *Ocypus macrocephalus* (Gravenhorst, 1802)

Synonyms: *Staphylinus macrocephalus* Gravenhorst, 1802.

Collection sites: 48.424950° N 24.396877° E 17.06.2022 1♀ pl. drop.; 48.424981° N 24.396971° E 05.06.2023 1♂ for. lit.; 48.424957° N 24.396983° E 17.06.2023 1♂ for. lit.; 48.424933° N 24.396990° E 08.07.2023 1♀ an. drop.

Species' range: all countries of the European continent.

23. *Ocypus nitens nitens* (Schrank, 1781)

Synonyms: *Ocypus abbreviatipennis* Aubé, 1850, *Ocypus decurtatus* Mulsant & Rey, 1876, *Staphylinus lugens* Nordmann, 1837, *Staphylinus mandli* Bernhauer, 1906b, *Staphylinus nero* Faldemann, 1835a, *Staphylinus semialatus* J. Müller, 1904c, *Staphylinus nitens nitens* (Schrank, 1781).

Collection sites: 48.424933° N 24.396990° E 26.04.2023 2♂ an. drop.; 48.424957° N 24.396983° E 16.05.2020 1♀ an. drop.; 16.05.2020 1♀ 2♂; 48.424950° N 24.396877° E 16.06.2022 1♀ 2♂ an. drop.; 48.424925° N 24.396865° E 29.06.2022 2♀ for. lit.; 48.424980° N 24.396920° E 16.06.2022 2♀ 1♂ for. lit.; 48.424933° N 24.396990° E 16.06.2021 1♀ for. lit.

Species' range: Albania, Armenia, Austria, Belgium, Bulgaria, Belarus, Canada, China (Yunnan Province), Denmark, Estonia, England, Greece, Georgia, Hungary, Finland, France, Italy, Ireland, Iran, Latvia, Lithuania, Luxembourg, Macedonia, Netherlands, Norway, Poland, Portugal, Romania, Slovenia, Spain, Switzerland, Sweden, Turkey, Ukraine, as well as in the US states (Massachusetts, Maine, New York, New Hampshire, Vermont), Uzbekistan.

24. *Emus hirtus* Linnaeus, 1758

Synonyms: *Staphylinus bombilius* De Geer, 1774, *Staphylinus hirtus* Linnaeus, 1758

Collection sites: 48.425833° N 24.425965° E 05.06.2022 1♀ an. drop.; 48.425847° N 24.426115° E 08.07.2022 1♂ an. drop.; 48.425831° N 24.426032° E 18.06.2023 1♂ for. lit.; 48.425817° N 24.425815° E 10.07.2023 1♂ for. lit.; 48.425879° N 24.426078° E 29.06.2024 1♀ an. drop.; 48.425883° N 24.425874° E 07.08.2024 1♂ an. drop.

Species' range: Azerbaijan, Austria, Armenia, Belgium, Bulgaria, Czech Republic, Croatia, Denmark, Estonia, France, Great Britain, Greece, Germany, Hungary, Iran, Italy, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Luxembourg, Netherlands, Spain, Poland, Portugal, Romania, Slovenia, Turkey, Switzerland, Sweden, Ukraine.

25. *Tasgius melanarius melanarius* Heer, 1839

Synonyms: *Alapsodus bulgaricus* Coiffait, 1835, *Emus angustatus* Lacordaire, 1971e, *Goerius kirbyi* Stephens, 1832, *Staphylinus dvoraki* Roubal, 1940a, *Staphylinus marani* Roubal, 1932a, *Staphylinus obscurus* Runde, 1835, *Ocypus rubidus* Verhoeff, 1890, *Ocypus saulcyi* Reiche, 1857, *Staphylinus similis* Paykull, 1789, *Staphylinus morsitans compressus* Marsh., 1802.

Collection sites: 48.424950° N 24.396877° E 20.04.2021 1♀ an. drop.; 48.424925° N 24.396865° E 20.04.2021 1♂ for. lit.; 48.424980° N 24.396920° E 28.04.2021 3♀ for. lit.; 48.424981° N 24.396971° E 29.05.2022 2♀ for. lit.; 48.424957° N 24.396983° E 19.05.2022 1♂ for. lit.; 48.424933° N 24.396990° E 28.05.2023 2♂ for. lit.

Species' range: Austria, Belgium, Bulgaria, Belarus, Canada, Croatia, China, Czech Republic, Denmark, Estonia, European part of Russia, England, Greece, Germany, Ireland, Italy, Kazakhstan, Latvia, Lithuania, Luxembourg, Massachusetts, Maine, Netherlands, New Hampshire, New York, Norway, Ohio, Poland, Romania, Switzerland, Sweden, Turkey, Ukraine, Vermont.

26. *Tasgius morsitans compressus* Rossi, 1790

Synonyms: *Staphylinus morsitans* Rossi, 1790, *Ocypus cerdo* Erichson, 1840, *Staphylinus compressus* Marsham, 1802, *Anodus fulvipes* Motschulsky, 1858i, *Staphylinus fulvipilis* J. Müller, 1932b, *Staphylinus luganensis* Heer, 1839, *Ocypus mutatus* Gemminger & Harold, 1868, *Ocypus phaeopus* Stephens, 1832, *Emus rufipalpis* Lacordaire, 1835.

Collection sites: 48.424957° N 24.396983° E 10.05.2022 1♀ 1♂ for. lit.; 48.424933° N 24.396990° E 13.05.2023 1♀ 1♂ for. lit.

Species' range: Austria, Belgium, Bulgaria, Cyprus, Croatia Czech Republic, Denmark, France, Germany, Great Britain, Greece, Netherlands, Iran, Ireland, Italy, Norway, Poland, Portugal, Romania, Syria, Switzerland, Spain, Sweden, Turkey, Ukraine.

27. *Staphylinus erythropterus erythropterus* Linnaeus, 1758

Synonyms: *Staphylinus castanopterus* Gravenhorst, 1802

Collection sites: 48.424957° N 24.396983° E 17.06.2022 1♀ for. lit.; 48.424933° N 24.396990° E 19.05.2023 2♂ for. lit.; 48.424981° N 24.396971° E 05.06.2022 2♂ for. lit.; 48.424957° N 24.396983° E 05.07.2021 5♂; 48.424933° N 24.396990° E 04.08.2022 3♂; 48.424917° N 24.396978° E 04.08.2022 5♀ an. drop.; 48.424891° N 24.396971° E 08.07.2023 2♀ an. drop.; 48.424886° N 24.396951° E 10.07.2023 1♀ 2♂ an. drop.; 48.425833° N 24.425965° E 19.05.2022 3♂ an. drop.; 48.425831° N 24.426032° E 19.05.2022 3♂ an. drop.; 48.425847° N 24.426115° E 29.05.2022 2♀ 3♂ for. lit.; 48.425879° N 24.426078° E 17.06.2022 5♂ for. lit.; 48.425883° N 24.425874° E 18.06.2023 5♀ for. lit.; 10.07.2023 1♀ 2♂; 19.07.2023 2♀ 2♂ for. lit.; 48.425883° N 24.425874° E 05.05.2023 1♀ 4♂ for. lit.; 48.425817° N 24.425815° E 17.06.2022 5♀; 29.06.2022 3♀ 5♂ for. lit.; 48.425837° N 24.425748° E 29.06.2022 2♀ for. lit.; 48.425798° N 24.426481° E 09.06.2023 2♀ 3♂ for. lit.; 48.425837° N 24.426473° E 19.07.2023 3♀ 4♂ for. lit.; 48.425873° N 24.426462° E 09.08.2023 5♀; 18.08.2023 3♂ for. lit.

Species' range: Azerbaijan, Austria, Belgium, Belarus, Croatia, Czech Republic, Chinese province of Heilongjiang, Denmark, England, Estonia, European part of Russia, France, Finland, Germany, Holland, Iran, Italy, Latvia, Lithuania, Luxembourg, Norway, Poland, Portugal, Romania, Siberia, Slovenia, Switzerland, Sweden, Turkey, Ukraine.

28. *Staphylinus caesareus caesareus* Cederhjelms, 1798

Collection sites: 48.424891° N 24.396971° E 19.05.2022 2♀♂ for. lit.; 29.05.2022 1♀; 08.07.2022 1♀ 2♂ for. lit.; 48.424886° N 24.396951° E 08.07.2022 4♀ an. drop.; 48.424981° N 24.396971° E 16.06.2023 1♀ an. drop.; 29.06.2022 1♀ 2♂ for. lit.; 48.424957° N 24.396983° E 26.07.2023 1♀ 2♂; 48.424933° N 24.396990° E 19.07.2023 1♀ 1♂ for. lit.; 48.425883° N 24.425874° E 17.06.2021 2♀ 3♂ for. lit.; 05.07.2021 3♀ an. drop.; 48.425817° N 24.425815° E 10.05.2021 1♀ 1♂ an. drop.; 21.05.2021 3♂; 19.05.2022 2♂ for. lit.

Species' range: Algeria, Armenia, Austria, Belgium, Belarus, Croatia, Cyprus, Czech Republic, Denmark, England, France, Finland, Germany, Georgia, Estonia, European part of Russia, Israel, Iran, Italy, Latvia, Lebanon, Lithuania, Luxembourg, Netherlands, Norway, Poland, Portugal, Romania, Syria, Slovenia, Switzerland, Sweden, Turkey, Ukraine.

29. *Quedius xanthopus* Erichson, 1839

Collection sites: 48.425817° N 24.425815° E 06.06.2024 1♀ for. lit.; 48.425837° N 24.425748° E 06.06.2024 2♂ for. lit.; 48.425883° N 24.425874° E 06.06.2024 1♀ for. lit.; 16.06.2024 1♀ 1♂ for. lit.

Species' range: Austria, Belgium, Croatia, Czech Republic, Great Britain, France, Finland, Greece, Germany, Denmark, European part of Russia, Italy, Latvia, Luxembourg, Middle East, Netherlands, Poland, Romania, Siberia, Slovenia, Spain, Switzerland, Sweden, Ukraine.

30. *Quedius paradisiensis* Heer., 1839

Synonyms: *Philonthus paradisiensis* Heer, 1839, *Quedius flavopilus* Gerhardt, 1899, *Quedius monticola* Erichson, 1840.

Collection sites: 48.425817° N 24.425815° E 16.06.2024 1♀ 1♂ for. lit.; 48.425837° N 24.425748° E 18.07.2024 1♀; 48.425883° N 24.425874° E 18.07.2024 1♂.

Species' range: Albania, Austria, Caucasus, Croatia, Czech Republic, France, Greece, Germany, Italy, Macedonia, Montenegro, Poland, Romania, Slovenia, Switzerland, Turkey, Ukraine.

31. *Nudobius lentus* Gravenhorst, 1806

Synonyms: *Nudobius excellens* Tikhomirova, 1973b, *Staphylinus fuscipes* Linnaeus, 1758, *Staphylinus wingelmuelleri* Bernhauer, 1899a, *Staphylinus lentus* Gravenhorst, 1806.

Collection sites: 48.425817° N 24.425815° E 16.06.2024 1♀ 1♂ under the bark of trees; 48.425837° N 24.425748° E 18.07.2024 1♀ under the bark of trees; 48.425883° N 24.425874° E 18.07.2024 1♂ for. lit.; 48.425837° N 24.426473° E 07.06.2021 1♂ for. lit.; 48.425873° N 24.426462° E 17.06.2021 3♀ for. lit.

Species' range: Armenia, China, Japan, Kazakhstan, all countries of the European continent, the European part of Russia, Siberia, Turkey.

32. *Xantholinus tricolor* (Fabricius, 1787)

Synonyms: *Xantholinus lessinicus* A. Bordoni, 1972c, *Xantholinus meyeri* Drugmand, 1994, *Xantholinus pellegrinus* Coiffait, 1970h, *Xantholinus rhaeticus* A. Bordoni, 1972c, *Xantholinus toumayeffi* A. Bordoni, 1986.

Collection sites: 48.424950° N 24.396877° E 05.07.2021 1♀ 2♂; 18.07.2021 1♀; 06.08.2021 1♂ for. lit.; 48.424925° N 24.396865° E 17.06.2022 1♀ 1♂ for. lit.

Species' range: England, Austria, Belgium, Bulgaria, Belarus, Croatia, Czech Republic, Denmark, Estonia, European part of Russia, France, Finland, Georgia, Germany, Hungary, Holland, Italy, Latvia, Lithuania, Luxembourg, Netherlands, Norway, Poland, Portugal, Romania, Slovenia, Switzerland, Sweden, Turkey, Tajikistan, Ukraine.

33. *Xantholinus linearis linearis* Olivier, 1795

Synonyms: *Xantholinus aequalis* Fauvel, 1898b, *Staphylinus longiceps* Gravenhorst, 1802, *Xantholinus multipunctatus* Thomson, 1860, *Staphylinus ochraceus* Gravenhorst, 1802, *Staphylinus punctulatus* Gravenhorst, 1802, *Staphylinus linearis linearis* Olivier, 1795.

Collection sites: 48.424950° N 24.396877° E 07.06.2021 3♂; 17.06.2021 1♀; 06.08.2021 1♂ for. lit.; 48.424925° N 24.396865° E 26.07.2022 2♂ for. lit.; 48.424971° N 24.396890° E 19.07.2023 4♀ 4♂ for. lit.; 48.424981° N 24.396971° E 18.06.2024 3♀♂ for. lit.

Species' range: Algeria, Armenia, Canary Islands, the European continent, Georgia, Iran, Kazakhstan, New Zealand, Tunisia.

34. *Megalimus glabratus* Gravenhorst, 1802

Collection sites: 48.424981° N 24.396971° E 16.06.2024 2♀ 2♂ for. lit.

Species' range: Algeria, Azores and the Canary Islands, Cyprus, Egypt, the entire European continent, Lebanon, Libya, Morocco, Syria, Sudan, Tunisia, Turkey.

Subfamily Oxytelinae

35. *Oxytelus sculptus* Gravenhorst, 1806

Synonyms: *Oxytelus antennatus* Stephens, 1834, *Oxytelus longicornis* Mannerheim, 1830, *Oxytelus moerens* Melsheimer, 1844a, *Omalium pullus* Broun, 1880, *Oxytelus testaceipennis* Fairmaire & Germain, 1862.

Collection sites: 48.424981° N 24.396971° E 09.07.2024 2♀ for. lit.; 48.425833° N 24.425965° E 18.07.2022 3♀ 2♂ for. lit.; 48.425831° N 24.426032° E 10.07.2023 1♀ 2♂ for. lit.; 48.425847° N 24.426115° E 18.07.2023 3♀ for. lit.

Species' range: Northern Africa, Argentina, Azores, Brazil, Canada, China, Canary Islands, European continent, Iran, Kyrgyzstan, Madagascar, Mongolia, Uruguay, Uzbekistan.

36. *Platystethus arenarius* (Geoffroy, 1785)

Synonyms: *Staphylinus arenarius* Geoffroy, 1785
Collection sites: 48.424950° N 24.396877° E 09.07.2024 2♀ 2♂ for. lit.

Species' range: Algeria, certain provinces of China (Beijing, Ningxia, Qinghai, Shanxi, Shaanxi, Sichuan, Xijiang), the European continent, Georgia, Iran, Kazakhstan, Morocco, Libya, Siberia, Turkey, Uzbekistan.

Subfamily Steninae

37. *Stenus comma* LeConte, J. L., 1863

Synonyms: *Stenus bipunctatus* Erichson, 1839b, *Stenus bipustulatus* Stephens, 1833b, *Stenus punctiger* Casey, 1884b.

Collection sites: 48.424957° N 24.396983° E 18.07.2021 2♀ 1♂; 29.08.2021 1♀♂ for. lit.; 48.424933° N 24.396990° E 18.07.2021 1♀ 1♂; 19.08.2021 1♀ 3♂ for. lit.; 48.425837° N 24.425748° E 29.08.2022 5♀♂ for. lit.

Species' range: Azerbaijan, Armenia, Canada, China, Georgia, covers the European continent, the Middle East, Iran, Iraq, Kazakhstan, Korea, Mongolia, Siberia, Turkey, and Japan.

38. *Stenus carpathicus* Ganglbauer, 1896

Synonyms: *Stenus pyrenaicus* L. Benick, 1925b, *Hemistenus carpathicus* Ganglbauer, 1896

Collection sites: 48.424981° N 24.396971° E 07.04.2020 3♀ 4♂; 09.06.2020 1♀ for. lit.; 48.425817° N 24.425815° E 19.08.2021 2♀ 3♂ for. lit.; 48.425837° N 24.425748° E 29.08.2021 1♀ 2♂; 06.08.2021 1♀ for. lit.; 48.425798° N 24.426481° E 27.08.2023 4♂; 06.09.2023 1♀ 1♂ for. lit.

Species' range: Austria, Croatia, Czech, Germany, Hungary, Poland, Romania, Serbia, Republic, Ukraine.

39. *Stenus geniculatus* Gravenhorst, 1806

Synonyms: *Paederus proboscoidens* Olivier, 1795, *Hemistenus geniculatus* Gravenhorst, 1806.

Collection sites: 48.424886° N 24.396951° E 19.07.2023 2♀ 2♂ for. lit.; 48.425837° N 24.426473° E 17.06.2022 2♀ 4♂; 08.07.2022 2♀ for. lit.; 48.425817° N 24.425815° E 29.07.2023 3♀ 2♂; 18.08.2023 3♀ for. lit.

Species' range: Austria, Belgium, Belarus, Denmark, Estonia, Finland, France, Germany, Ireland, Italy, Latvia, Lithuania, Luxembourg, Netherlands, Norway, Poland, Switzerland, Sweden, United Kingdom, Ukraine.

40. *Stenus humilis* Erichson, 1839

Synonyms: *Stenus fuscipes* Ljungh, 1810, *Stenus montandoni* L. Benick, 1929a, *Stenus netolitzkyi* Bernhauer, 1908b, *Stenus onymus* Gemminger & Harold, 1868, *Stenus picipes* Motschulsky, 1858h, *Stenus scabripennis* W. Kolbe, 1909.

Collection sites: 48.424950° N 24.396877° E 30.06.2020 4♂ for. lit.; 48.424933° N 24.396990° E 05.07.2021 1♀ 1♂ for. lit.; 48.425879° N 24.426078° E 17.06.2021 1♀ 1♂; 27.06.2021 1♀ 2♂; 04.08.2022 1♀ for. lit.

Species' range: Austria, Azerbaijan, Bulgaria, Belgium, Belarus, Croatia, Czech Republic, Denmark, Finland, France, Georgia, Great Britain, Germany, Hungary, Italy, Latvia, Lithuania, Kazakhstan, Netherlands, Norway, Poland, Romania, Serbia, Siberia, Slovenia, Sweden, Switzerland, Turkey, Turkmenistan, Ukraine, as well as the European part of Russia.

41. *Stenus nitens* Stephens, 1833

Collection sites: 48.424950° N 24.396877° E 29.07.2022 3♂ for. lit.; 15.08.2022 1♀ 1♂ for. lit.; 48.424925° N 24.396865° E 04.08.2022 1♂; 18.08.2023 1♂ for. lit.; 48.424980° N 24.396920° E 19.07.2023 2♀ 1♂; 09.08.2023 1♀ for. lit.; 48.425833° N 24.425965° E 08.08.2020 4♀ 2♂; 07.09.2021 3♀ for. lit.; 48.425873° N 24.426462° E 14.08.2020 5♂; 18.08.2023 2♀ for. lit.

Species' range: Austria, Belgium, Belarus, Czech Republic, Great Britain, Denmark, Estonia, France, Germany, Hungary, Ireland, Italy, Latvia, Netherlands, Norway, Poland, Siberia, Switzerland, Sweden, Ukraine.

Subfamily Olisthaerinae

42. *Olisthaerus substriatus* Paykull, 1790

Synonyms: *Olisthaerus nitidus* LeConte, 1850, *Staphylinus substriatus* Paykull, 1790.

Collection sites: 48.425837° N 24.426473° E 24.08.2020 1♂ 3♀ for. lit.; 48.425817° N 24.425815° E 25.08.2021 2♀ for. lit.

Species' range: Canada, the area covers the European continent, Siberia, and some US states.

Subfamily Tachyporinae

43. *Tachyporus chrysolinus* (Linnaeus, 1758)

Synonyms: *Tachyporus basalis* Eppelsheim, 1893a, *Tachyporus fasciatus* Nicholson, 1911, *Oxyporus melanocephalus* Fabricius, 1792b, *Staphylinus merdarius* Fabricius, 1775, *Staphylinus nigricapillus* Turton, 1802, *Tachyporus petzi* Bernhauer, 1927a, *Tachyporus congruens* Eppelsheim, 1893a, *Tachyporus flavescens* Stephens, 1832, *Staphylinus martialis* Schrank, 1781, *Tachyporus meridionalis* Fairmaire & Brisout de Barneville, *Oxyporus minutus* Fabricius, 1792b, *Tachyporus niger* Luze, 1901, *Tachyporus nigriceps* Mannerheim, 1830, *Tachyporus putridarius* Gistel, 1857a, *Tachyporus putridus* Stephens, 1832, *Tachyporus rufomarginatus* Kolenati, 1846a.

Collection sites: 48.424925° N 24.396865° E 20.04.2021 3♀ fungi; 10.05.2021 1♂; 05.07.2021 1♀ fungi; 48.424957° N 24.396983° E 16.06.2022 2♀ 2♂; 29.06.2022 2♂; 17.07.2022 1♀; 10.07.2023 4♂ for. lit.; 48.425817° N 24.425815° E 30.06.2020 2♀ 3♂; 17.06.2022 4♀ for. lit.; 48.425837° N 24.425748° E 27.06.2021 2♀ 4♂ for. lit.; 48.425798° N 24.426481° E 17.07.2022 3♀ for. lit.; 48.425837° N 24.426473° E 26.07.2022 3♂; 04.08.2022 3♀ 2♂; 15.08.2022 2♀ for. lit.; 48.425873° N 24.426462° E 14.04.2023 4♀; 26.05.2023 3♂ for. lit.; 48.425879° N 24.426078° E 13.04.2024 5♀ for. lit.

Species' range: Azores, Armenia, China, the entire European continent, Kazakhstan, Mongolia, Turkmenistan, Turkey, and Japan.

44. *Tachyporus hypnorum* (Fabricius, 1775)

Synonyms: *Tachyporus apicalis* Stephens, 1832, *Tachyporus armeniacus* Kolenati, 1846a, *Tachyporus atratus* Csiki, 1901a, *Staphylinus blattinus* Schrank, 1781, *Tachyporus collaris* Stephens, 1832, *Staphylinus conicus* Villers, 1789, *Oxyporus dimidiatus* Fabricius, 1798, *Tachyporus erythropterus* Stephens, 1832.

Collection sites: 48.425883° N 24.425874° E 28.05.2023 3♀ for. lit.; 48.425817° N 24.425815° E 28.05.2023 5♀ for. lit.; 48.425837° N 24.425748° E 13.05.2023 2♂ for. lit.; 48.425798° N 24.426481° E 18.07.2024 1♀ 4♂ fungi; 48.425837° N 24.426473° E 06.06.2024 2♀ 3♂ for. lit.

Species' range: Algeria, Armenia, Afghanistan, Cyprus, as well as in certain provinces of China (Heilongjiang, Jilin, and Liaoning) Georgia, covers Europe, Iran, Lebanon, Morocco, Pakistan, Syria, Tunisia, Turkey, Uzbekistan.

45. *Tachyporus formosus* Matthews, A. H., 1838

Synonyms: *Tachyporus caspius* Motschulsky, 1860e, *Tachyporus decoratus* Luze, 1901a, *Tachyporus februaryii* Gistel, 1857a, *Tachyporus flavipes* Mäklin, 1846, *Tachyporus laticollis* Luze, 1901a, *Tachyporus rufus* Erichson, 1839a.

Collection sites: 48.424957° N 24.396983° E 09.04.2021 2♀; 17.06.2021 1♂; 05.07.2021 1♀ 1♂ for. lit.; 48.424933° N 24.396990° E 27.06.2021 3♂ for. lit.; 48.424925° N 24.396865° E 29.07.2021 1♀ for. lit.; 48.424886° N 24.396951° E 25.04.2022 1♀ 2♂ for. lit.; 48.424950° N 24.396877° E 10.07.2023 4♂ fungi; 48.424971° N 24.396890° E 29.06.2023 2♀ 2♂ fungi; 48.425833° N 24.425965° E 27.06.2021 3♀ fungi; 48.425831° N 24.426032° E 09.08.2023 5♀ fungi; 10.07.2023 2♂ for. lit.; 48.425817° N 24.425815° E 09.04.2021 1♀; 30.05.2021 1♀ 2♂ for. lit.; 48.425837° N 24.426473° E 05.06.2022 1♀ 1♂; 29.06.2023 3♂ for. lit.; 48.425873° N 24.426462° E 10.07.2020 1♀ for. lit.

Species' range: Azerbaijan, all of Europe, Georgia, Morocco, Turkey, Uzbekistan.

46. *Tachyporus nitidulus* (Fabricius, 1781)

Synonyms: *Tachyporus ancorarius* Cameron, 1926a, *Tachyporus angustatus* Stephens, 1832, *Tachyporus basalis* Stephens, 1832, *Oxyporus brunneus* Fabricius, 1792b, *Tachyporus brunneus* Stephens, 1832, *Tachyporus chloroticus* Kolenati, 1846a, *Tachyporus compressicornis* Luze, 1901a, *Tachyporus crassicornis* Mannerheim, 1844a, *Tachyporus crux* Eppelsheim, 1892b, *Tachyporus elegantulus* Reiche & Saulcy, 1856, *Tachyporus faber* Say, 1832, *Tachyporus flavicornis* Stephens, 1832, *Conurus flavus* Stephens, 1832, *Tachyporus gracilis* Stephens, 1832, *Tachyporus libens* Stephens, 1832, *Tachyporus longipennis* Bernhauer, 1933c, *Tachyporus minimus* Stephens, 1832, *Tachyporus nitiduloides* Cameron, 1926a, *Tachyporus*

nitidus Stephens, 1832, *Tachyporus pusillus* Stephens, 1832, *Tachyporus pyrrochocaris* Stephens, 1832, *Tachyporus scutellaris* Lacordaire, 1835, *Tachinus spaethi* Luze, 1901a, *Tachyporus thoracicus* Stephens, 1832.

Collection sites: 48.424933° N 24.396990° E 11.04.2020 2♀ 1♂ for. lit.; 05.05.2020 1♀; 16.05.2020 1♂ for. lit.; 31.07.2020 4♂; 14.08.2020 3♀; 25.08.2020 2♀ 3♂; 17.07.2022 3♀ fungi; 48.424917° N 24.396978° E 17.07.2022 2♂; 29.06.2022 1♀ 2♂; 29.06.2024 3♂ fungi; 48.424891° N 24.396971° E 10.05.2022 2♀ for. lit.; 48.424886° N 24.396951° E 29.06.2023 2♀ 3♂; 04.04.2024 2♀ for. lit.

Species' range: Azerbaijan, all of Europe, Georgia, Morocco, Turkey, Uzbekistan.

47. *Sepedophilus testaceus* Fabricius, 1792

Synonyms: *Conosoma devillei* Jeannel & Jarrige, 1949, *Conosoma elongatus* Blatchley, 1910, *Conurus imbricatus* Casey, 1885a, *Conosoma limuloides* Casey, 1895, *Oxyporus testaceus* Fabricius, 1792.

Collection sites: 48.425817° N 24.425815° E 05.05.2020 1♂ for. lit.; 48.425879° N 24.426078° E 16.05.2020 1♀ for. lit.; 48.425837° N 24.426473° E 26.04.2024 1♀ for. lit.

Species' range: Azerbaijan, Algeria, Arabia, Armenia, Cyprus, China, Europe, Iran, Japan, Madeira, Morocco, Siberia, Saudi Arabia, Taiwan, Tunisia, Turkey.

48. *Sepedophilus bipustulatus* (Gravenhorst, 1802)

Synonyms: *Tachyporus bipustulatus* (Gravenhorst, 1802)

Collection sites: 48.425817° N 24.425815° E 05.06.2022 1♀ for. lit.; 48.425879° N 24.426078° E 13.05.2023 1♀ 1♂ fungi; 48.425837° N 24.426473° E 26.04.2024 2♂ fungi.

Species' range: China, Europe, Turkey.

49. *Tachinus elongatus* Gyllenhal, 1810

Synonyms: *Tachinus aterrimus* Stephens, 1832, *Tachinus intricatus* C. R. Sahlberg, 1830, *Mycetoporus kobai* Kano, 1933, *Tachinus ochsi* Coiffait, 1955b, *Tachinus parallelus* Hom, 1877.

Collection sites: 48.424917° N 24.396978° E 17.06.2020 3♀ for. lit.; 48.424891° N 24.396971° E 17.06.2020 1♀ for. lit.; 48.424886° N 24.39695° E 30.06.2020 5♀ for. lit.; 48.425817° N 24.425815° E 17.06.2021 3♂ fungi; 48.425879° N 24.426078° E 10.05.2022 1♀ fungi; 48.425831° N 24.426032° E 15.08.2022 1♀ 1♂; 07.08.2024 1♂ fungi.

Species' range: Armenia, Canada, China, Europe, Georgia, Japan, the Far East, Kyrgyzstan, Mexico, Mongolia, Turkey.

50. *Tachinus humeralis* Gravenhorst, 1802

Synonyms: *Staphylinus cinctus* Marsham, 1802, *Staphylinus laetus* Marsham, 1802, *Tachinus gamasifex* Gistel, 1857a, *Tachinus rufescens* Mulsant & Rey, 1853b.

Collection sites: 48.424886° N 24.396951° E 17.06.2020 1♀ fungi; 29.06.2022 1♀; 09.07.2024, 2♀ 1♂ for. lit.

Species' range: Azerbaijan, Europe, Georgia, Iran, Syria, Turkey.

51. *Tachinus subterraneus* Linnaeus, 1758

Synonyms: *Tachyporus bicolor* Gravenhorst, 1806, *Tachinus biplagiatus* Lacordaire, 1835, *Tachinus ruficollis* Eppelsheim, 1889c, *Staphylinus subterraneus* Linnaeus, 1758.

Collection sites: 48.424981° N 24.396971° E 17.06.2020 1♀ 2♂ for. lit.

Species' range: Armenia, Europe, Georgia, Iran, Siberia, Syria, Turkey and Turkmenistan.

52. *Tachinus rufipes* (Linnaeus, 1758)

Synonyms: *Tachinus apicalis* Stephens, 1832, *Tachinus cunicularius* Gistel, 1857a, *Tachinus eidami* Wendeler, 1928b, *Tachinus fulvipes* Stephens, 1832, *Tachinus pallens* Gyllenhal, 1810, *Tachinus pullus* Gravenhorst, 1802, *Tachinus signatus* Gravenhorst, 1802, *Staphylinus spinipes* Pontoppidan, 1765, *Staphylinus rufipes* (Linnaeus, 1758).

Collection sites: 48.424950° N 24.396877° E 10.07.2020 2♀ 1♂; 14.08.2020 1♀; 04.09.2020 1♂ for. lit.; 48.424925° N 24.396865° E 10.05.2021 2♂; 09.08.2023 1♀ 1♂; 06.09.2023 1♀ for. lit.; 48.424980° N 24.396920° E 13.04.2024 2♀; 09.07.2024 1♀; 29.06.2024 2♂ for. lit.

Species' range: Azerbaijan, Algeria, Armenia, Europe, China, Georgia, the Far East, Morocco, Lebanon, Kazakhstan, Kyrgyzstan, Siberia, Syria, Turkey.

53. *Lordithon lumulatus* (Linnaeus, 1760)

Synonyms: *Staphylinus atricapillus* Fabricius, 1775, *Paederus austriacus* Schrank, 1781, *Staphylinus lumulatus* Linnaeus, 1760

Collection sites: 48.424950° N 24.396877° E 05.07.2021 2♀ 3♂; 19.08.2021 1♀; 07.09.2021 1♀ for. lit.; 48.424925° N 24.396865° E 30.06.2020 2♂; 09.08.2023 2♀; 03.09.2022 1♀ fungi; 48.424980° N 24.396920° E 13.04.2024 2♀; 06.06.2024 1♂; 17.06.2022 2♀ fungi; 48.425817° N 24.425815° E 17.06.2021 2♀ 1♂; 21.05.2021 3♀; 07.06.2021 2♀ fungi; 48.425879° N 24.426078° E 08.07.2022 3♀ 2♂ for. lit.; 48.425831° N 24.426032° E 23.08.2022 2♀; 07.08.2024 1♀ for. lit.

Species' range: European continent.

54. *Lordithon exoletus* Erichson, 1839

Synonyms: *Bolitobius apicalis* Stephens, 1832, *Bolitobius bimaculatus* Stephens, 1832, *Bolitobius ochraceus* Stephens, 1832, *Bolitobius exoletus* (Erichson, 1839)

Collection sites: 48.424950° N 24.396877° E 05.07.2021 2♀ 19.08.2021 1♀; 03.09.2021 2♀ for. lit.; 48.424925° N 24.396865° E 30.06.2020 2♀; 09.08.2023 3♂; 03.09.2022 1♀ for. lit.; 48.424980° N 24.396920° E 13.04.2024 2♀; 06.06.2024 1♀; 17.06.2022 1♀ fungi; 48.425817° N 24.425815° E 17.06.2021 2♀ 1♂; 21.05.2021 3♀; 07.06.2021 2♂ fungi; 48.425879° N 24.426078° E 18.07.2022 3♀ 2♂ fungi; 48.425831° N 24.426032° E 15.08.2022 3♀ 1♂; 04.08.2024 3♀ for. lit.

Species' range: Algeria, Belarus, Caucasus, Morocco, Tunisia, Ukraine.

55. *Lordithon trinotatus* Erichson, 1839

Synonyms: *Bolitobius gularis* Stephens, 1832, *Bolitobius discophorus* Rey, 1883a, *Bolitobius dorsalis* Rey, 1883a, *Bolitobius trinotatus* Erichson, 1839, *Bolitobius trinotatus* Erichson, 1839

Collection sites: 48.424981° N 24.396971° E 17.06.2020 3♀ for. lit.; 48.424957° N 24.396983° E 07.06.2021 1♀ 3♂ for. lit.; 48.424933° N 24.396990° E 18.07.2021 2♀ for. lit.; 48.425831° N 24.426032° E 18.08.2023 4♀; 04.08.2022 3♂ fungi; 48.425817° N 24.425815° E 19.05.2022 3♀; 07.06.2021 2♂; 17.06.2022 1♀ 2♂ fungi.

Species' range: Algeria, Austria, Belgium, Bulgaria, Denmark, England, Greece, Georgia, Iran, Ireland, Italy, Cyprus, Latvia, Lithuania, Macedonia, Netherlands, Germany, Norway, Poland, Portugal, Romania, Slovenia, Turkey, France, Switzerland, Sweden, Spain, Ukraine, Croatia, Czech Republic.

56. *Lordithon trimaculatus* Fabricius, 1792

Synonyms: *Bolitobius breviceps* Sharp, 1888b, *Bolitobius flavicollis* Hochhuth, 1849, *Bolitobius kraatzii* Pandellé, 1869, *Oxyporus trimaculatus* Fabricius, 1792.

Collection sites: 48.424981° N 24.396971° E 17.06.2020 3♀ fungi; 48.424957° N 24.396983° E 07.06.2021 2♀ 2♂ fungi; 48.424933° N 24.396990° E 18.07.2021 2♀; 48.425831° N 24.426032° E 18.08.2023 4♀; 04.08.2022 1♀ 2♂ fungi; 48.425817° N 24.425815° E 19.05.2022 3♀; 07.09.2021 2♀; 14.09.2022 2♀ 1♂ for. lit.

Species' range: The range covers the European continent, Azerbaijan, Armenia, individual provinces of China (Heilongjiang) and Japan (Hokkaido, Honshu, Kyushu, Shikoku), the Far East, Iran, Kazakhstan, Siberia, Turkey,

Subfamily Micropeplinae

57. *Micropeplus fulvipes* Kerst., 1964

Collection sites: 48.425817° N 24.425815° E 18.07.2021 2♂ 06.08.2021 2♀; 09.08.2023 1♂ fungi; 48.425837° N 24.425748° E 15.08.2024 1♂ fungi.

Species' range: Austria, Belgium, Croatia, Czech Republic, Denmark, France, Germany, Italy, Ireland, Netherlands, Poland, Portugal, Romania, Switzerland, Ukraine, United Kingdom.

Subfamily Piestinae

58. *Siagonium humerale* Germar, 1836

Collection sites: 48.425833° N 24.425965° E 18.017.2024 4♂ for. lit.

Species' range: Austria, Belgium, Croatia, Czech Republic, Denmark, France, Germany, Ireland, Italy, Netherlands, Poland, Portugal, Romania, Switzerland, Ukraine, United Kingdom.

59. *Siagonium quadricorne* Kirby & Spence, 1815

Synonyms: *Prognathus rufipenne* Blondel, 1827

Collection sites: 48.424891° N 24.396971° E 09.07.2024 1♀ 1♂ fungi.

Species' range: Austria, Belgium, Croatia, Czech Republic, Denmark, France, Germany, Ireland, Italy, Netherlands, Poland, Portugal, Romania, Switzerland, United Kingdom, Ukraine.

Subfamily Pselaphinae

60. *Bryaxis carpathicus* Saulcy, 1875

Synonyms: *Bythinus carpathicus* Saulcy, 1875

Collection sites: 48.424957° N 24.396983° E 05.05.2023 1♀ fungi; 48.425837° N 24.425748° E 19.07.2023 1♂; 15.08.2024 2♀ fungi.

Species' range: Poland, Romania, Slovakia, Ukraine.

61. *Bryaxis reitteri* Saulcy, 1875

Synonyms: *Bythinus reitteri* Saulcy, 1875

Collection sites: 48.425837° N 24.425748° E 19.07.2023 1♂ fungi.

Species' range: Poland, Romania, Slovakia, Slovenia, Ukraine.

62. *Bryaxis ruthenus ruthenus* Saulcy, 1875

Synonyms: *Bythinus ruthenus ruthenus* Saulcy, 1875

Collection sites: 48.425837° N 24.425748° E 18.06.2023 1♀ fungi; 48.425879° N 24.426078° E 18.06.2023 1♂ fungi.

Species' range: Hungary, Poland, Romania, Slovakia, Ukraine.

Subfamily Oxyporinae

63. *Oxyporus maxillosus* Fabricius, 1792

Synonyms: *Oxyporus amurensis* Ganglbauer, 1895, *Oxyporus angularis* Gebler, 1830, *Oxyporus apicalis* Eppelsheim, 1889c, *Oxyporus schoenherrii* Mannerheim, 1830.

Collection sites: 48.424981° N 24.396971° E 17.06.2020 1♀ 2♂ fungi; 48.424957° N 24.396983° E 07.06.2021 4♀ fungi; 48.424933° N 24.396990° E 18.07.2021 1♂ for. lit.; 48.425831° N 24.426032° E 09.08.2023 2♀ 2♂; 04.08.2022 3♀♂; 07.06.2021 1♀ 1♂; 26.07.2023 2♀ for. lit.

Species' range: Austria, Belgium, Denmark, Estonia, Iran, Italy, Kazakhstan, Latvia, Lithuania, Mongolia, Germany, Poland, Romania, Syria, Slovenia, Turkey, Finland, France, Switzerland, Sweden, Ukraine, Czech Republic, Japan.

64. *Oxyporus rufus rufus* Linnaeus, 1758

Synonyms: *Oxyporus minarzi* Bernhauer, 1923, *Staphylinus nigrofulvus* Geoffroy, 1785, *Staphylinus rufus rufus* Linnaeus, 1758

Collection sites: 48.424957° N 24.396983° E 19.08.2021 2♀ for. lit.; 48.424933° N 24.396990° E 06.08.2021 2♀ 1♂ for. lit.; 48.425879° N 24.426078° E 16.05.2020 3♀ fungi; 48.425883° N 24.425874° E 21.05.2021 1♀ 1♂ fungi; 48.425817° N 24.425815° E 04.08.2022 2♀ fungi; 48.425837° N 24.425748° E 04.08.2022 2♂ fungi; 48.425798° N 24.42648° E 30.07.2024 3♀ 1♂ for. lit.

Species' range: Armenia, Azerbaijan, Austria, Belgium, Bulgaria, Czech Republic, Croatia, China (Heilongjiang, Ningxia), England, Estonia, France, Georgia, Denmark, Iran, Italy, Kazakhstan, Korea, Latvia, Lithuania, Netherlands, Germany, Norway, Poland, Portugal, Slovenia, Spain, Turkey, Switzerland, Sweden, Ukraine, Japan (Kyushu, Hokoku, Honshu).

Subfamily Scaphidiinae

65. *Scaphidium assimile* Olivier, 1790

Collection sites: 48.425833° N 24.425965° E 27.06.2021 1♀ for. lit.; 48.425879° N 24.426078° E 29.07.2021 1♂ for. lit.

Species' range: Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Italy, Latvia, Lithuania, Poland, Romania, Slovenia, Switzerland, Sweden, Ukraine.

66. *Scaphidium quadrimaculatum* Olivier A. G., 1790

Collection sites: 48.425837° N 24.42647° E 27.06.2021 1♀ for. lit.

Species' range: Albania, Austria, Belgium, Bulgaria, Belarus, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Israel, Italy, Lithuania, Liechtenstein, Latvia, Macedonia, Norway, Netherlands, Poland, Portugal, Romania, Serbia, Spain, Sweden, Switzerland, Siberia, Turkey, Ukraine, United Kingdom.

Subfamily Scidmaeninae

67. *Phloeostiba plana* Paykull, 1792

Synonyms: *Xylodromus bipunctata* Motschulsky, 1860e, *Staphylinus flavipes* Linnaeus, 1758, *Omalium rufipes* Lentz, 1856, *Staphylinus plana* Paykull, 1792.

Collection sites: 48.425837° N 24.42647° E 16.06.2024 1♀ for. lit.

Species' range: Armenia, China (Heilongjiang, Hubei, Yunnan), Iran, Iceland, Siberia, Eastern Europe, Japan (Hokkaido, Honshu, Shikoku), Turkey.

68. *Phloeonomus minimus* (Erichson, 1839)

Synonyms: *Omalium minimus* Erichson, 1839

Collection sites: 48.424981° N 24.396971° E 29.06.2023 1♂ for. lit.; 48.424957° N 24.396983° E 06.06.2024 1♀ for. lit.; 48.424933° N 24.396990° E 06.06.2024 1♀ for. lit.

Species' range: Austria, Albania, Armenia, Belarus, Belgium, Czech Republic, Germany, Hungary, Italy, Switzerland, France.

Subfamily Phloeocharinae

69. *Phloeocharis subtilissima* Mannerheim, 1830

Collection sites: 48.425817° N 24.425815° E 03.09.2024 1♀ for. lit.; 48.425837° N 24.425748° E 03.06.2024 1♂ for. lit.

Species' range: China, Europe, North Africa, Turkey.

Discussion

Staphylinidae, commonly known as rove beetles, represent one of the most diverse families within the order Coleoptera. Currently, the global fauna comprises over 66,000 described species, distributed across 32 subfamilies. According to phylogenetic classifications, members of this family are divided into four principal groups: Omalinae, Tachyporinae, Staphylininae, and Aleocharinae (Yin, 2018; Kim, 2020; Tihelka, 2020; Brunke, 2021; Dolson, 2021; Yamamoto, 2021). Rove beetles are found on every continent except Antarctica and often form entomological complexes with a significant proportion of endemic and rare species in various regions (Assing, 2019, 2022). In the Ukrainian Carpathians, they play a crucial ecological role, with over 160 species recorded (Glotov, 2021; Glotov et al., 2022).

Members of this family have adapted to a wide range of habitats, including animal dung, plant and animal debris, fungal fruiting bodies, compost heaps, and under stones. Some species are even found on the tops of plants and may participate in pollination processes (Luff et al., 2021; Wojas, 2021a; Stocker et al., 2022; Spiessberger et al., 2024).

These beetles prefer moist areas, often characterized by swampy conditions. They are commonly found in clearings, burnt areas, and peat bogs, favoring moss layers. Genera frequently encountered in these habitats include *Anthrophagus*, *Stenus*, *Xantholinus*, *Othius*, *Philonthus*, *Quedius*, *Tachyporus*, and *Tachinus* (Wojas, 2006; Faly et al., 2023, 2025).

Additionally, rove beetles are often found near freshwater ecosystems, where they can be categorized into six groups based on habitat preferences: open, dry areas with numerous boulders, stones, and sand, typically inhabited by *Atheta* species; areas near river catchments or upstream tributaries with loose substrates and moderate vegetation, where *Staphylinus erythropterus*, *Othius punctulatus* are common; sites with sedimentary rocks and varying particle sizes,

characterized by sparse vegetation, often hosting (*Xantholinus linearis*); ruderal vegetation on open, rocky areas with boulders and sandy admixtures near highland rivers, where *Staphylinus erythropterus* is typical; downstream areas with abundant sand and gravel, dense vegetation, and often shaded by woody plants, commonly inhabited by *Tachyporus chrysomelinus*; regions with significant sand, high silt content, and dense vegetation, where *Xantholinus glabratus*, *Stenus boops* are numerous. Notably, several rove beetle species are adapted to various habitats, including *Philonthus rotundicollis*, *Ph. rubripennis*, *Tachyporus chrysomelinus*, *Deleaster dichrous*, *Xantholinus linearis* (Eyre et al., 2001).

Staphylinidae prefer not only natural ecosystems but also artificial ones (Faly & Brygadyrenko, 2014, 2024; Faly et al., 2024). For example, in urban ecosystems, they represent a dominant group among epigeic Coleoptera. They favor a variety of ecosystem types, including urban and forest parks, plant communities in the central parts of megacities, as well as areas of private housing development. It is worth noting that each type of ecosystem forms assemblages with a specific species composition and dominance structure. It has been established that the lowest species diversity is characteristic of private areas, where *Drusilla canaliculata*, often dominates, accompanied by three subdominant species: *Anotylus insecatus*, *Ocyopus nitens*, and *Xantholinus longiventris*. In forest park assemblages, *Staphylinus caesareus*, is dominant, while *Philonthus decorus*, and *Tasgius melanarius*, are subdominants. The highest species diversity is characteristic of ecosystems in the city center and its outskirts. Here, one eudominant species stands out – *Drusilla canaliculata* – with dominants including *Anotylus insecatus*, *Gabrieus osseticus*, *Ocyopus brunripes*, *O. nitens*, and *Zyras funestus*. As for urban park ecosystems, *Staphylinus caesareus*, is the most numerous species, while subdominants include *Drusilla canaliculata*, *Omalium rivulare*, *Philonthus decorus*, and *Xantholinus longiventris* (Faly et al., 2017; Puchkov et al., 2020).

They are also quite numerous in fruit orchards, particularly in apple and pear orchards growing on various substrate types. In this type of biocenosis, they play an extremely important role as regulators of pest populations. Frequently observed in orchards are *Omalium caesum*, *Othius punctulatus*, *Sepedophilus testaceus*, *Staphylinus erythropterus*, *Stenus ater*, *Tachinus rufipes*, *Tachyporus hypnorum*, *Tachyporus chrysomelinus* (Balog et al., 2003; Rood, 2015).

Rove beetles are frequently found under the bark of fallen trees at various stages of decay. The most numerous here are Tachyporinae, particularly representatives of the genera *Mycetoporus* (*Mycetoporus erichsonanus*, *M. dispersus*, *M. glaber*), *Sepedophilus* (*Sepedophilus obtusus*), *Tachyporus* (*Tachyporus formosus*), as well as representatives of the subfamilies Omaliinae and Oxytelinae (Bohac, 2016; Joëlsson et al., 2018; Vorst, 2021).

Among the analyzed family, numerous representatives of the coprobiont group are found in the feces of various groups of wild and domestic animals. Rove beetles are especially abundant in the dung of sheep, cattle, and horses. Commonly encountered species here include: *Philonthus splendens*, *Tachinus rufipes*, *Ontholestes tessellatus*, *Tachinus humeralis* (Lipkow, 2016).

Rove beetles are also frequently found in fungal fruiting bodies, showing a preference for parasitic and semi-parasitic species. Symbiotic relationships between members of this family and polypores are often observed. A fairly numerous species in this context is *Sepedophilus bipustulatus* (Drovalenko, 2023). Staphylinidae prefer the fruiting bodies of a significant number of species from the Ascomycota and Basidiomycota (Melke et al., 2022).

The altitudinal distribution of rove beetles in the Ukrainian Carpathians is quite extensive. Representatives of this family cover all elevation zones; among the recorded species, seven are found in high-mountain zones: *Deleaster dichrous*, *Staphylinus erythropterus*, *Xantholinus linearis*, *Megalimus* (*Xantholinus*) *glabratus*, *Tachyporus chrysomelinus*, *T. hypnorum*, *Othius punctulatus* and *Ocyopus macrocephalus* reach the subalpine belt (Eyre et al., 2001; Wojas, 2006).

It is worth noting that among the analyzed species there is one included in the Red Data Book of Ukraine and classified as rare – *Emus hirtus* (Red Data Book of Ukraine) (Zamoroka et al., 2017). In addition, within the studied assemblages, species that show activity during

the winter period were identified: *Deleaster dichrous* and *Othius punctulatus*.

Conclusion

As a result of the conducted research, we identified 69 species of rove beetles belonging to 13 subfamilies. The highest levels of species diversity were observed in the subfamilies Staphylininae, Tachyporinae, Steninae, and Omaliinae. According to the analysis of dominance structure in the assemblages, one common dominant species was identified for two ecosystem types – *Philonthus splendens*. Additionally, *Philonthus marginatus* and *Staphylinus erythropterus* were also found to be highly abundant in the rove beetle assemblages. Among the identified species, one is listed in the Red Book of Ukraine – *Emus hirtus*. The study of ecological and morphological groups of rove beetles demonstrated a clear dominance of motile epibiont stratobionts, which accounted for 35%. A slightly smaller proportion of species belonged to the cryptobiont group – 25%. The analysis of trophic structure revealed a clear dominance of zoophages – 90%, along with a minor share of zoo-nematophages and zoo-saprophages. Further studies of the region should be conducted to obtain a comprehensive picture of the distribution of beetles and their ecological characteristics.

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