Ентомологія

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ADDENDA TO THE KNOWLEDGE OF THE WEEVIL FAUNA (COLEOPTERA: CURCULIONIDAE) OF UKRAINE

Highly precise occurrence data for 13 poorly-known weevil species in Lviv and Ivano-Frankivsk Provinces of Ukraine are given: Eubrychius velutus (Beck, 1817), *Pelenomus velaris* (Gyllenhal, 1827), *Cotaster uncipes* (Boheman, 1838), *Anthonomus undulatus* Gyllenhal, 1836, *Orthochaetes setiger* (Beck, 1817), *Acallocrates colonnellii* Bahr, 2003, *Centricnemus leucogrammus* (Germar, 1823), *Humeromima rufipes* (Boheman, 1834), *Otiorhynchus pinastri* (Herbst, 1795), *Paophilus afflatus* (Boheman, 1833), *Stomodes gyrosicollis* Boheman, 1842, *Adexius scrobipennis* Gyllenhal, 1834, *Neoplinthus tigratus porcatus* (Panzer, 1798). *Eubrychius velutus, Anthonomus undulatus and Acallocrates colonnellii are recorded from Ukraine for the first time. Cotaster uncipes* (Boheman, 1838) *firstly documented since 1941 and firstly recorded from Lviv Province and Ciscarpathian region.*

Key words: *biodiversity, Moczarski-Winkler method, new records, Curculionidae.*

Despite the weevil fauna of Ukraine was recently surveyed [11] some species remain presumably unknown or are known by literature data only. Using the Chao2 estimation algorithm the whole fauna is estimated as 1470 species. While 1453 species are known from Ukraine, 278 of them are not yet confirmed by samples. The first comprehensive implementation of Winkler's sifter and Moczarski-Winkler method of extraction of arthropods confirms estimated gaps in the knowledge of the weevils of Ukraine.

Material and Methods

The material was collected by Denys Khrapov in Lviv and Ivano-Frankivsk Provinces during 2018-2020. Winkler's sifter, pitfall traps, sweep net, aquatic net and manual sampling with aspirator are used. Leaf litter extract was processed by Moczarski-Winkler extraction method [1, 3].

Dataset is deposited in Ukrainian Biodiversity Information Network (Khrapov & Yunakov 2020) and available from http://www.ukrbin.com/literature.php?id=4437.

Depositories: DMLU - State Museum of Nature, Lviv; KhDC - Private collection of Denys Khrapov, Lviv.

Results and Discussion

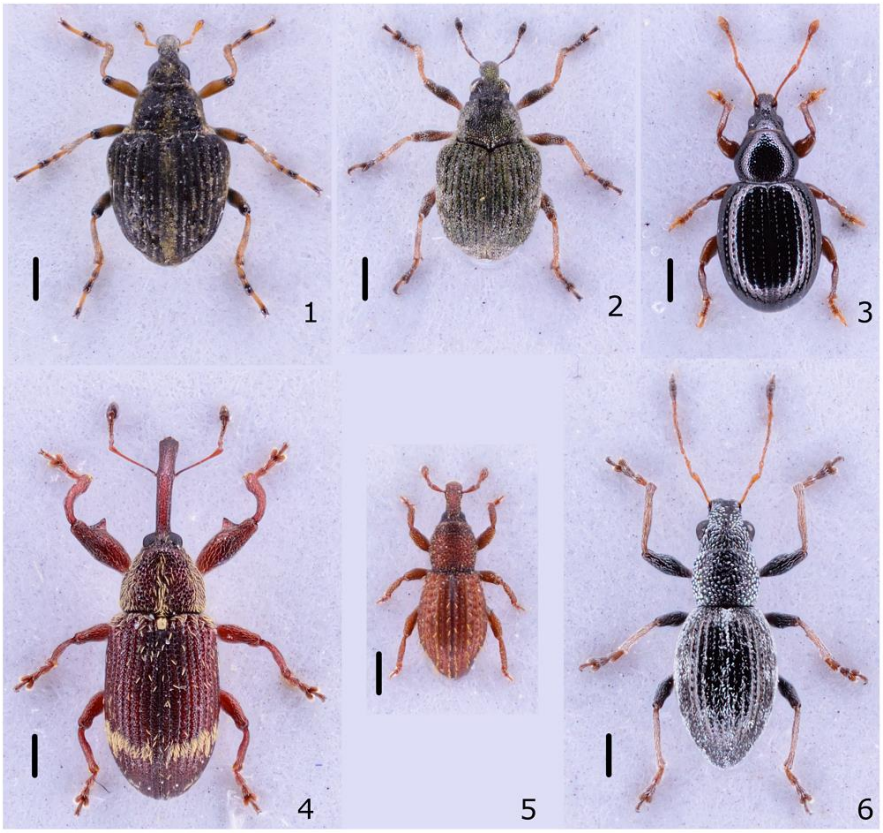
New finds of 13 poorly-known weevil species are listed below.

Subfamily Ceutorhynchinae

***Eubrychius velutus* (Beck, 1817)** (fig. 1)
Records. First record in Ukraine.

Material. 1 spec. (KhDC), Lviv Prov., Stryi Distr., 2 km SE Semyhyniv, Semyhyniv Protected Area, N49.135203, E23.743017, pond, 16.VII.2020, aquatic net; 1 spec. (DMLU), idem, 30.VII.2020; 4 spec. (KhDC), idem, 30.VII.2020.
Remark. Historical record from «West Galicia» belongs to modern territory of Poland [9]. In Lviv Province this species is restricted to riparian habitats with dominance of flowering rush (*Butomus umbellatus*).

***Pelenomus velaris* (Gyllenhal, 1827)** (fig. 2)
Records. Khmelnytskyi, Kyiv, Ternopil and Vinnytsia Province [2, 8]
Material. 3 spec. (KhDC), Lviv Prov., Zhydachiv Distr., Borodchytsi, Dnister River, riparian habitat, N49.387244, E24.224384, 23.VII.2020, manual sampling.
Remark. The species was known in Ukraine only by literature data. This is the first record from Lviv Province. It co-occurs with dominant species *Neophytobius granatus*.



Figures 1–6. Dorsal view of weevils. 1 – *Eubrychius velutus* (Beck, 1817); 2 – *Pelenomus velaris* (Gyllenhal, 1827); 3 – *Humeromima rufipes* (Boheman, 1834); 4 – *Anthonomus undulatus* Gyllenhal, 1836; 5 – *Cotaster uncipes* (Boheman, 1838); 6 – *Paophilus afflatus* (Boheman, 1833). Scale bar = 0.5 mm.

Subfamily Cossoninae

***Cotaster uncipes* (Boheman, 1838)** (fig. 5)

Records. Zakarpatska Province [10]

Material. 1 spec. (KhDC), NE Carpathians, Lviv Prov., Skole Distr., near Nyzhnie Synovydne, N49.090861, E23.643894, deciduous forest, 30.III.2020, sifting leaf litter; 4 spec. (KhDC, 1 - DMLU), NE Carpathians, Lviv Prov., Stryi Distr., near Rozgirche, N49.109959, E23.707283, mixed forest, 18.IV.2020, sifting leaf litter.

Remark. Inhabits both deciduous hornbeam-oak (*Carpinus betulus-Quercus robur-Populus tremula*) and mixed beech-spruce (*Fagus sylvatica-Picea abies*) forests of foothills. Beetles sifted exclusively from leaf litter near huge deciduous and coniferous trees. This is the first record from Lviv Province and Ciscarpathian region.

Subfamily Curculioninae

***Anthonomus undulatus* Gyllenhal, 1836** (fig. 4)

Records. First record in Ukraine.

Material. 1 spec. (KhDC), NE Carpathians, Lviv Prov., Stryi Distr., near Rozgirche, N49.109959, E23.707283, mixed forest, 10.III.2019, sifting leaf litter.

Remark. The single hibernating specimen was accidentally sifted from leaf litter of foothill deciduous forest with dominance of oak (*Quercus robur)* and birch (*Betula* sp.), with a mixture of hornbeam (*Carpinus betulus*), alder (*Alnus* sp.), and hazel understory (*Corylus avellana*).

***Orthochaetes setige*r (Beck, 1817)**

Records. Chernivtsi, Ivano-Frankivsk, Lviv, Zakarpatska Provinces [6, 8, 10].

Material. 1 spec. (KhDC), NW Podolian Upland, Lviv Prov., Brody Distr., near Buchyna, Mts Drancha, N50.031016, E25.283051, steppe site, 9.V-21.VI.2019, pitfall trap.

Remark. Xerothermic habitat on chalk hilltop with scattered grass cover.

Subfamily Cryptorhynchinae

***Acallocrates colonnellii* Bahr, 2003**

Records. First record in Ukraine.

Material. 1 spec. (KhDC), NE Carpathians, Lviv Prov., Stryi Distr., near Rozgirche, N49.109959, E23.707283, mixed forest, 24.III.2019, sifting leaf litter; 3 spec. (KhDC, 1 - DMLU), idem, 23.IV.2019; 1 spec. (KhDC), idem, 18.IV.2020; 1 spec. (KhDC), Lviv Prov., Stryi Distr., 2 km SE Semyhyniv, N49.139689, E23.750811, Semyhyniv Protected Area, mixed forest, 6.IV.2020, sifting leaf litter.

Remark. Inhabits mixed forests of foothills (*Carpinus betulus-Quercus robur-Populus tremula-Picea abies*) with hazel understory (*Corylus avellana*).

Subfamily Entiminae

***Centricnemus leucogrammus* (Germar, 1823)**

Records. Khmelnytskyi, Lviv, Rivne, Ternopil, Vinnytsia, Volyn Provinces [11]

Material. 5 spec. (KhDC, 1 - DMLU), NW Podolian Upland, Lviv Prov., Brody Distr., near Buchyna, Mts Drancha, N50.031016, E25.283051, steppe site, 9.V.2019, sweeping; 1 spec. (KhDC), Podolian Upland, Opillia, Ivano-Frankivsk reg., Rohatyn Distr., Chortova Gora

(Devil's Mt.), N49.402028, E24.664503, steppe site, 1.V.2020, sweeping; 1 spec. (KhDC), Podolian Upland, Opillia, Ivano-Frankivsk reg., Kasova Hora near Burshtyn, N49.222523, E24.704307, steppe site, 3.V.2020, sweeping.
Remark. This species is abundant in sweep net samples on steppe slopes of chalky hills.

***Humeromima rufipes* (Boheman, 1834)** (fig. 3)
Records. Chernivtsi, Khmelnytskyi, Lviv, Ternopil, Vinnytsia Provinces [11].
Material. 1 spec. (KhDC), NW Podolian Upland, Lviv reg., Brody distr. near Buchyna, Mts Drancha, N50.031016, E25.283051, steppe site, 21.VI-2.VIII.2019, pitfall trap; 2 spec. (KhDC, DMLU), Podolian Upland, Opillia, Ivano-Frankivsk Prov., Kasova Hora near Burshtyn, N49.222523, E24.704307, steppe site, 15.VI-28.VII.2020, pitfall trap; 1 spec. (KhDC), NW Podolian Upland, Lviv Prov., Brody Distr., near Pidhirtsi, N49.798542, E24.713128, steppe site, 20.V-4.VII.2020, pitfall trap.
Remark. This species is occasionally present in pitfall trap samples on steppe slopes of chalky hills.

***Otiorhynchus pinastri* (Herbst, 1795)**
Records. Ivano-Frankivsk, Khmelnytskyi, Lviv, Ternopil, Zakarpatska Provinces [11].
Material. 1 spec. (KhDC), NW Podolian Upland, Lviv Prov., Zolochiv Distr., Bila Hora near Pidlyssya, N49.933248, E24.845067, steppe site, 20.V–4.VII.2020, pitfall trap; 2 spec. (KhDC), idem, 4.VII.2020, sweeping; 3 spec. (KhDC, 1 - DMLU), idem, 4.VII–15.VIII.2020, pitfall trap.
Remark. Historically documented from the plain part of Lviv Province, near Lviv city [5]. Habitat: chalk hills, on hillslopes covered with meadow grass vegetation e.g. *Agrimonia eupatoria*, *Salvia verticillata*, *Cytisus albus*. Diurnal activity of imago detected.

***Paophilus afflatus* (Boheman, 1833)** (fig. 6)
Records. Khmelnytskyi, Ternopil, Zakarpatska Provinces [11]
Material. 1 spec. (KhDC), NW Podolian Upland, Lviv Prov., Zolochiv Distr., Lysa Hora, between Vilshanytsa and Gologirky, N49.798542, E24.713128, steppe site, 27.VI.2020, sweeping; 1 spec. (KhDC), NW Podolian Upland, Lviv Prov., Brody Distr., near Yaseniv, N49.952664, E25.056620, steppe site, 20.V.2020, sweeping.
Remark. Inhabits chalk hills, on base of hillslopes covered with abundant meadow grass vegetation.

***Stomodes gyrosicollis* Boheman, 1842**
Records. Crimea, Khmelnytskyi, Kyiv, Odesa, Ternopil Provinces [11], «East Galicia» [7]
Material. 3 spec. (KhDC), NW Podolian Upland, Lviv Prov., Zolochiv Distr., Lysa Hora, between Vilshanytsa and Gologirky, N49.798542, E24.713128, steppe site, 7.VIII-20.IX.2020, pitfall trap; 3 spec. (KhDC, 1 - DMLU), Podolian Upland, Opillia, Ivano-Frankivsk Prov., Kasova Hora near Burshtyn, N49.222523, E24.704307, steppe site, 3.V-15.VI.2020, pitfall trap; 2 spec. (KhDC), idem, 15.VI–28.VII.2020; 5 spec. (KhDC, 1 - DMLU), NW Podolian Upland, Lviv Prov., Zolochiv Distr., Bila Hora near Pidlyssya, N49.933248, E24.845067, steppe site, 20.V–4.VII.2020, pitfall trap; 1 spec. (KhDC), NW

Podolian Upland, Lviv Prov., Brody Distr., near Pidhirtsi, N49.798542, E24.713128, steppe site, 20.V–4.VII.2020, pitfall trap.
Remark. Habitat restricted to dry chalk hillslopes and hilltops with scattered and moderate grass vegetation. This species is not abundant in samples.

Subfamily Molytinae

***Adexius scrobipennis* Gyllenhal, 1834**
Records. Chernivtsi, Ivano-Frankivsk, Lviv, Zakarpatska Provinces [11]
Material. 26 spec. (KhDC, 5 - DMLU), Lviv Prov., Stryi Distr., 2 km SE Semyhyniv, Semyhyniv Protected Area, N49.139689, E23.750811, mixed forest, 10.IV.2018, sifting leaf litter; 19 spec. (KhDC), NE Carpathians, Lviv Prov., Stryi Distr., near Rozgirche, N49.113347, E23.701362, beech forest, 08.III.2019, sifting leaf litter.
Remark. Habitat restricted to leaf litter of mature deciduous forests. Occurs predominantly in beech forests (*Fagus sylvatica*) and occasionally in oak-hornbeam forests (*Quercus robur-Carpinus betulus*).

***Neoplinthus tigratus porcatus* (Panzer, 1798)**
Records. Chernivtsi, Ivano-Frankivsk, Khmelnytskyi, Kyiv, Lviv, Ternopil, Vinnytsia, Zakarpatska, Zhytomyr Provinces [11]
Material. 1 spec. (KhDC), Lviv Prov., Zhydachiv Distr., Borodchytsi, Dnister River, riparian habitat, N49.387244, E24.224384, 29.VII–25.VIII.2019, pitfall trap; 5 spec. (KhDC, 1 - DMLU), idem, 23.VII–26.VIII.2020.
Remark. Habitat: riparian shrubland.

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Доповнення до вивчення фауни довгоносиків (Coleoptera: Curculionidae) України

Наводяться точні дані про поширення 13 маловідомих видів довгоносиків у Львівській та Івано-Франківській областях України: Eubrychius velutus (Beck, 1817), *Pelenomus velaris* (Gyllenhal, 1827), *Cotaster uncipes* (Boheman, 1838), *Anthonomus undulatus* Gyllenhal, 1836, *Orthochaetes setiger* (Beck, 1817), *Acallocrates colonnellii* Bahr, 2003, *Centricnemus leucogrammus* (Germar, 1823), *Humeromima rufipes* (Boheman, 1834), *Otiorhynchus pinastri* (Herbst, 1795), *Paophilus afflatus* (Boheman, 1833), *Stomodes gyrosicollis* Boheman, 1842, *Adexius scrobipennis* Gyllenhal, 1834, *Neoplinthus tigratus porcatus* (Panzer, 1798).

Eubrychius velutus, Anthonomus undulatus та Acallocrates colonnellii вперше зареєстровані в Україні. Cotaster uncipes (Boheman, 1838) *вперше знайдено з 1941 року та вперше зафіксовано у Львівській області та Передкарпатті.*

Ключові слова: *біорізноманіття, метод Мочарського-Вінклера, нові знахідки, жуки-довгоносики.*