

New records of Ichneumonidae from Slovakia (Hymenoptera)

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Abstract – Faunistical results of ichneumon wasps (Hymenoptera: Ichneumonidae) are provided based on an ongoing ecological study in the Cerová vrchovina Upland, Slovakia. 48 species are reported for the first time from Slovakia: *Adelognathus pilosus* Thomson, 1888, *Agrypon delarvatum* (Gravenhorst, 1829), *Arotrephes speculator* (Gravenhorst, 1829), *Astiphromma italicum* Schwenke, 1999, *Astiphromma nigrocoxatum* (Strobl, 1904), *Barichneumon plagiarius* (Wesmael, 1848), *Bathyplectes anurus* (Thomson, 1887), *Bathyplectes cingulatus* (Brischke, 1880), *Bathyplectes quinqueangularis* (Ratzeburg, 1852), *Campoletis congesta* (Holmgren, 1860), *Campoletis thomsoni* (Roman, 1915), *Campoplex punctulatus* (Szépligeti, 1916), *Campoplex spurius* Gravenhorst, 1829, *Casinaria lamellata* Riedel, 2018, *Casinaria nigrotrochanterata* Riedel, 2018, *Casinaria subglabra* Thomson, 1887, *Coelichneumon sinister* (Wesmael, 1848), *Crytea sanguinator* (Rossi, 1794), *Cymodusa australis* (Smits van Burgst, 1913), *Cymodusa exilis* Holmgren, 1860, *Daschia brevitarsis* (Thomson, 1890), *Diadegma elongatum* (Thomson, 1887), *Diadegma majale* (Gravenhorst, 1829), *Diadegma sordipes* (Thomson, 1887), *Dicaelotus parvulus* (Gravenhorst, 1829), *Diplazon parvus* Klopstein, 2014, *Dolichomitius agnoscendus* (Roman, 1939), *Dusona baueri* Hinz, 1973, *Dusona erythrogaster* (Förster, 1868), *Eriborus braccatus* (Gmelin, 1790), *Erigorgus melanops* (Förster, 1855), *Erigorgus villosus* (Gravenhorst, 1829), *Exochus pictus* Holmgren, 1858, *Gelis obscuripes* Horstmann, 1986, *Hyposoter caedator* (Gravenhorst, 1829), *Hyposoter notatus* (Gravenhorst, 1829), *Ichneumon balteatus* Wesmael, 1845, *Ichneumon bucculentus* Wesmael, 1845, *Ischnus agitator* (Olivier, 1792), *Lissonota coracina* (Gmelin, 1790), *Mesochorus vitticollis* Holmgren, 1860, *Olesicampe patellana* (Thomson, 1887), *Schizopyga podagrica* Gravenhorst, 1829, *Sinophorus villosus* Sanborne, 1984, *Spudaeus scaber* (Gravenhorst, 1829), *Tersilochus* (*Pectinolochus*) *striola* (Thomson, 1889), *Therospocus rufulus* (Gmelin, 1790), and *Trichomma fulvidens* Wesmael, 1849.

Key words – faunistics, distribution, Western Palearctic Region

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INTRODUCTION

The entomofauna of the Cerová vrchovina Upland, Slovakia, is currently the subject of intensive study, driven by multiple conservation initiatives involving mowing, grazing, and the use of prescribed fire. At the same time, ongoing agricultural abandonment and subsequent shrub encroachment are exerting significant pressure on insect communities. In 2023 and 2024, we conducted entomological surveys to assess the effects of these contrasting land-use trends on insect diversity. Among abundant taxa recorded were parasitic Hymenoptera. The ecological study also yielded faunistical results.

The ichneumon wasp (Hymenoptera: Ichneumonidae) fauna of Slovakia is relatively poorly studied as compared to other Central and Western European countries. Only relatively few Slovakian entomologists have devoted themselves to the study of this group of insects; the most comprehensive faunistical works were done by Hungarian (in the times of the former Kingdom of Hungary) and Czech researchers (particularly in the times of the former Czechoslovakia, and to a lesser extent also in the most recent decades) (MOCSÁRY 1897, SZÉPLIGETI 1914, 1916, ŠEDIVÝ 1989, RINDOŠ *et al.* 2017, HOLÝ & ZEMAN 2018, and HOVORKA *et al.* 2024). As their research activity in the areas forming the present-day Slovakia was not as significant as in the territories of the present Czech Republic and Hungary, only somewhat less than 1000 species have been reported from Slovakia. This number is much less than half of the currently known species richness either from Czech Republic or from Hungary (YU *et al.* 2016, HOLÝ & ZEMAN 2018).

Our present study indicates the need and the promising feature of targeted future surveys by demonstrating that even “side effect” faunistics of ecological projects may result numerous faunistical novelties of Ichneumonidae in Slovakia; however, only if the collected specimens are properly handled, kept, conserved and are identified by experts of the group. In this paper, 48 species are reported for the first time from Slovakia, representing eleven subfamilies of Ichneumonidae: Adelognathinae, Anomaloninae, Banchinae, Campopleginae, Cryptinae, Diplazontinae, Ichneumoninae, Mesochorinae, Metopiinae, Pimplinae, and Tersilochinae. Most of the reported species are widely distributed in the Western Palearctic Region and have been reported from several European countries so far (YU *et al.* 2016); therefore, their occurrence in Slovakia are considered as expected.

MATERIAL AND METHODS

The material examined was collected by the second author in the Cerová vrchovina Upland, Slovakia, using Malaise traps installed during April and May 2023, and in April 2024. Each Malaise trap was enhanced with transparent plastic containers (190x142x65 mm/1200 ml) filled with propylene glycol, placed

at ground level on both sides of the trap to capture and euthanise intercepted insects. Ten containers were positioned on each side, resulting in a total of 20 plastic containers per trap. The traps were installed in the core areas of surveyed management types (grazing, mowing, burning and shrub encroached sites) present in the eastern part of the Cerová vrchovina geomorphological unit. Study sites (Figs 1–6):

Hodejovec: 48°16'40.145"N, 20°0'46.022"E, 218 m; association: *Lolietum perennis*, *Poo-Trisetum flavescens*; biotope type: mesophile pastures, lowland hay meadows (Fig. 1).

Drňa: 48°15'23.522"N, 20°6'41.728"E, 212 m; association: *Lolietum perennis*, *Festuco rupicolae-Caricetum humilis*, *Festuco valesiacae-Stipetum capillatae*; biotope type: mesophile pastures (Fig. 2).

Gemerské Dechtáre: 48°14'37.433"N, 20°0'50.682"E, 232 m; association: *Festuco rupicolae-Caricetum humilis*, *Ranunculo bulbosi-Arrhenatheretum elatioris*; biotope type: lowland hay meadows, *Juniperus communis* L. (Cupressaceae) formations on heaths or calcareous grasslands (Fig. 3).

Jesenské: 48°17'30.795"N, 20°3'51.828"E, 212 m; association: *Scabioso ochroleucae-Brachypodietum pinnate*, *Avenulo pratensis-Festucetum valesiacae*; biotope type: semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (Fig. 4).

Jestice: 48°12'47.358"N, 20°2'41.971"E, 254 m; association: *Scabioso ochroleucae-Brachypodietum pinnate*, *Potentillo heptaphyllae-Festucetum rupicolae*; biotope type: semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (Fig. 5).

Hostice: 48°14'31.441"N, 20°4'51.082"E, 240 m; association: *Lolietum perennis*, *Rosetum gallicae*; biotope type: semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (Fig. 6).

The collected specimens were mounted on triangular cards or pinned; the entire material was identified by the first author and all specimens are deposited in the Hymenoptera Collection of the Hungarian National Museum Public Collection Centre – Hungarian Natural History Museum, Budapest, Hungary (HNHM).

Taxonomy and nomenclature follow YU *et al.* (2016). Previous Slovakian records of identified species were checked mainly in MOCSÁRY (1897), SZÉPLIGETI (1914, 1916), ŠEDIVÝ (1989), HOLÝ *et al.* (2012), SCHWARZ & HOLÝ (2015), VAS (2015, 2018, 2019), YU *et al.* (2016), RINDOŠ *et al.* (2017), HOLÝ & ZEMAN (2018), VAS & SCHWARZ (2018), SMETANA *et al.* (2020) and HOVORKA *et al.* (2024); additionally, for each species reported here as new for Slovakia, also Google Scholar searches were performed (considering the synonym names, too) to ensure that none of these was reported previously from the country.



Fig. 1. Site of lowland hay meadows biotope at the farm near Hodejovec village (photo by A. Balázs).



Fig. 2. Sub-pannonic steppe grassland in the vicinity of Drňa municipality; the site is managed via low-key cattle grazing and prescribed burning in 2023 and 2024 (photo by A. Balázs).



Fig. 3. The site called Dechtárske vinice is a site of European importance located in the village of Gemerské Dechtáre; the area is mostly unmanaged, but in 2024 prescribed burning was initiated (photo by A. Balázs).



Fig. 4. Biotope of semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) is located in the village of Jesenské; parts of the site are grazed by sheep and were subject to prescribed burning in 2023 and 2024, while other areas are being encroached upon by shrubs (photo by A. Balázs).



Fig. 5. A European importance site called Drieňové near the village Petrovce; the locality is managed permanently via sheep and prescribed burning that took place in 2023 (photo by A. Balázs).



Fig. 6. Malaise trap in mesophile pastures managed via cattle near Hostice (photo by A. Balázs).

RESULTS

The following species, all collected in the Cerová vrchovina Upland region, are reported for the first time from Slovakia. Taxa are listed in alphabetical order.

Adelognathinae

Adelognathus pilosus Thomson, 1888 – Two females, Hodejovec, Drňa, IV–V.2023.

Anomaloninae

Agrypon delarvatum (Gravenhorst, 1829) – Two females, Gemerské Dechtáre, V.2023.

Erigorgus melanops (Förster, 1855) – Five females, four males, Drňa, Jestice, IV.2023, IV.2024.

Erigorgus villosus (Gravenhorst, 1829) – One male, Jestice, IV.2024.

Trichomma fulvidens Wesmael, 1849 – Eight females, three males, Drňa, Hodejovec, Jestice, IV.2023, IV.2024.

Banchinae

Lissonota coracina (Gmelin, 1790) – Three females, two males, Drňa, Gemerské Dechtáre, Jesenské, Jestice, IV–V.2023.

Campopleginae

Bathyplectes anurus (Thomson, 1887) – Seven females, five males, Gemerské Dechtáre, Hodejovec, Hostice, Jesenské, Jestice, IV.2023, IV.2024.

Bathyplectes cingulatus (Brischke, 1880) – Two females, one male, Hodejovec, Jesenské, Jestice, IV.2023.

Bathyplectes quinqueangularis (Ratzeburg, 1852) – Five females, six males, Gemerské Dechtáre, Hodejovec, Hostice, IV.2023, IV.2024.

Campoletis congesta (Holmgren, 1860) – One female, Hodejovec, IV.2024.

Campoletis thomsoni (Roman, 1915) – One female, Gemerské Dechtáre, IV.2023.

Campoplex punctulatus (Szépligeti, 1916) – One female, Drňa, IV–V.2023.

Campoplex spurius Gravenhorst, 1829 – One female, Drňa, IV.2023.

Casinaria lamellata Riedel, 2018 – One male, Gemerské Dechtáre, V.2023.

- Casinaria nigrotrochanterata* Riedel, 2018 – Two males, Gemerské Dechtáre, IV.2024.
- Casinaria subglabra* Thomson, 1887 – One female, one male, Gemerské Dechtáre, IV–V.2023.
- Cymodusa australis* (Smits van Burgst, 1913) – Two females, Gemerské Dechtáre, Jesenské, IV.2023, IV.2024.
- Cymodusa exilis* Holmgren, 1860 – One female, Drňa, IV.2023.
- Diadegma elongatum* (Thomson, 1887) – Two females, Gemerské Dechtáre, IV–V.2023.
- Diadegma majale* (Gravenhorst, 1829) – Two females, Hodejovec, Hostice, IV.2023, IV.2024.
- Diadegma sordipes* (Thomson, 1887) – One female, Gemerské Dechtáre, IV.2023.
- Dusona baueri* Hinz, 1973 – One male, Gemerské Dechtáre, IV.2023.
- Dusona erythrogaster* (Förster, 1868) – Two females, Jesenské, IV–V.2023.
- Eriborus braccatus* (Gmelin, 1790) – Four males, Jesenské, IV.2023.
- Hyposoter caedator* (Gravenhorst, 1829) – One female, Drňa, IV–V.2023.
- Hyposoter notatus* (Gravenhorst, 1829) – One female, Gemerské Dechtáre, IV–V.2023.
- Olesicampe patellana* (Thomson, 1887) – One female, Gemerské Dechtáre, IV.2024.
- Sinophorus villosus* Sanborne, 1984 – One male, Hostice, IV.2024.

Cryptinae

- Arotrephes speculator* (Gravenhorst, 1829) – One female, Gemerské Dechtáre, IV.2024.
- Gelis obscuripes* Horstmann, 1986 – One female, Gemerské Dechtáre, IV.2024.
- Ischnus agitator* (Olivier, 1792) – One female, Gemerské Dechtáre, IV.2024.
- Theroscopus rufulus* (Gmelin, 1790) – One female, Jesenské, IV.2024.

Diplazontinae

- Daschia brevitarsis* (Thomson, 1890) – Four females, three males, Drňa, IV–V.2023, IV.2024.
- Diplazon parvus* Klopstein, 2014 – One female, Jestice, IV–V.2023.

Ichneumoninae

- Barichneumon plagiarius* (Wesmael, 1848) – One female, Jestice, IV–V.2023.
Coelichneumon sinister (Wesmael, 1848) – One male, Jesenské, IV–V.2023.
Crytea sanguinator (Rossi, 1794) – One female, Hodejovec, IV.2023.
Dicaelotus parvulus (Gravenhorst, 1829) – One female, Jestice, IV–V.2023.
Ichneumon balteatus Wesmael, 1845 – One female, Jesenské, V.2023.
Ichneumon bucculentus Wesmael, 1845 – Two females, Hodejovec, Jesenské, V.2023, IV.2024.

Mesochorinae

- Astiphromma italicum* Schwenke, 1999 – One male, Hostice, IV.2023.
Astiphromma nigrocoxatum (Strobl, 1904) – One male, Hodejovec, IV–V.2023.
Mesochorus vitticollis Holmgren, 1860 – Three females, Drňa, Gemerské Dechtáre, Jestice, IV–V.2023.

Metopiinae

- Exochus pictus* Holmgren, 1858 – One female, Gemerské Dechtáre, V.2023.
Spudaeus scaber (Gravenhorst, 1829) – One female, one male, Jesenské, Jestice, V.2023, IV.2024.

Pimplinae

- Dolichomitus agnoscendus* (Roman, 1939) – One female, Jestice, V.2023.
Schizopyga podagrica Gravenhorst, 1829 – One male, Drňa, IV.2024.

Tersilochinae

- Tersilochus (Pectinolochus) striola* (Thomson, 1889) – One female, Jestice, IV–V.2023

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