

## Contributions to the Albanian ichneumon wasp fauna (Hymenoptera: Ichneumonidae)

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Ichneumon wasps (Hymenoptera: Ichneumonidae) represent one of the most diverse families of the animal kingdom (Townes 1969). More than 30.000 species has been described so far (Yu & Horstmann 1997; Yu *et al.* 2012), while the estimated diversity of the family is at least 60.000 (Townes 1969; Wahl 1993). Even in the relatively well-studied Western European countries Ichneumonidae is one of the most scarcely known groups; there are still a lot of species to be recorded to infer their distribution and most likely several species to describe (see e.g. Klopstein 2014). However, they constitute an important group of bio-control agents, as nearly all species are parasitoids of various arthropods, including several pest insects (Wahl 1993; Godfray 1994).

The ichneumon wasp fauna of Albania is especially poorly discovered. The earliest records from Albania were summarized by Kolarov (1992), listing 38 species found in the country. 79 species were listed by Yu *et al.* (2012) which is undoubtedly a mass underestimation of the real species richness of the country. As a rough comparison, the Bulgarian ichneumon wasp fauna is the best studied among the Balkan countries with 1916 species recorded so far (Yu *et al.* 2012). In this study we report the first records of five ichneumon wasp species in the Albanian fauna with annotations on distribution, biology and host records.

Recently the second author collected some ichneumon wasp specimens on an entomological field trip in Albania and donated them to the Hungarian Natural History Museum (HNHM). The specimens were identified by the first author using a Nikon SMZ645 stereoscopic microscope in the Hymenoptera Collection of HNHM. The identifications were based on keys provided by Constantineanu (1959), Perkins (1959, 1960), Bajári (1960), Townes *et al.* (1965), Bauer (1966), Bajári & Móczár (1969), Townes (1971), Gauld & Mitchell (1977), Fitton *et al.* (1988), Wahl (1993), Broad (2011), Riedel (2012), and Schnee (2014). The voucher specimens are deposited in the Hymenoptera Collection of HNHM, Budapest, Hungary. Ichneumonidae taxonomy and nomenclature in this paper follow Yu *et al.* (2012); distributional references and host records were also traced through this dataset.

Among the collected Ichneumonidae material five species were new for the Albanian fauna (see below) according to Yu *et al.* (2012), belonging to the subfamilies Alomyinae (1 species), Anomaloninae (2 species), and Ichneumoninae (2 species). Besides these, one specimen of *Pimpla rufipes* (Miller) (Pimplinae) has also been found; however, this species has already been recorded from Albania (Oehlke 1964, as *Coccygomimus instigator* (Fabricius)). The collected specimens belonging to the subfamily Campopleginae have not been identified at species level yet due to the lack of comprehensive identification key for the region.

***Alomya debellator* (Fabricius)** (Alomyinae)

*Material examined:* Gjirokaštër County, Rruga Cajupit (Cajupit Road), N 40.21713° E 20.16225°, 28.06.2014, leg. T. Szentiványi, 1 male.

*Remarks:* The occurrence of *Alomya debellator* represents the first record of the subfamily Alomyinae in Albania. This species is widely distributed in the Western Palaearctic region (Yu *et al.* 2012). *Alomya debellator* is a koinobiont endoparasitoid of various lepidopteran (Hepialidae, Lasiocampidae, Noctuidae, Sphingidae) hosts (see e.g. Cameron 1950; Hinz & Short 1983; Yu *et al.* 2012).

***Anomalon cruentatum* (Geoffroy)** (Anomaloninae)

*Material examined:* Gjirokaštër County, Rruga Cajupit (Cajupit Road), N 40.21713° E 20.16225°, 28.06.2014, leg. T. Szentiványi, 2 females.

*Remarks:* *Anomalon cruentatum* is a widespread species, occurring both in the Palaearctic and Oriental regions (Yu *et al.* 2012). It develops as a koinobiont endoparasitoid of lepidopteran (Noctuidae, Notodontidae) and coleopteran (Tenebrionidae) hosts (see e.g. Bogush 1959; Zapryanov 1985; Yu *et al.* 2012; Schnee 2014)

***Erigorgus cerinops* (Gravenhorst)** (Anomaloninae)

*Material examined:* Gjirokaštër County, Rruga Cajupit (Cajupit Road), N 40.21713° E 20.16225°, 28.06.2014, leg. T. Szentiványi, 2 females & 1 male.

*Remarks:* *Erigorgus cerinops* is widespread both in the Western and Eastern Palaearctic regions (Yu *et al.* 2012). This species is a koinobiont endoparasitoid of various lepidopteran (Dilobidae, Geometridae, Noctuidae) hosts (see e.g. Gauld & Mitchell 1977; Yu *et al.* 2012).

***Amblyteles armatorius* (Forster)** (Ichneumoninae)

*Material examined:* Gjirokaštër County, Rruga Cajupit (Cajupit Road), N 40.21713° E 20.16225°, 28.06.2014, leg. T. Szentiványi, 1 male.

*Remarks:* *Amblyteles armatorius* is common and widespread in the Western and Eastern Palaearctic regions (Yu *et al.* 2012). This species is an endoparasitoid of various lepidopteran (Geometridae, Lasiocampidae, Lymantriidae, Noctuidae, Notodontidae, Nymphalidae, Saturniidae) hosts (see e.g. Constantineanu 1959; Yu *et al.* 2012).

***Coelichneumon comitator* (Linnaeus)** (Ichneumoninae)

*Material examined:* Korçë County, Lin, Lake Ohrid, N 41.06634° E 20.64611°, 22.06.2014, leg. T. Szentiványi, 1 male.

*Remarks:* *Coelichneumon comitator* is a widespread species in the Western and Eastern Palaearctic regions (Riedel 2012; Yu *et al.* 2012). This species is an endoparasitoid of various lepidopteran (Dilobidae, Geometridae, Noctuidae) hosts (see e.g. Constantineanu 1959; Yu *et al.* 2012).

By revising the faunistic literature we found a few erroneously missing or erroneously added records. Yu *et al.* (2012) cite Aubert (1969) for the occurrence of *Acaenitus dubitator* (Panzer) and Morley (1914) for *Diplazon laetatorius* (Fabricius) in Albania; however, there are no mentions of Albanian records in those volumes. Similarly, in the cases of *Dicaelotus rufiventris* Berthoumieu and *Diphyus arduus* (Berthoumieu) Yu *et al.* (2012) cite Habermehl (1926) as Albanian records; however, they were collected in Serbia and Croatia, respectively. On the other hand, the Albanian occurrence of *Phaenolobus saltans* (Gravenhorst) is reported in Kolarov (1995) but it is not recorded in Yu *et al.* (2012).

Hence, including the five species reported here, there are currently 81 ichneumon wasp species known from Albania. Future faunistic research might reveal hundreds of records in the region.

**References**

- Aubert, J. F. (1969) *Les Ichneumonides ouest-paléarctiques et leurs hotes I. Pimplinae, Xoridinae, Acaenitinae*. Laboratoire d'Evolution des Etres Organisés, Paris, 302 pp.
- Bajári, E. (1960) Fűrksészdarázs-alkatúak I. Ichneumonoidea I. In: Székessy, V. (Ed.), *Magyarország Állatvilága. Fauna Hungariae Vol. XI. Part 4*. Akadémiai Kiadó, Budapest, 266 pp.

- Bajári, E. & Móczár, L. (1969) Fűrészdarázs-alkatúak IV. Ichneumonoidea IV. In: Székessy, V. (Ed.), *Magyarország Állatvilága. Fauna Hungariae Vol. XI. Part 7*. Akadémiai Kiadó, Budapest, 122 pp.
- Bauer, R. (1966) Die Gattung *Alomya* Panzer. *Nachrichtenblatt der Bayerischen Entomologen*, 15, 124–127.
- Bogush, P. P. (1959) Materials on parasitic insects of Turkmenia. *Zoologicheskii Zhurnal*, 38, 189–195. (In Russian, English summary).
- Broad, G. R. (2011) *Identification key to the subfamilies of Ichneumonidae (Hymenoptera)*, Natural History Museum, London. Available from: [http://www.nhm.ac.uk/resources-rx/files/ich\\_subfamily\\_key\\_2\\_11\\_compressed-95113.pdf](http://www.nhm.ac.uk/resources-rx/files/ich_subfamily_key_2_11_compressed-95113.pdf) (30 September 2015).
- Cameron, E. (1950) The biology and economic importance of *Alomya debellator* (F.), a remarkable parasites of the swift moth, *Hepialis lupulinus* (L.). *Bulletin of Entomological Research*, 41(2), 429–438.
- Constantineanu, M. I. (1959) Familia Ichneumonidae, tribul Ichneumoninae Stenopneusticae. In: *Fauna Republicii Populare Romine. Vol. IX. Part 4*. Academia Republicii Populare Romane, Bucarest, 1248 pp.
- Fitton, M. G., Shaw, M. R. & Gauld, I. D. (1988) Pimpline ichneumon-flies. Hymenoptera, Ichneumonidae (Pimplinae). In: *Handbooks for the identification of British insects. Vol. 7. Part 1*. Royal Entomological Society of London, London, 110 pp.
- Gauld, I. D. & Mitchell, P. A. (1977) Ichneumonidae: Orthopelmatinae & Anomaloninae. In: *Handbooks for the Identification of British Insects Vol. 7. Part 2(b)*. Royal Entomological Society of London, London, 32 pp.
- Godfray, H. C. J. (1994) *Parasitoids. Behavioral and Evolutionary Ecology*. Princeton University Press, Princeton, 473 pp.
- Habermehl, H. (1926) Neue und wenig bekannte paläarktische Ichneumoniden (Hym.). IV. Nachtrag. *Deutsche Entomologische Zeitschrift*, 1926(4), 321–331.
- Hinz, R. & Short J. R. T. (1983) Life-history and systematic position of the European *Alomya* species (Hymenoptera: Ichneumonidae). *Entomologica Scandinavica*, 14(4), 462–466.
- Klopfstein, S. (2014) Revision of the Western Palaearctic Diplazontinae (Hymenoptera, Ichneumonidae). *Zootaxa*, 3801, 1–143.
- Kolarov, J. A. (1992) A catalogue of Ichneumonidae from Albany (Hymenoptera, Ichneumonidae). *Entomofauna*, 13, 261–268.
- Kolarov, J. A. & Andoni, V. (1995) A study of Albanian Ichneumonidae (Hymenoptera). I. Pimplinae, Tryphoninae and Acaenitinae. *Acta Entomologica Bulgarica*, 2, 28–31.
- Morley, C. (1914) *A revision of the Ichneumonidae based on the collection in the British Museum (Natural History) Part III. Tribes Pimplides and Bassides*. British Museum, London, 148 pp.
- Oehlke, J. (1964) Ergebnisse der Albanien-Expedition 1961 des Deutschen Entomologischen Institutes. 28. Beitrag: Hymenoptera: Ichneumonidae I (Ephialtinae). *Beiträge zur Entomologie*, 14, 373–376.
- Perkins, J. F. (1959) Hymenoptera. Ichneumonoidea. Ichneumonidae, key to subfamilies and Ichneumoninae I. In: *Handbooks for the identification of British insects. Vol. VII. Part 2 (ai)*. Royal Entomological Society of London, London, 116 pp.
- Perkins, J. F. (1960) Hymenoptera. Ichneumonoidea. Ichneumonidae, subfamilies Ichneumoninae II, Alomyinae, Agriotypinae and Lycorininae. In: *Handbooks for the identification of British insects. Vol. VII. Part 2 (aii)*. Royal Entomological Society of London, London, 117–213 pp.
- Riedel, M. (2012) Revision der westpaläarktischen Arten der Gattung *Coelichneumon* Thomson (Hymenoptera: Ichneumonidae: Ichneumoninae). *Linzer biologische Beiträge*, 44(2), 1477–1611.
- Schnee, H. (2014) Anomaloninae aus Israel und Palästina mit Beschreibung einer neuen *Anomalon*-Art (Hymenoptera: Ichneumonidae). *Entomologische Zeitschrift*, 124(2), 97–107.
- Townes, H. (1969) The genera of Ichneumonidae. Part 1. *Memoirs of the American Entomological Institute*, 11, 1–300.
- Townes, H. (1971) The genera of Ichneumonidae. Part 4. *Memoirs of the American Entomological Institute*, 17, 1–372.
- Townes, H., Momoi, S. & Townes, M. (1965) A catalogue and reclassification of Eastern Palearctic Ichneumonidae. *Memoirs of the American Entomological Institute*, 5, 1–661.
- Wahl, D. B. (1993) Family Ichneumonidae. In: Goulet, H. & Huber J. T. (Eds.), *Hymenoptera of the World: An identification guide to families*. Agriculture Canada, Ottawa. pp. 395–509.
- Yu, D. S., van Achterberg, C. & Horstmann, K. (2012) *Taxapad 2012, Ichneumonoidea 2011. Database on flash-drive*. [www.taxapad.com](http://www.taxapad.com). Ottawa, Ontario, Canada.

- Yu, D. S. & Horstmann, K. (1997) *A catalogue of world Ichneumonidae (Hymenoptera)*. The American Entomological Institute, Gainesville, 1558 pp.
- Zapryanov, A. (1985) The parasites of the family Ichneumonidae in Bulgaria and their hosts in the various agroecosystems. *Pochvoznaniye Agrokhimiya i Rastitelna Zashchita*, 20(4), 135–145. (In Russian, English summary.)