

NEW RECORDS OF THE GENUS *BATHYPLECTES* FÖRSTER, 1869
(HYMENOPTERA: ICHNEUMONIDAE) FROM IRAN

A. Feizi¹⁾, A. A. Talebi^{1*)}, M. Riedel²⁾, E. Rakhshani³⁾, M. Mehrabadi¹⁾

1) Faculty of Agriculture, Department of Entomology, Tarbiat Modares University, P. O. Box: 14115-336, Tehran, I. R. Iran. *Corresponding author. E-mail: talebia@modares.ac.ir

2) Zoologische Staatssammlung München, Münchhausenstr. 21, 81247 München, Germany.

3) Department of Plant Protection, Faculty of Agriculture, University of Zabol, Zabol. P. O. Box: 538-98615, Zabol, I. R. Iran.

Summary. A study of the genus *Bathyplectes* Förster, 1869 (Ichneumonidae) in Iran revealed six species from various provinces. Among them, four species are reported for the first time from Iran. A distributional map and an identification key to species of *Bathyplectes* known from Iran are provided.

Key words: Darwin wasps, Campopleginae, biodiversity, fauna, new records, Asia.

А. Фейзи, А. А. Талеби, М. Ридель, Э. Рахшани, М. Мехрабади. Новые находки рода *Bathyplectes* Förster, 1869 (Hymenoptera: Ichneumonidae) в Иране // Дальневосточный энтомолог. 2026. N 559. С. 11-20.

Резюме. Из различных провинций Ирана приводятся шесть видов рода *Bathyplectes* Förster, 1869 семейства Ichneumonidae, из которых четыре вида являются новыми для страны. Приведены карта распространения и определительная таблица известных из Ирана видов рода *Bathyplectes*.

INTRODUCTION

The genus *Bathyplectes* Förster, 1869 (Ichneumonidae: Campopleginae) remains poorly studied in Iran. The first record was established by Kamali et al. (1978), who reported *B. curculionis* (Thomson, 1887) from Khuzestan province. Subsequent findings included *B. anurus* (Thomson, 1887) and *B. curculionis* in West Azarbaijan province (Gonzalez et al., 1980), followed by records of *B. anurus* from Chaharmahal and Bakhtiari province (Roshandel & Ebrahimi, 2003) and *B. curculionis* from Alborz province (Sabahi & Talebi, 2007). Most recently, a single male specimen of *B. rufigaster* Horstmann, 1977 was also supplemented from Guilan province (Vas et al., 2024). Present study aims to provide new data on *Bathyplectes* in Iran.

Specimens were collected using Malaise traps and sweep nets at intermittent intervals between 2010 and 2025 in several Iranian provinces: Alborz, Guilan, Razavi Khorasan, West

Azarbaijan, Mazandaran, Qazvin, Kurdistan, and Hormozgan. Samples from both collection methods were transferred to the laboratory and preserved in 75% ethanol. Subsequently, the specimens were placed on filter paper to dry. The dried specimens were then card-mounted and labeled for taxonomic study.

Identification of all specimens was done using a SZX9 OlympusTM stereomicroscope. Morphological terminology follows Broad *et al.* (2018), and microsculpture terminology follows Eady (1968). Images were taken using a Canon 50D camera, then stacked by Helicon Focus software (Version 7.7.6), and finally edited and arranged using Adobe Photoshop CS5 portable 2018 software. The distribution map was created using Datawrapper (<https://app.datawrapper.de>). All voucher specimens are deposited in the Tarbiat Modares University Collection, Tehran, Iran (TMUC).

RESULTS

Family Ichneumonidae Latreille, 1802

Subfamily Campopleginae Förster, 1869

A total of 30 specimens were examined, resulting in the identification of 6 species, including 4 species and one subspecies are reported for the first time in Iran. Additionally, there are 14 new provincial records. The taxonomic and diagnostic characteristics, along with relevant illustrations (Figs 1, 2), are also provided.

Genus *Bathyplectes* Förster, 1869

Key to females of all known *Bathyplectes* species in Iran

(modified from Horstmann, 1974; Horstmann, 1977; Dbar, 1983; Soroka *et al.*, 2020)

1. 2nd and 3rd metasomal tergites red (Fig. 1F). [Basal area transverse, 4× as wide as long; areolet sessile; ovipositor sheath ca. 3.6× as long as hind tibiae] *B. rufigaster* Horstmann, 1977
- All metasomal tergites black (at most 2nd tergite apically narrowly yellow) 2
2. Hind trochantelli ventrally with a weakly concave widened flange (Fig. 2F); genal carina meets oral carina at the base of mandibles 3
- Hind trochantelli ventrally without a widened flange; genal carina meets oral carina behind the base of mandibles 4
3. Basal area triangular, apically reduced to a carina (Fig. 2B); ovipositor sheath 3× as long as hind tibiae (Fig. 1B) *B. carinatus* Horstmann, 1974
- Basal area trapezoidal, not reduced (Fig. 2E); ovipositor sheath 0.85× as long as hind tibiae (Fig. 1E) *B. tesquicola* (Dbar, 1983)
4. Area superomedia of propodeum posteriorly convergent, its posterior end indicated by angulations in the lateromedian longitudinal carina (Figs. 2A, D) 5
- Area superomedia of propodeum posteriorly divergent, confluent with area petiolaris (Fig. 2C) 6
5. Areolet pentagonal, sessile; clypeus not punctate in apical 0.2, with wide lamellar edge *B. anurus graecator* Aubert, 1970
- Areolet quadrate, petiolate; clypeus punctate to the edge *B. infernalis* (Gravenhorst, 1820)
6. Ovipositor sheath longer than hind tibiae (Fig. 1C) *B. exiguus* (Gravenhorst, 1829)
- Ovipositor sheath shorter than hind tibiae *B. curculionis* (Smits van Burgst, 1913)

***Bathyplectes anurus graecator* Aubert, 1970**

Figs 1A, 2A

MATERIAL EXAMINED. **Iran:** Guilan province, Roodsar, Rahim Abad, Ziaz, 36°52'27.18"N, 50°13'24.78"E, h=490 m, 19–26.IV 2010, 1♀, leg. M. Khayrandish; Razavi Khorasan province, Mashhad county, Ahmad Abad district, Molk Abad, 35°59'53.97"N, 59°35'10.14"E, h=1300 m, 15.IV 2023, 1♀, leg. A. Feizi; Koruj, 36°01'39.46"N, 59°34'36.97"E, h=1306 m, 13.IV 2023, 2♀, leg. A. Feizi; Qazvin province, Loshan, 36°40'14.58"N, 49°25'38.52"E, h=295 m, 04–13.IV 2010, 1♀, 1♂, leg. A. Nadimi.

DISTRIBUTION. Palearctic and Nearctic (Yu *et al.*, 2016; Vas, 2023).

NOTES. *Bathyplectes anurus graecator* can be separated from other subspecies by its coloration of hind tibiae [hind tibiae yellowish brown to brown subbasally and apically on dorsal surface, brown to black on ventral surface (Fig. 1A) (Horstmann, 1974)]. Previous Iranian records (Gonzalez *et al.*, 1980; Roshandel & Ebrahimi, 2003) identified only as *B. anurus* were likely referring to this subspecies, a conclusion supported by its known distribution within the Western Palearctic region (Yu *et al.*, 2016). Here *B. anurus* is recorded from Guilan, Razavi Khorasan, and Qazvin provinces for the first time.

***Bathyplectes carinatus* Horstmann, 1974**

Figs 1B, 2B

MATERIAL EXAMINED. **Iran:** Kurdistan province, Marivan county, Nazhmar village, 35°26'06.22"N, 46°14'14.26"E, h=1264 m, 23.IV 2025, 2♀, leg. A. Feizi.

DESCRIPTION OF IRANIAN SPECIMENS. Female, body length 4.6 mm (Fig. 1B); antenna with 19 flagellomeres; all flagellomeres longer than wide; clypeus flat in profile, weakly punctate, medially with a lamellar edge; face densely wrinkled punctate; malar space 1× as long as width of mandibular base; speculum smooth and shiny, area in front wrinkled; mesopleuron granulate-punctate; areolet quadrate, sessile; propodeum granulate; basal area reduced to a carina; area superomedia strongly divergent posteriorly, confluent with the widened area petiolaris; lateral parts of anterior transverse carina not developed (Fig. 2B); hind trochantellus ventrally with a weakly concave widened flange (Fig. 2F); apical edge of 6th and 7th metasomal tergites with a dorsal notch; ovipositor sheath 3× as long as hind tibia.

GENERAL DISTRIBUTION: Western Palearctic (Yu *et al.*, 2016), Iran (new record).

***Bathyplectes curculionis* (Smits van Burgst, 1913)**

MATERIAL EXAMINED. **Iran:** Guilan province, Roodsar, Rahim Abad, Ghazi Chak, 36°45'52.62"N, 50°20'01.08"E, h=1787 m, 24–31.V 2010, 1♀, leg. M. Khayrandish; same locality, 31.V–07.VI 2010, 1♀, leg. M. Khayrandish; Alborz province, Chalous Road, Shahrestanak, 35°58'16.26"N, 51°21'25.80"E, h=2225m, 22–29.VI 2010, 1♂, leg. A. Nadimi; Qazvin province, Loshan, 36°40'14.58"N, 49°25'38.52"E, h=295 m, 4–13.VI 2011, 1♀, 3♂, leg. A. Nadimi; Kurdistan province, Marivan county, Masidar-e Sofla village, 35°34'57.57"N, 46°19'37.52"E, h=1380 m, 24.IV 2025, 1♀, leg. A. Feizi; Razavi Khorasan province, Mashhad county, Ahmad Abad district, Koruj, 36°01'39.46"N, 59°34'36.97"E, h=1306 m, 13.IV 2023, 1♀, leg. A. Feizi; Hormozgan province, Rudan county, Faryab, 27°28'58.72"N, 57°04'24.62"E, h=313 m, 26.IV 2013, 3♀, leg. A. Amiri.

DISTRIBUTION. Palearctic, Nearctic, and Oriental (Yu *et al.*, 2016; Riedel *et al.*, 2023; Vas, 2023). Here this species is recorded from Guilan, Qazvin, Kurdistan, Razavi Khorasan, and Hormozgan provinces for the first time.

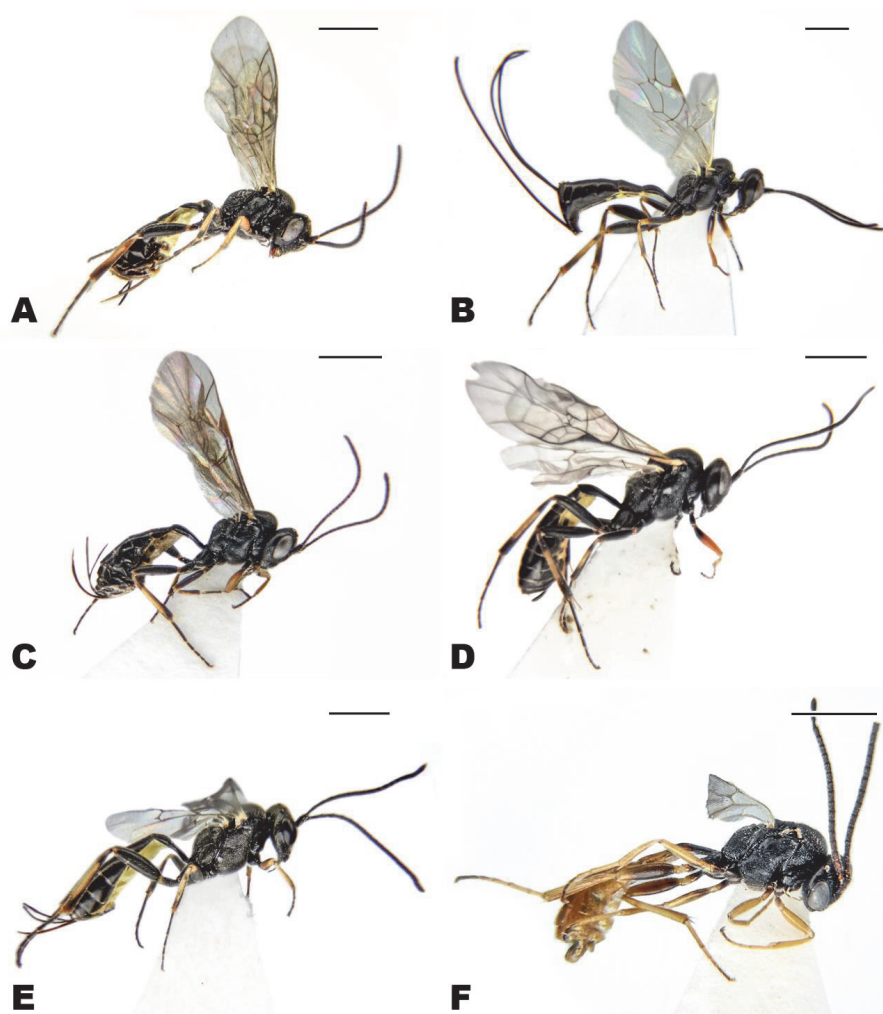


Fig. 1. Habitus of *Bathyplectes* spp., female (A–E) and male (F), lateral view. A – *B. anurus graecator* Aubert, 1970; B – *B. carinatus* Horstmann, 1974; C – *B. exiguus* (Gravenhorst, 1829); D – *B. infernalis* (Gravenhorst, 1820); E – *B. tesquicola* (Dbar, 1983); F – *B. rufigaster* Horstmann, 1977. Scale bars: 1 mm.

***Bathyplectes exiguus* (Gravenhorst, 1829)**

Figs 1C, 2C

MATERIAL EXAMINED. Iran: Mazandaran province, Noor, Chamestan, Gaznasara, 36°16'56.82"N, 52°10'58.50"E, h=2032 m, 27.V–07.VI 2011, 1♀, leg. M. Khayrandish; Guilan province, Roodsar, Rahim Abad, Ghazi Chak, 36°45'52.62"N, 50°20'01.08"E, h=1787 m, 24–31.V 2010, 1♀, leg. M. Khayrandish.

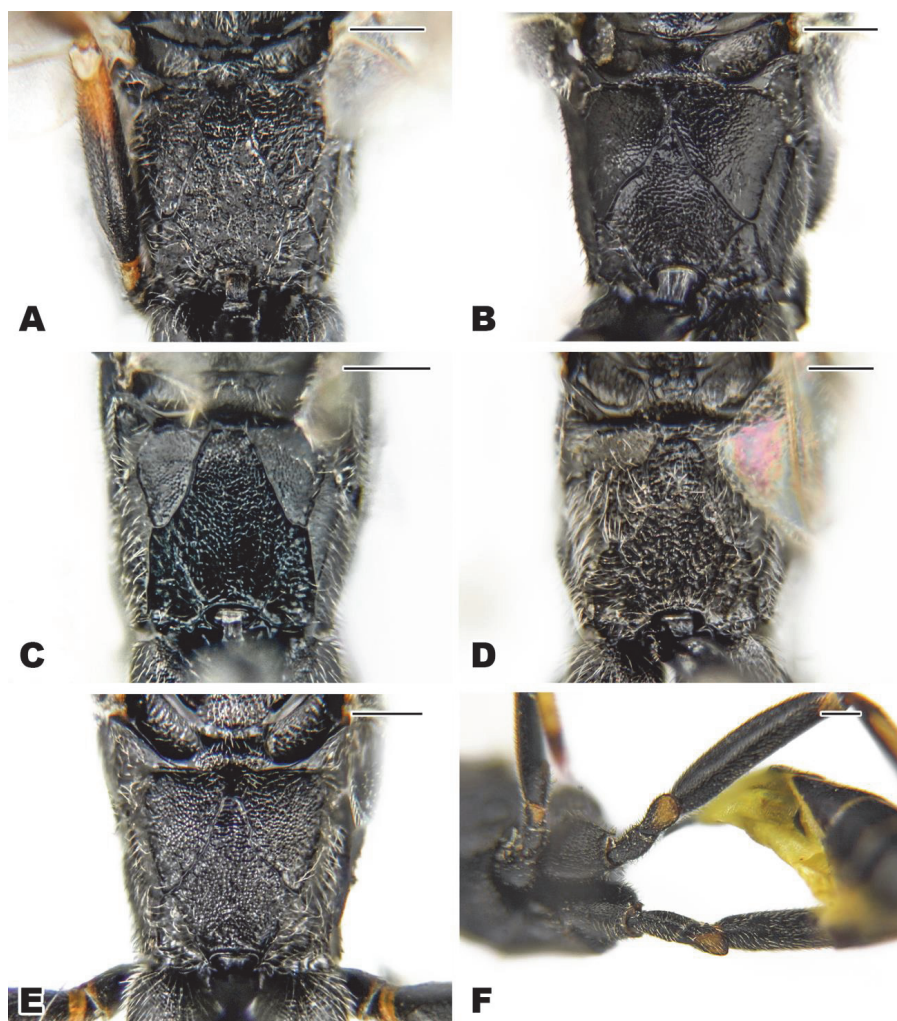


Fig. 2. *Bathyplectes* spp., propodeum (A–E), dorsal view and hind trochantelli (F), ventral view. A – *B. anurus graecator* Aubert, 1970; B – *B. carinatus* Horstmann, 1974; C – *B. exiguus* (Gravenhorst, 1829); D – *B. infernalis* (Gravenhorst, 1820); E – *B. tesquicola* (Dbar, 1983); F – *B. carinatus* Horstmann, 1974. Scale bars: 0.2 mm.

DESCRIPTION OF IRANIAN SPECIMENS. Female, body length 3.5 mm; antenna with 17 flagellomeres; all flagellomeres longer than wide; clypeus convex in profile, granulate, apically punctate, with a lamellar edge medially; face granulate; malar space $1\times$ as long as width of mandibular base; speculum indistinctly coriaceous, shiny, area in front granulate; mesopleuron granulate; areolet pentagonal, sessile; hind trochantellus ventrally without concave oval area; propodeum granulate; basal area rectangular, wider than long; area superomedia strongly divergent posteriorly, confluent with the widened area petiolaris;

lateral parts of anterior transverse carina not developed (Fig. 2C); apical edge of 6th and 7th metasomal tergites without a dorsal notch; ovipositor sheath 1.2× as long as hind tibia.

DISTRIBUTION. Palearctic and Nearctic (Yu *et al.*, 2016; Riedel & Japoshvili, 2021; Vas, 2023; Libert & Vas, 2025), Iran (new record).

***Bathyplectes infernalis* (Gravenhorst, 1820)**

Figs 1D, 2D

MATERIAL EXAMINED. **Iran:** West Azarbaijan province, Urmia county, Tergver district, 37°48'61.22"N, 44°79'66.23"E, h=1721m, 11.VII 2023, 1♀, 3♂, leg. Y. Karimpour; Dalamper, 37°20'13.32"N, 44°85'37.64"E, h=2078 m, 21.VII 2023, 1♀, 1♂, leg. Y. Karimpour.

DESCRIPTION OF IRANIAN SPECIMENS. Female, body length 4.5 mm (Fig. 1D); antenna with 22 flagellomeres; all flagellomeres longer than wide; clypeus weakly convex in profile, granulate, apical half irregularly punctate to the edge; face granulate; malar space 1.2× as long as width of mandibular base; speculum indistinctly rugose, shiny, area in front rugose; mesopleuron medially strongly rugose, ventrally granulate; areolet quadrate, petiolate; hind trochantellus ventrally without concave oval area; propodeum mostly rugose; basal area rectangular, wider than long; area superomedia weakly convergent, posteriorly open; lateral parts of anterior transverse carina obliterated (Fig. 2D); apical edge of 6th and 7th metasomal tergites without a dorsal notch; ovipositor sheath 0.3× as long as hind tibia. Male: similar to female with the following differences: antenna with 26 flagellomeres; speculum distinctly rugose, matt.

DISTRIBUTION. Palearctic and Nearctic (Yu *et al.*, 2016; Riedel *et al.*, 2023; Vas, 2023), Iran (new record).

***Bathyplectes rufigaster* Horstmann, 1977**

Fig. 1F

MATERIAL EXAMINED. **Iran:** Guilan, Roodsar, Rahim Abad, Orkom, 36°45'44.34"N, 50°18'11.88"E, h=1201 m, 24–31.V 2010, 1♂, leg. M. Khayrandish.

DESCRIPTION OF IRANIAN SPECIMENS. Male, body length 3.5 mm (Fig. 1F); antenna with 18 flagellomeres; all flagellomeres longer than wide; clypeus weakly convex in profile, granulate, only apically medially slightly smooth and shiny; face granulate; malar space 1× as long as width of mandibular base; speculum granulate; mesopleuron granulate; areolet quadrate, sessile; hind trochantellus ventrally without concave oval area; propodeum granulate; basal area rectangular, wider than long; area superomedia divergent, posteriorly open; lateral parts of anterior transverse carina obliterated.

DISTRIBUTION. Palearctic (Yu *et al.*, 2016; Sari & Coruh, 2018), Iran (Vas *et al.*, 2024).

***Bathyplectes tesquicola* (Dbar, 1983)**

Figs 1E, 2E

MATERIAL EXAMINED. **Iran:** Kurdistan province, Marivan county, Chuin village, 35°25'00.9"N, 46°31'24.7"E, h=1541 m, 22.IV 2025, 1♀, leg. A. Feizi; West Azarbaijan province, Urmia county, Dalamper, 37°20'13.32"N, 44°85'37.64"E, h=2078 m, 23.VII 202, 1♀, leg. Y. Karimpour.

DESCRIPTION OF IRANIAN SPECIMENS. Female, body length 4.5 mm; antenna with 19 flagellomeres; all flagellomeres longer than wide; clypeus convex in profile, granulate, apical half irregularly punctate, medially with a lamellar edge; face densely granulate-punctate; malar space 1.3× as long as width of mandibular base; speculum rugose; mesopleuron granulate-punctate; areolet quadrate, petiolate; hind trochantellus ventrally with a weakly concave widened area; propodeum granulate; basal area trapezoidal, as long as wide; area superomedia divergent posteriorly, confluent with the widened area petiolaris; lateral part of anterior transverse carina not developed (Fig. 2E); apical edge of 7th metasomal tergite with a

DISTRIBUTION: Eastern Palearctic (Yu *et al.*, 2016), Iran (new record).

DISCUSSION

This study significantly expands the known diversity of the genus *Bathyplectes*, adding four species and one subspecies and arising the total number of confirmed Iranian species to seven. The species number of Iranian *Bathyplectes* in comparison to adjacent countries is as follows: Afghanistan and Iraq (one species), Azerbaijan and Turkmenistan (four species), Armenia (five species), Turkey (eleven species) and no records exist from Pakistan (Yu *et al.*, 2016; Vas, 2023). The updated distribution map of Iranian *Bathyplectes* species (Fig. 3) confirms the first occurrence of the genus in eastern Iran (*B. anurus* and *B. curculionis* in Razavi Khorasan province). This map also demonstrates that northern and northwestern Iran are the most explored areas. However, the discovery of additional species is expected, as several species found in adjacent areas, for example, *B. algericus* (Smits van Burgst, 1913), *B. balteatus* (Thomson, 1887), *B. crassicornis* Horstmann, 1977, *B. rufipes* Horstmann, 1974, *B. rufiventator* Aubert, 1979, and *B. tibiator* (Gravenhorst, 1820) in Turkey; *B. crassicornis* Horstmann, 1977, and *B. rufiventator* Aubert, 1979 in Armenia, and *B. aspergus* Dbar, 1985, and *B. quinqueangularis* (Ratzeburg, 1852) in Azerbaijan, these species remain unrecorded in Iran. It should be emphasized that the sampling efforts in provinces like West Azarbaijan and Kurdistan have been limited to sweep-netting, a method less effective for capturing the full hymenopteran diversity than Malaise traps (Shweta & Rajmohana, 2016; Idris *et al.*, 2001). The recent description of *B. dbari* Vas, 2023 near the Turkmenistan border suggest its potential presence in the Kopet-Dagh mountains range (Razavi Khorasan, North Khorasan, and Golestan provinces).

The global distribution of *Bathyplectes* shows that limited species distributed in Oriental (2 species) and Eastern Palaearctic (5 species), and no records have been reported from the Afrotropical realm (Yu *et al.*, 2016; Vas, 2023). This pattern explains the lower species richness in eastern and southern parts of Iran, which are ecologically overlapping with these ecoregions (Rahmani *et al.*, 2020). In contrast, the richer fauna of the northwestern and northern regions aligns with their connection to the Western Palaearctic, which hosts 25 species (Yu *et al.*, 2016; Horstmann, 1974; Vas, 2023). Consequently, we hypothesize that future sampling in southern and eastern Iran is unlikely to yield many new species beyond the widespread *B. anurus* and *B. curculionis*, although this requires confirmation through comprehensive, methodical surveys (e.g., using Malaise traps).

A historical record of *B. curculionis* and *B. anurus* from the "hot-arid areas of Iran" exists from a biological control program targeting *Hypera postica* (Van Den Bosch *et al.*, 1961). While the collection locality is vague, this can be considered a validated, albeit imprecise, record of the genus in southern Iran.

Finally, we excluded several species records of the genus *Bathyplectes* from our analysis. This decision is based on a critical assessment of the records which were published by the

non-taxonomist journals with insufficient peer-review. The majority of these reports typically lack reference to the voucher specimens and fail to provide background data supporting the occurrence of the species. A similar critical approach to validating faunal records has been adopted in other Hymenoptera groups (Barahoei *et al.*, 2022; Rahmani *et al.*, 2020, 2022; Rosa *et al.*, 2024).

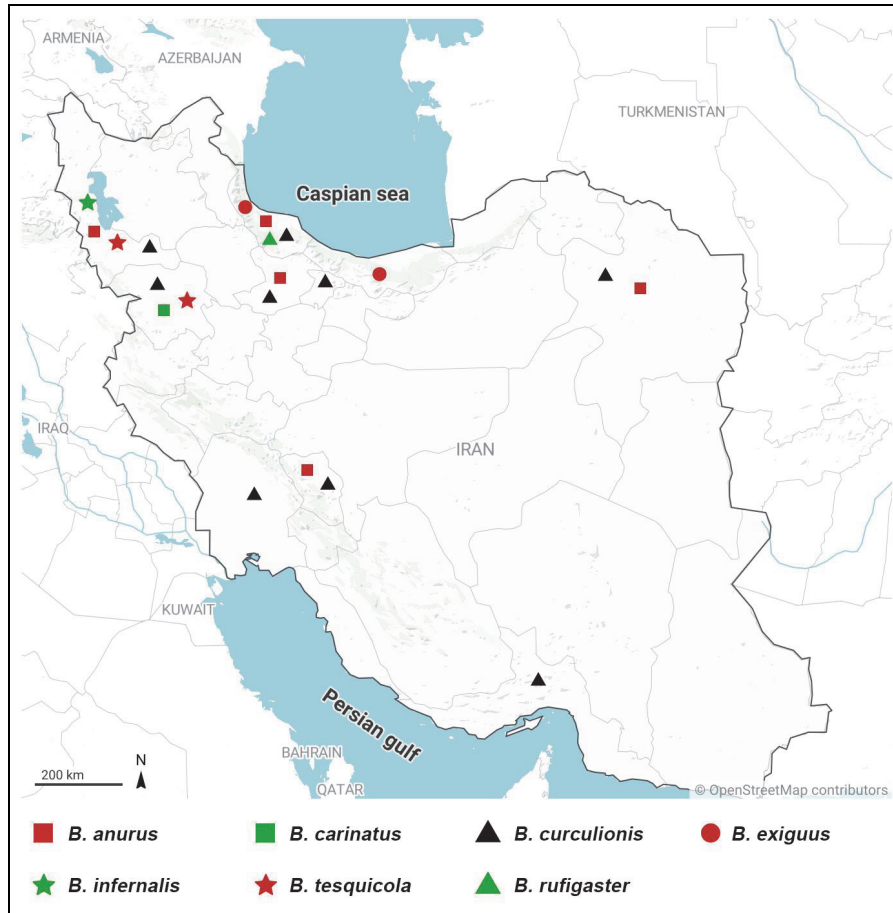


Figure 3. Distribution of *Bathyplectes* species reported from Iran.

ACKNOWLEDGMENTS

We extend our gratitude to the Department of Entomology at Tarbiat Modares University for providing financial support for this research. Our special thanks go to Dr. Ahmad Nadimi, Dr. Mohammad Khayrandish, Dr. Abbas Amiri, and Dr. Younes Karimpour for their dedicated efforts in collecting the material. We deeply thank Dr. Fardin Faizi for his help and support in collecting the material from Kurdistan province.

REFERENCES

- Aubert, J.F. 1970. Ichneumonides pétiolées inédites. *Bulletin de la Société Entomologique de Mulhouse*, 1970: 65–73.
- Barahoei, H., Khajeh, N., Azevedo, C.O., Olmi, M. & Rakhshani, E. 2022. A review of Chrysidoidea (Hymenoptera, Aculeata), excluding Chrysididae of Iran. *Journal of Insect Biodiversity and Systematics*, 8(4): 617–645. DOI: 10.52547/jibs.8.4.617
- Broad, G.R., Shaw, M.R. & Fitton, M.G. 2018. Ichneumonid wasps (Hymenoptera: Ichneumonidae): their classification and biology. *Royal Entomological Society and the Field Studies Council, Handbooks for the Identification of British Insects*, 7(12): 1–418. DOI: 10.1111/9781119252083
- Carlson, R.W. 1979. Family Ichneumonidae. Stephanidae. P. 315–741. In: K.V. Krombein, P.D. Hurd Jr., D.R. Smith, & B.D. Burks (Eds.), *Catalog of Hymenoptera in America north of Mexico*. Smithsonian Institution Press, Washington.
- Dbar, R.S. 1983. Ichneumonids of the genus *Bathypiestia* Aubert (Hymenoptera, Ichneumonidae). *Entomologicheskoye Obozreniye*, 62(4): 773–779. DOI: 10.1007/BF02516954
- Eady, R.D. 1968. Some illustrations of microsculpture in the Hymenoptera. *Proceedings of the Royal Entomological Society of London. Series A, General Entomology*, 43(4–6): 66–72. DOI: 10.1111/j.1365-3032.1968.tb01029.x
- Gonzalez, D., Etzel, L., Esmaili, M., El-Heneidy, A.H. & Kaddou, I. 1980. Distribution of *Bathyplectes curculionis* and *Bathyplectes anurus* (Hym.: Ichneumonidae) from *Hypera* (Col.: Curculionidae) on alfalfa in Egypt, Iraq, and Iran. *Entomophaga*, 25(2): 111–121. DOI: <https://doi.org/10.1007/BF02372338>
- Horstmann, K. 1974. Revision der westpaläarktischen Arten der Schlupfwespen-Gattungen *Bathyplectes* und *Biolysia* (Hymenoptera: Ichneumonidae). *Entomologica Germanica*, 1: 58–81.
- Horstmann, K. 1977. Campopleginae aus Jordanien und Libanon (Hymenoptera, Ichneumonidae). *Annales historico-naturales Musei nationalis hungarici*, 69: 195–199.
- Idris, A.B., Zaneedarwaty, N.N., Gonzaga, A.D., Zaidi, M.I., Azman, S. & Salmah, Y. 2001. A study on four methods of sampling Ichneumonidae and Braconidae at two different habitats of Fraser's hill, Malaysia. *Pakistan Journal of Biological Sciences*, 4(12): 1515–1517.
- Kamali, K., Soleiman-Nejadian, E. & Bishop, G.W. 1978. Biology of the Egyptian alfalfa Weevil in Khuzestan, southwestern province of Iran. *Annals of the Entomological Society of America*, 71(2): 196–198. DOI: 10.1093/aesa/71.2.196
- Libert, P.N. & Vas, Z. 2025. Contribution to the knowledge of entomofauna of a Belgian Famenne village. XIV. Campopleginae (Hymenoptera: Ichneumonidae). *Folia Entomologica Hungarica*, 86: 151–181. DOI: 10.17112/FoliaEntHung.2025.86.151
- Rahmani, Z., Rakhshani, E., & Carpenter, J.M. 2020. Updated checklist of Vespidae (Hymenoptera: Vespoidea) in Iran. *Journal of Insect Biodiversity and Systematics*, 6(1): 27–86. DOI: 10.52547/jibs.6.1.27
- Rahmani, Z., Rakhshani, E., Lotfalizadeh, H., & Mokhtari, A. 2022. Annotated checklist of Pteromalidae (Hymenoptera, Chalcidoidea) in the Middle East and North Africa. *Journal of Insect Biodiversity and Systematics*, 8(2): 265–377. DOI: 10.52547/jibs.8.2.265
- Riedel, M. & Japoshvili, G. 2021. New records of Ichneumonidae from Northwestern Sakartvelo (Georgia), with additions to the fauna of Lagodekhi reserve. *Linzer biologische Beiträge*. 53(1): 241–288. DOI: 10.5281/zenodo.13154240

- Riedel, M., Pénigot, W., Schwarz, M., Diller, E., Johannsson, N. & Japoshvili, G. 2023. Darwin wasps (Hymenoptera, Ichneumonidae) of the Kintrishi National Park, Sakartvelo (Georgia), with descriptions of six new species. *Linzer biologische Beiträge*, 55(1): 61–153. DOI: 10.5281/zenodo.10415120
- Rosa, P., Farhad, A., Talebi, A.A., Ameri, A., Baiocchi, D., Halada, M. & Rakhshani, E. 2024. The Iranian Chrysididae (Hymenoptera), the current state of the art, with an updated checklist and description of eleven new species. *Journal of Insect Biodiversity and Systematics*, 10(4): 827–951. DOI: 10.61186/jibs.10.4.827
- Roshandel, S. & Ebrahimi, E. 2003. Biology and seasonal parasitism of *Bathyplectes anurus* (Thomson), parasitoid of *Hypera postica* Gill. in Chahar Mahal Va Bakhtiari province. *Journal of Entomological Society of Iran*, 22(2): 1–15.
- Sabahi, Q. & Talebi, K. 2007. Effects of phosalone residues on alfalfa weevil larval parasitoid, *Bathyplectes curculionis* (Hym.: Ichneumonidae). *Journal of Entomological Society of Iran*, 26(2): 11–22.
- Sari, Ü. & Coruh, S. 2018. Ichneumonidae (Hymenoptera) from Northeastern Anatolia Region (Erzurum, Aşkale). *Türkiye Entomoloji Dergisi*, 42 (3): 215–228. DOI: 10.16970/entoted.400369
- Shweta, M. & Rajmohana, K. 2016. A comparison of efficiencies of sweep net, yellow pan trap and Malaise trap in sampling Platygasteridae (Hymenoptera: Insecta). *The Journal of Experimental Zoology*, 19: 393–396.
- Soroka, J., Bennett, A.M.R., Kora, C. & Schwarzfeld, M.D. 2020. Distribution of alfalfa weevil (Coleoptera: Curculionidae) and its parasitoids on the Canadian Prairies, with a key to described species of Nearctic *Bathyplectes* (Hymenoptera: Ichneumonidae). *The Canadian Entomologist*, 152: 663–701. DOI: 10.4039/tce.2020.35
- Van Den Bosch, R., Dawson, L., Roth, V. & Brown, V. 1961. Promising new parasite of the Egyptian alfalfa weevil imported from southern Iran. *California Agriculture*, 15(8): 11.
- Vas, Z. 2023. Contribution to the taxonomy, identification, and biogeography of the Palearctic species of *Bathyplectes* Förster and *Leptoperilissus* Schmiedeknecht (Hymenoptera: Ichneumonidae: Campopleginae). *Zootaxa*, 5270(1): 105–114. DOI: 10.11646/zootaxa.5270.1.5
- Vas, Z., Feizi, A., Talebi, A. A., & Heydari, M. Z. 2024. Contributions to the taxonomy, identification, and biogeography of Palearctic Campopleginae (Hymenoptera: Ichneumonidae), with the description of a new *Porizon* Fallén species from Iran. *Zootaxa*, 5418(2): 183–192. DOI: 10.11646/zootaxa.5418.2.5
- Yu, D.S., van Achterberg, C. & Horstmann, K. (2016). *Taxapad 2016, Ichneumonoidea 2015*. Database on flash-drive. www.taxapad.com, Nepean, Ontario, Canada.