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The *Gasteruption* (Hymenoptera: Gasteruptionidae) of Turkey

E. YILDIRIM, S. ÇORUH, J. KOLAROV & M. MADL

A b s t r a c t : This study is based upon material collected from different localities of Turkey between 1993 and 2003, and the other related studies were reviewed. In this study, *Gasteruption assectator* (LINNAEUS 1758), *G. diversipes* (ABEILLE 1879), *G. erythrostomum* (DAHLBOM 1834), *G. freyi* (TOURNIER 1877), *G. jaculator* (LINNAEUS 1758), *G. jekylljaechi* (MADL 1987), *G. opacum* (TOURNIER 1877), *G. pedemontanum* (TOURNIER 1877), *G. pyrenaicum* GUERIN 1844, *G. tibiale* (SCHLETTERER 1885), *G. tournieri* (SCHLETTERER 1885) and *G. undulatum* (ABEILLE 1879) species have been recorded in Turkey so far. Among them, *G. assectator*, *G. freyi*, *G. jaculator*, *G. pedemontanum*, *G. pyrenaicum* and *G. tibiale* are new records for Turkish fauna. Some new localities are found for some species which have already been reported in Turkey. Separately, distribution of species in Turkey and world is given.

K e y w o r d s : Hymenoptera, Gasteruptionidae, *Gasteruption*, fauna, Turkey.

Introduction

Gasteruptionidae contains about nine genera and 500 species around the world. The biology of Nearctic species is not known, but some European species have been reared from nests of solitary bees and wasps in holes in wood where they are predators, feeding upon one or more of the eggs and larvae found in the nests (GOULET & HUBNER 1993). Gasteruptionids have been stated to be ectoparasitoids of larval sphecids, vespids and apids (Hymenoptera), but it seems clear from the work of MALYSHEV (1964) on *Gasteruption* that they develop principally as secondary cleptoparasites on the food stored in the cells of only solitary bees. The female gasteruptionid gains access, for oviposition, through the normal nest entrance. The egg is laid variously on the bee egg, on the food store, elsewhere in the bee cell, or just outside the cell proper. On hatching the *Gasteruption* larva consumes the host egg and then feeds on the food store. Sometimes the contents of more than one cell, including the bee larvae, may be consumed. There appear to be three larval instars. In the final instar the larva produces a series of pellets of excrement. The fully grown larva constructs a flimsy cocoon in a section of the bee nest, in which it overwinters. Pupation takes place early in the following summer (GAULD & BOLTON 1988).

Faunal studies on the Gasteruptionidae of Turkey have been made by MADL (1987, 1988a, b, 1989, 1991), SEDIVY (1958) and HEDICKE (1939).

The material of Gasteruptionidae was collected from different localities of Turkey in 1993-2003.

Results

In this study, 12 species of genus *Gasteruption* were reported in Turkey.

Gasteruption assectator (LINNAEUS 1758)

Material examined: Erzurum: Nenehatun, 1850 m, 30.VI.1999, ♂, Ilica, Rizekent, 2200 m, 30.VII.1996, ♀, Sorkumlu, 1850 m, 30.VII.1996, ♀, Oltu, Camlibel, 1750 m, 2.VII.1997, 3♂♂, ♀, 14.VII.1996, ♀, Subatik, 1300 m, 28.VI.2000, 3♀♀, Tutmac, 1700 m, 2.VII.2000, ♂, Pasinler, Caliyazi, 2400 m, 11.VII.1997, ♀; Erzincan: 1250 m, 18.VII.1997, ♂, ♀.

Distribution in Turkey: New for the Turkish fauna.

Distribution in the world: Holarctic.

Gasteruption diversipes (ABEILLE 1879)

Distribution in Turkey: Turkey (no locality) (MADL 1988a).

Distribution in the world: Europe, North Africa, Sardinia, Turkey.

Gasteruption erythrostomum (DAHLBOM 1834)

Material examined: Balikesir: Ayvalik, 8.VIII.1996, ♂; Erzurum: 1900 m, 18.VII.1997, ♀, Oltu, Camlibel, 1750 m, 2.VII.1997, ♀, Tutmac, 1700 m, 2.VII.2000, ♀, Olur, Süngübayir, 1850 m, 20.VIII.1994, ♀, Pasinler, Caliyazi, 2400 m, 10.VII.1997, ♀, Senkaya, Turnali, 1750 m, 25.VII.1996, ♀.

Distribution in Turkey: Turkey (no locality) (MADL 1987, 1988b, 1989, 1990).

Distribution in the world: Europe, Russia, Turkey.

Gasteruption freyi (TOURNIER 1877)

Material examined: Erzurum: 1900 m, 18.VII.1997, ♂, ♀, 5.VIII.1997, 2♀♀, Konakli, 2400 m, 22.VII.2000, ♀, Nenehatun, 1850 m, 30.VI.1999, ♀, Palandöken, 2200 m, 7.VII.1996, ♀, 6.VIII.1996, ♀, Ilica, Sorkumlu, 1800 m, 10.VIII.1999, ♀, Oltu, Camlibel, 1750 m, 2.VII.1997, 2♀♀, Pasinler, 17.VII.1996, ♀, Caliyazi, 2400 m, 10.VII.1997, ♀, 11.VII.1996, ♀, Senkaya, Turnali, 1750 m, 22.VIII.1999, ♀; Nevsehir: Ürgüp, Aksalur, 1600 m, 13.VIII.1999, ♀.

Distribution in Turkey: New for the Turkish fauna.

Distribution in the world: Palaearctic.

Gasteruption jaculator (LINNAEUS 1758)

Material examined: Erzurum: 1900 m, 8.VIII.1996, ♀, Dutcu, 2200 m, 18.VII.1999, ♀, Konakli, 2400 m, 22.VII.2000, 3♀♀, Oltu, Camlibel, 1750 m, 2.VII.1997, 4♀♀, 14.VII.1996, 6♀♀, 26.VII.2000, ♀, Olur, Süngübayir, 1850 m, 20.VIII.1994, 2♀♀, Senkaya, Timurkislâ, 1400 m, 14.VIII.1996, 2♀♀, Turnali, 1750 m, 10.VII.1997, ♀, 23.VII.1996, ♀, 25.VII.1996, ♂, 2♀♀; Konya: Sille, 1350 m, 10.VIII.1999, ♀; Rize: Camlihemsin, Ayder, 1350 m, 30.VII.2000, ♀.

Distribution in Turkey: New for the Turkish fauna.

Distribution in the world: Palaearctic.

***Gasteruption jekylljaechi* (MADL 1987)**

Distribution in Turkey: Turkey (no locality) (MADL, 1987, 1988b).

Distribution in the world: Middle and South Europe, Syrian, Transcaucasia, Turkey.

***Gasteruption opacum* (TOURNIER 1877)**

Material examined: Bilecik: 600 m, 2.VII.1995, ♂; Bitlis: Adilcevaz, Yildiz, 1950 m, 15.VII.1999, ♂.

Distribution in Turkey: Turkey (no locality) (MADL 1988a).

Distribution in the world: Europe, Turkey.

***Gasteruption pedemontanum* (TOURNIER 1877)**

Material examined: Bilecik: 600 m, 2.VIII.1995, ♀; Erzurum: Oltu, Camlibel, 1600 m, 26.VII.2000, ♂, Senkaya, Turnali, 1750 m, 10.VII.1997, ♀ 25.VII.1996, ♀; 1.VIII.1993, ♀.

Distribution in Turkey: New for the Turkish fauna.

Distribution in the world: Palaearctic.

***Gasteruption pyrenaicum* GUERIN 1844**

Material examined: Erzurum: Güngörmez, 2500 m, 28.VII.1998, ♂; Oltu, Camlibel, 1700 m, 14.VII.1996, ♀; Erzincan: 1250 m, 15.VI.1994, ♀, 18.VI.1997, ♀; Icel: Erdemli, 11.VIII.1996, ♀.

Distribution in Turkey: New for the Turkish fauna.

Distribution in the world: Europe, Turkey.

***Gasteruption tibiale* (SCHLETTERER 1885)**

Material examined: Erzurum: Konakli, 2400 m, 22.VII.2000, ♂; Askale, 1950 m, 16.VII.1999, ♀, Oltu, Camlibel, 1750 m, 2.VII.1997, 6♂♂; Pasinler, Pelitli, 2000 m, 14.VII.1998, ♂.

Distribution in Turkey: New for the Turkish fauna.

Distribution in the world: Europe, Siberia, Turkey.

***Gasteruption tournieri* (SCHLETTERER 1885)**

Material examined: Erzurum: Oltu, Camlibel, 1700 m, 14.VII.1996, ♀, Senkaya, Gaziler, 1700 m, 14.VIII.1998, ♂, Timurkisla, 1400 m, 14.VII.1998, ♂, Turnali, 1750 m, 10.VII.1996, ♀, 25.VII.1996, ♂, 10.VIII.1997, 2♂♂, 22.VIII.1999, ♂; Hatay: Tasoluk, 6.VIII.1997, ♂; Konya: Sille, 1350 m, 10.VIII.1999, 2♂♂.

Distribution in Turkey: Turkey (no locality) (MADL 1987).

Distribution in the world: Middle and South Europe and Bashkiria, Turkey.

***Gasteruption undulatum* (ABEILLE 1879)**

Distribution in Turkey: Turkey (no locality) (MADL 1988b).

Distribution in the world: Europe, Turkey.

Zusammenfassung

Vorliegende Bearbeitung bezieht sich auf Material, das zwischen 1993 und 2003 an verschiedenen türkischen Fundorten gesammelt wurde. Die Arten *Gasteruption assectator* (LINNAEUS 1758), *G. diversipes* (ABEILLE 1879), *G. erythrostomum* (DAHLBOM 1834), *G. freyi* (TOURNIER 1877), *G. jaculator* (LINNAEUS 1758), *G. jekylljaechi* (MADL 1987), *G. opacum* (TOURNIER 1877), *G. pedemontanum* (TOURNIER 1877), *G. pyrenaicum* GUERIN 1844, *G. tibiale* (SCHLETTERER 1885), *G. tournieri* (SCHLETTERER 1885) und *G. undulatum* (ABEILLE 1879) wurden nachgewiesen. Davon sind *G. assectator*, *G. freyi*, *G. jaculator*, *G. pedemontanum*, *G. pyrenaicum* und *G. tibiale* neu für die türkische Fauna.

Literature

- GAULD I.D. & B. BOLTON (ed.) (1988): The Hymenoptera. — British Museum (Natural History) Oxford University Press, New York, 332 pp.
- GOULET H. & J.T. HUBNER (ed.) (1993): Hymenoptera of the world: An identification guide to families. — Research Branch Agriculture Canada Publication 1894/E, 668 pp.
- HEDICKE H. (1939): Hymenopterorum Catalogus 11, Gasteruptionidae: 1-54; s-Gravenhage.
- MADL M. (1987): Über Gasteruptionidae aus Oberösterreich (Hymenoptera, Evanoidea). — Linzer biol. Beitr. 19 (2): 401-405.
- MADL M. (1988a): Die Gasteruptionidae Sardiniens (Hymenoptera, Evanoidea). — Nachrbl. Bayer. Entomol 37 (1): 12-17.
- MADL M. (1988b): Die Gasteruptionidae des Bundeslandes Salzburg (Hymenoptera, Evanoidea). — Verh. Zool.-Bot. Ges. Österreich 125: 37-40.
- MADL M. (1989): Über Gasteruptionidae aus Triol und Vorarlberg. — Ber. Nat.-med. Verein Innsbruck 76: 159-162.
- MADL M. (1990): Beitrag zur Kenntnis der Gasteruptionidae Griechenlands (Insecta, Hymenoptera, Evanoidea). — Faun. Abh. Mus. Tierkd. Dresden 17 (14): 127-130.
- MALYSHEV S.I. (1964): A comparative study of the life and development of primitive gasteruptionids (Hymenoptera, Gasteruptionidae). — Entomological Review 43: 267-271.
- SEDIVY J. (1958): Die tschechischen Arten der Gasteruptioniden. — Acta. Soc. Ent. Csl. Prag, 55: 34-43.

Author's addresses: Prof. Dr. Erol YILDIRIM,
Mrs. Saliha ÇORUH
Department of Plant Protection
Faculty of Agriculture, Atatürk University
TR-25240 Erzurum, Turkey
E-Mail: eyildi@atauni.edu.tr

Prof. Dr. Janko KOLAROV
University of Plovdiv
Pedagogical Faculty
BG-Plovdiv, Bulgaria.

Michael MADL
Naturhistorisches Museum Wien
Zweite Zoologische Abteilung (Insekten)
Burggring 7, Postfach 417
A-1014 Wien, Austria.

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Autor(en)/Author(s): Yildirim Erol, Kolarov Janko Angelov, Madl Michael, Coruh Saliha

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