Orijinal araştırma (Original article)

Diplazon annulatus (Gravenhorst, 1829) (Hymenoptera: Ichneumonidae: Diplazontinae), new for the Turkish fauna and new localities for some species of this subfamily

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Summary

In order to contribute to the knowledge on the distribution of Diplazontinae (Hymenoptera: Ichneumonidae) species, sampling was performed from 10 different localities of Turkey (Anatolia), in 1988 and 1996. Four species from *Diplozon* and *Promethes* were determined. *Diplazon annulatus* (Gravenhorst, 1829) is recorded for the first time for Turkey. New distribution areas for previously known species *Diplazon laetatorius* (Fabricius, 1781), *Diplazon tibiatorius* (Thunberg, 1824) and *Promethes sulcator* (Gravenhorst, 1829) are represented.

Key words: Ichneumonidae, Diplazontinae, new record, Turkey **Anahtar sözcükler:** Ichneumonidae, Diplazontinae, yeni kayıt, Türkiye

Introduction

Diplazontinae is a small to medium large subfamily of Ichneumonidae and comprises more than 348 species in the World (Yu & Horstmann, 1997). These subfamily members are koinobiont endoparasitoids of Syrphidae (Diptera). Oviposition is into the egg or larvae and adult emergence is occurs from the puparium of hosts (Wahl, 1993). Diplazontinae is best generally represented in the Holarctic and Neotropic regions (Townes, 1970).

Although the members of the Ichneumonidae represent one of the most important groups of parasitoids for pest management is concerned, the researches on ichneumonid fauna of Turkey were explored very restricted (Özbek et al., 2003). Kolarov (1995), in his catalogue listed 10 species in 4 genera of the subfamily Diplazontinae occurring in Turkey. Since then several authors (Yurtcan et al., 1999; Özdemir, 2001; Gürbüz, 2005) have made valuable contributions to our knowledge of Diplazontinae fauna in Turkey. With these contributions, numbers of species and genera of Diplazontinae known from Turkey amount now to 18 and 8 respectively.

This study is based upon material of subfamily Diplazontinae collected from different localities of northeastern Anatolia in Turkey in 1988 and 1996. The aim of this study is to present the complete records of preserved material to researchers and relevant people.

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Material and Methods

The material for this study was collected from Ardahan, Artvin, Erzurum, Erzincan, Trabzon and Şanlıurfa in Turkey during 1988-1996. The samples were collected by sweeping net on flowering plants with an insect sweep net. Specimens were collected transferred into a handmade aspirator and were killed with ethyl acetate. Known standard methods (Çoruh & Özbek, 2008) were used for preparation of the samples. In the present study there were given for each species: the name valid at present; the location and time of collected; collection time examined material of the study region. General distributions of the species were taken from Yu et al. (2005). All materials are deposited in the Entomology Museum Erzurum, Turkey (EMET).

Results

With present study the complete numbers of species and genera of Diplazontinae known from Turkey rises to 19 and 8 respectively. *Diplazon annulatus* (Gravenhorst, 1829) is a new record for the Turkish fauna. For the other species listed below new localities are given.

Diplazon annulatus (Gravenhorst, 1829)

Material examined: Erzurum: Şenkaya- Turnalı, 1750 m, 25.VII.1996, 13, leg. S. Çoruh.

New for Turkish fauna.

Distribution in the world: Greenland, Europe and India,

Remarks: Length 6.1 mm color of the male varies, face generally entirely yellow, central part and clypeus have some yellow spots with black streaks from the antennae downwards all over the face; fore wing 5.0 mm long, without areolet; fore and middle legs brown, metacoxae, trochanters metafemur brown, metatibia with yellow-black marking, tarsal segments and tarsal claws black.

Diplazon laetatorius (Fabricius, 1781)

Material examined: Artvin: Yusufeli, 15.VIII.1996, 1♀, leg. Ş. Aydemir; Erzincan: Kavakyolu, 15.VI.1996, 1♀, leg. S. Çoruh; Erzurum: Kombina, 5.IX.1988, 1♂, leg. H. Özbek, 19.IX.1988, 1♂, leg. Ü. Avcı, 20.IX.1988, 1♀, leg. Ü. Avcı; 26.IX.1988, 1♂, leg. H. Özbek, Atatürk University field, 1850 m, 23.VI.1996, 1♂, leg. S. Çoruh;Trabzon: 26.VII.1996, 1♀, leg. Ö. Kara, 31.VII.1996, 1♀, leg. Ö. Kara; Şanlıurfa: 21.V.1988, 1♀, leg. R. Hayat; 23.V.1988, 4♀♀, leg. R. Hayat.

Distribution in Turkey: Afton, Ankara, Bolu, Burdur, Eskişehir, Isparta, Nevşehir and Konya (Özdemir, 2001).

Distribution in the world: Australian, Ethiophian, Nearctic, Neotropical, Oceanic, Oriental and Palaearctic regions.

Remarks: This specimen was reared from the pupae of *Episyrphus balteatus* (De Geer 1776) (Diptera: Syrphidae) collected from the campus of Atatürk University.

Diplazon tibiatorius (Thunberg, 1824)

Material examined: Erzurum: Palandöken Mt., 2200-2400 m, 1.VII.1996, 1♀, leg. S. Çoruh; İspir-Madenköprübası, 1450 m, 2.VII.1996, 1♀, leg. E. Yıldırım, Senkaya, Turnalı, 1750 m, 25.VII.1996, 1♂, leg. E. Yıldırım, Uzundere, 1000 m, 9.VI.1996, 1♂, leg. E. Yıldırım.

Distribution in Turkey: Ankara and Antalya (Özdemir, 2001).

Distribution in the world: Holarctic region.

Promethes sulcator (Gravenhorst, 1829)

Material: Ardahan: Çıldır, 13.VII.1996, 1♂, leg. S. Çoruh; Erzurum: Atatürk University field, 1850 m, 2.VIII.1988, 1♀, leg. H. Özbek.

Distribution in Turkey: Ankara, Çankırı, Kayseri, Konya and Kırşehir (Özdemir, 2001).

Distribution in the world: Holarctic and Oriental region.

Özet

Türkiye faunası için yeni bir kayıt *Diplazon annulatus* (Gravenhorst, 1829) (Hymenoptera: Ichneumonidae: Diplazontinae) ve bazı türler için yeni lokaliteler

Türkiye'nin Diplazontinae (Hymenoptera: Ichneumonidae) türlerinin dağılımları hakkındaki bilgilere katkı sağlamak amacıyla 1988 ve 1996 yıllarında 10 farklı lokaliteden örnek alınmış ve *Diplazon* ve *Promethus* cinslerine bağlı 4 tür tespit edilmiştir. Bu türler arasından *Diplazon annulatus* (Gravenhorst, 1829) Türkiye'den ilk defa kaydedilmiştir. Daha önceden bilinen *Diplazon laetatorius* (Fabricius, 1781), *Diplazon tibiatorius* (Thunberg, 1824) ve *Promethes sulcator* (Gravenhorst, 1829) türleri için yeni yayılış alanları belirlenmiştir.

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References

- Çoruh, S. & H. Özbek, 2008. A faunistic and systematic study on Pimplinae (Hymenoptera: Ichneumonidae) in Eastern and Northeastern parts of Turkey. Linzer Biologische Beitrage 40 (1): 419–462.
- Gürbüz, F., 2005. A survey of the Ichneumonidae (Hymenoptera) of Isparta in Turkey. Linzer Biologische Beitrage 37 (2): 1809-1817.
- Kolarov, J., 1995. A catalogue of the Turkish Ichneumonidae (Hymenoptera). Entomofauna 16 (7): 137-188.
- Özbek, H., S. Coruh & J. Kolarov, 2003. A Contribution to Ichneumonidae fauna of Turkey: The subfamily Ichneumoninae. Entomofauna 24 (10): 157-164.
- Özdemir, Y., 2001. The species of Diplazontinae and Tryphoninae (Hymenoptera: Ichneumonidae) from Central Anatolia. Turkish Journal of Entomology 25 (3): 183-192.
- Townes, H., 1971. The Genera of Ichneumonidae, Part 2. Memoirs of the American Entomological Institute 17: 372 pp.
- Wahl, D.B., 1993. Family Ichneumonidae. In: Hymenoptera of the World: An Identification Quide to Families. (Eds. H. Goulet, & J. T. Huber). Research Branch Agriculture Canada Publication 668 pp.
- Yu, D.S. & K. Horstmann, 1997. A Catalogue of World Ichneumonidae (Hymenoptera). Memoirs of the American Entomological Institute 58: 1558 pp.
- Yu, D., K. Van Achterberg & K. Horstmann, 2005. World Ichneumonoidea 2004. Taxonomy, Biology, Morphology and Distribution. CD-ROM, Taxapad, Vancouver.
- Yurtcan, M., A. Beyarslan & J. Kolarov, 1999. Investigation on the Ichneumonidae (Hymenoptera) fauna of Turkey. V. Diplazontinae and Ichneumoninae. Acta Entomologica Bulgarica 1: 34-36.