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A New Species *Bracon (Orthobracon) malatyensis* sp. n. from Eastern Anatolia (Hymenoptera, Braconidae, Braconinae)

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ABSTRACT

During the study of the Braconidae fauna in the Turkish East Anatolia region a new species of Braconinae, *Bracon (Orthobracon) malatyensis* sp. n. was recorded. The new species is described, illustrated and diagnosed.

Key words: Braconinae, Braconidae, *Bracon*, *Orthobracon malatyensis*, new species, Malatya, Turkey.

INTRODUCTION

The Braconinae (Hymenoptera; Braconidae) is a large subfamily including moderately small to large wasps with more than 2909 described species worldwide. They are well distributed in almost all terrestrial habitats, and play an important role as regulatory agents for the phytophagous insect population dynamics, particularly the economically important insects pests. Braconinae species are known as solitary or gregarious idiobiont ectoparasitoids on the concealed larvae of many harmful species within Coleoptera, Diptera, Lepidoptera and Hymenoptera (Shaw and Huddleston, 1991; Yu *et al.*, 2006).

Bracon Fabricius, 1804 is a cosmopolitan genus with well over 878 described species worldwide, and it is distributed mostly in the Palaearctic region. (Yu *et al.,* 2006). It is a moderately large genus divided into eighteen subgera and it is represented in the Turkish fauna with only *Bracon* Fabricius, *Asiobracon* Tobias, *Cyanopterobracon* Tobias, *Glabrobracon* Fahringer, *Habrobracon* Ashmead, *Lucobracon* Fahringer, *Orthobracon* Fahringer, *Pigeria* Achterberg, *Rostrobracon* Tobias and *Osculobracon* Papp (Papp, 2008). Up to now approximately 110 *Bracon* species have been published from Turkey and 9 of these species are new to science. (Beyarslan, 1986a, 1986b, 1987, 1988, 1991, 1992, 1996, 1999, 2002a, 2002b; Beyarslan and Fischer 1990; Beyarslan *et al*., 2002, 2005,2006a, 2006b; Güler and Çağatay 2001, 2007; Beyarslan and Tobias, 2008).

MATERIAL AND METHODS

Adult specimens of *Bracon* (Hymenoptera: Braconidae: Braconinae) were collected by sweeping from various habitats of the Turkish Eastern Anatolia region and they were sacrificed with either ethyl acetate or cigarette smoke. Collected specimens were placed in %70 ethylalcohol and transferred to laboratory. Samples were pinned and labelled according to taxonomic rules and regulations in laboratory. The taxonomical examination and identification of the material was based on Tobias (1986, 2000), Papp (1969) and Quicke and Sharkey (1989).

Type material is deposited in the collection of the Biology Department of Arts and Sciences Faculty in Trakya University.

The definitions, ratios and abbreviations follow those of van Achterberg (1990) and van Achterberg and Quicke (1991). The following abbreviations are used in the text: OOL = ocular-ocellar line, POL = postocellar line, OD= maximal diameter of lateral ocelli. Figures of the new species were drawn and measurements were taken using a camera lucida attached to a Stereomikroskop/ Nikon SMZ800

TAXONOMY

***Bracon (Orthobracon) malatyensis* sp. n. (Figs 1-7)**

Description. Female (holotype). Length of body 2.9 mm, of antennae 4.3 mm, of fore wing 3.5 mm, of hind wing 3.0 mm, of hind leg 2.8 mm, of mesosoma 1.3 mm, of metasoma 1.6 mm, of ovipositor 0.6 mm.

Head. Transverse, ratios of width: length: height of head = 48: 26: 50 (Fig. 1).

Antenna with 40 flagellomeres. First flagellomere 2.2 times as long as its width and 1.6 times as long as second flagellomere, all flagellomeres longer than its width and penultimate flagellomere 2 times as long as its width (Fig. 2). Width of the hypoclypeal depression 0.5 times of longitudinal diameter of eye, as long as length of malar space and 1.5 times as long as basal width of mandible; longitudinal diameter of eye 1.4 times longer than its transverse diameter; ratios of height of clypeus: inter-tentorial distance: tenterio-ocular distance = 3 : 8 : 8; length of maxillary palp 0.6 times the height of head; width of face 1.3 times its height, face smooth; glabrous and with very sparse, long, white setae; ratios of longitudinal diameter of eye : width of face : width of head= 22 : 27 : 48; vertex and frons smooth and glabrous with some white setae; transverse diameter of eye 2 times as long as temple in dorsal view; ratios of OOL: OD :POL = 11 : 3 : 6; basal part of mandible microsculptured; temple smooth, shiny; length of malar space 1.4 times as long as basal width of mandible and 0.3 times longitudinal diameter.of eye

Mesosoma (Fig. 3). Mesosoma approximately 1.6 times longer than height; pronotum and propleuron with very fine longitudinal carina, smooth; mesoscutum smooth, glabrous, with silvery short setae; notauli distinct and with long white setae; scutellar sulcus smooth, scutellum compressed, smooth and mate; flange of metapleuron distinctly developed; metanotum smooth, shiny; surface of propodeum smooth and with short silvery setae laterally.

Fore wing (Fig. 4). Pterostigma almost triangular, length of pterostigma 3.8 times its maximal width, vein 1-SR+M straight; vein cu-a interstitial; ratio of r : 3-SR : SR1 = 10 : 28 : 45; CUlb short, 3-CU1 0.7 times as long as m-cu and 2 times as long as CU1b; ratios of 2- SR : 3-SR: r-m: 2-M: 2-SR+M= 17 : 27 : 11 : 40 : 4.

Hind wing (Fig. 5). Ratios of cu-a : 1-M : 1r-m : 2-SC+R : SC+R1= 9 : 52 : 10 : 4 : 28; apex of C+SC+R with one especially thickened bristle; Ratios of M+CU : 1-M : 1r-m : 2-SC+R : SC+R1 : cu-a= 15 : 52 : 10 : 4 : 27 : 9.

Legs (Fig. 7). Hind coxa smooth, with long, whitish setae; femur weakly compressed; ratios of femur : tibia : basitarsus: tarsus of hind leg = 43 : 70 : 25 : 62; length of femur, tibia and basitarsus of hind leg 3.7, 10 and 6.2 times their maximum width, respectively; length of both hind tibial spurs 0.3 times of hind basitarsus; length of fore tibial spur 0.3 times of fore basitarsus, tibia and tarsus densely setose.

Metasoma (Fig. 6). Length of first tergite 0.73 times its apical width and smooth; suture between 2nd and 3rd metasomal tergites deep and sinuate; medial length of second tergite 0.65 times as long as medial length of third tergite; all tergites smooth and glabrous.

Colour. Yellow-red. Eye, antennae, 2 small spots on the lateral sides of mesonotun, lower part of mesopleuron, propodeum, 4 apical segments of tarsi, all tarsal claws, medial part of first metasomal tergite, 2 spots on lateral sides of second tergite and ovipositor sheath black; wing membrane light brown; pterostigma yellow and veins brown.

Male: Unknown.

Host: Unknown.

Material examined. Holotype: Female – Malatya-Akçadağ, Sarıhacı, in an area with *Prunus armeniaca, Quercus* sp., *Populus* sp., and herbaceous plants (32° 22' 32" N, 37° 53' 17" E), 1367 m a.s.l., 05.06.2007, leg. E. Coban.

Paratype: Malatya-Akçadağ, Darıca, in an area with *Triticum* sp. belt, *Trifolium* sp, *Prunus armeniaca*, *Quercus* sp., *Populus* sp., (38° 20' 39" N, 37° 40' 22" E), 1540 m a.s.l., 05.06.2007, 1 female, leg. A.Beyarslan.

Diagnosis. The new species is distinguished from the congeneric *Bracon zonulatus* Fahringer, 1928, by the synopsis of the following characters:

1(2) Antennae with 40 flagellomeres, 1.5 times as long as length of body; mesopleuron, and metapleuron smooth; suture between 2nd and 3rd metasomal tergites deep and sinuate ……..…….….. *B.(O.) malatyensis* sp. n.

2(1) Antennae with 32 flagellomeres, shorter than length of body; mesopleuron, and metapleuron sculptured; suture between 2nd and 3rd metasomal tergites deep and straight…… …… ….. …… *B.(O.) zonulatus* Fahringer, 1928

Etymology. The species is named taking into account the province of Malatya where the type locality is situated.

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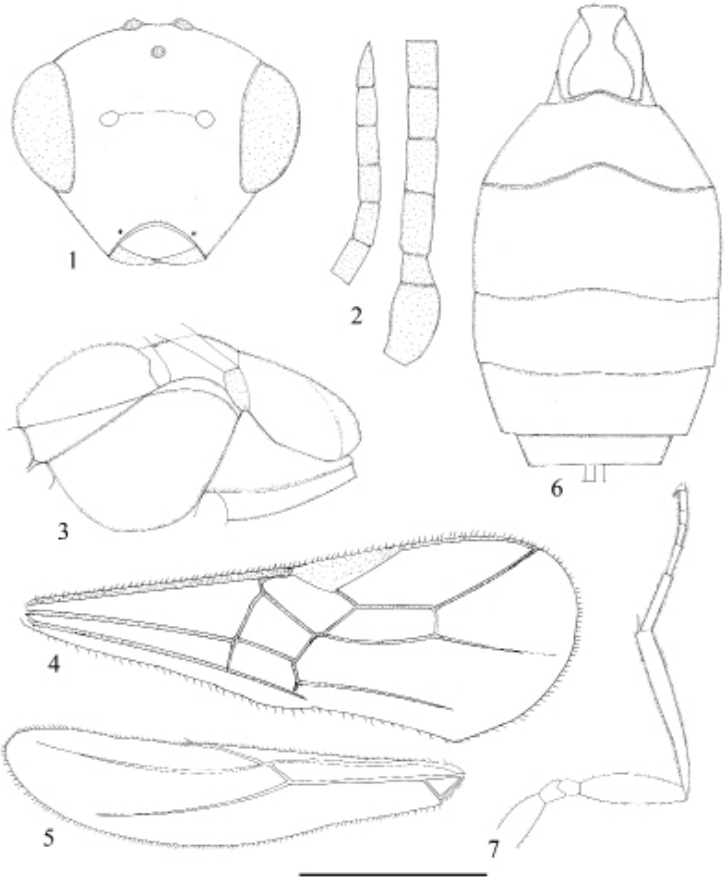

Figs 1–7. *Bracon (Orthobracon) malatyensis* sp. n. (female): 1. head in frontal view; 2. antenna; 3. mesosoma in lateral view; 4. fore wing; 5. hind wing; 6. hind leg; 7. metasoma. Scale 0.52 mm (Fig 1), 0.50 mm (Fig. 2), 0.72 mm (Fig. 3), 1.17 mm (Fig. 4), 1.2 mm (Fig. 5), 0.64 mm (Fig. 6), 1.15 mm (Fig. 7).

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