



***HILARA REGNEALAI* PÂRVU (DIPTERA: EMPIDIDAE), NEW RECORD FOR TURKISH FAUNA WITH FEMALE DESCRIPTION¹**

Mustafa Cemal ÇİFTÇİ & Abdullah HASBENLİ

Gazi University, Faculty of Art and Science, Department of Biology, 06500, Teknikokullar, Ankara, Turkey, email: empididae@gmail.com

Abstract - *Hilara regnealai* Pârvu, 1991 is a new species record for Turkish fauna and also the genus *Hilara* Meigen is recorded for the first time in Turkey. The description of the previously unknown female is given.

KEY WORDS: Empididae, fauna, Turkey, new record, female description

Izveček - *HILARA REGNEALAI* PÂRVU (DIPTERA: EMPIDIDAE), NOVA NAJDBA V TURŠKI FAVNI, Z OPISOM SAMICE

Hilara regnealai Pârvu, 1991, je nova vrsta za turško favno in tudi rod *Hilara* Meigen je prvič najden v Turčiji. Podan je opis predhodno nepoznane samice.

KLJUČNE BESEDE: Empididae, favna, Turčija, new record, female description

Introduction

The genus *Hilara* belongs to the subfamily Empidinae of the family Empididae (Diptera). *Hilara* includes a large number of species of moderate to very small size (2.5-7.5 mm). General appearance is black, brown, grey or yellowish brown in some species and rarely yellow. Eyes well separated in frons in both male and female except for in *Hilara flavipes*-group. Costa is continued along the wing margin, subcosta distinctly connected to costa, rarely ended before it (*Hilara albitarsis* v. Roser, *Hilara nigrohirta* Collin). Radial fork (R_4+R_5) elongated, upper branch (R_4) only slightly bowed or almost straight. Length of legs varying but never extremely long. Another characteristic feature is thickened and swollen fore basitarsus in males, feature found also in some *Empis* species (Collin, 1961, Chvála, 2005).

¹ This study composed part of the master thesis called "Empididae (Diptera) of Bolkar Mountains" submitted by Mustafa Cemal Çiftçi.

Generally Empididae, including *Hilara*, appear one or two months earlier in southern parts of Europe and in the Mediterranean than in temperate Europe. In northern part of Europe, adults appear later than in the other parts of Europe (Chvála, 1983). In Britain species of *Hilara* may be found from April to October (Collin, 1961). In Poland, they first appear in the middle of May and some species may be found till the end of September and rarely in October, mainly on sunny days (Niesiolowski, 1996). The *Hilara flavipes*-group is well recognized by the late summer occurrence (Chvála, 1997). There is no record of the flight period of *Hilara* species in Turkey.

Hilara adults can be collected generally above and around water (streams, rivers, ponds or pools), very few species are found far from water as some species of *Hilara abdominalis*-group inhabiting dry steppe biotopes (Collin, 1961, Chvála, 2001).

In this study, Collin's (1961) morphological nomenclature is followed, with a few modifications.

Material and Methods

12 male and 3 female specimens were collected in the Bolkar Mountains (east Mediterranean Province, southern Turkey) in 2005. All of the specimens are deposited in the Zoological Museum of the Gazi University (ZMGU).

Hilara regnealai Pârvu, 1991

Female description

Frons and face covered with grey pruinescence. A pair of ocellar bristles is longer than the postocular bristles, a pair of frontal bristles short, fine and half as long as the ocellar pair. Occiput black with grey pruinescence and 2 rows of postocular black bristles. Anterior row of postocular bristles 2 times longer than the posterior row. Antennae brownish black, 3rd antennal segment short, style thick and as long as 3rd antennal segment. Palpi brown with yellow hairs and preapically a long, black bristle. Proboscis as long as half length of height of the head.

Thorax black, slightly olive colored and with grey pruinescence. Mesoscutum without distinct stripes and slightly brownish dusted. Pronotum with two strong black bristles on each side and between them with a row of black, short hairs. Prosternum with short, fine and yellow pubescence. All of the thoracic bristles black, acrostichal and dorsocentral bristles same length, hair-like and a little longer than 2nd antennal segment. Acrostichal bristles biserial in front, irregularly 3-serial behind and ended at the beginning of the prescutellar depression. Dorsocentral bristles uniserial and ending with a pair of long, strong bristles. Large thoracic bristles longer than 3rd antennal segment; one humeral, one posthumeral, 3 notopleurals, one supra-alar, one postalar and 2 pairs of scutellar bristles (inner pair longer than the outer pair). Additionally, humeral area with numerous short hairs.

Wings faintly brownish tinted with a distinct dark brown stigma, veins almost black but in the basal part lighter colored. Costal bristle distinct, long and black. Squamae brownish yellow with yellow fringes. Halteres brownish yellow.

Coxae brownish yellow with slightly grey pruinescence. All femora and basal half of all tibiae yellow, apical half of all tibiae and all tarsal segments dark brown. All legs with yellow and black, fine hairs. The hairs on hind legs longer than the anterior four legs. Legs without distinct bristles, with only short preapical circlet of bristles on all tibiae. Mid femora anteroventrally with a preapical bristle-like hair and apical half of hind tibiae with 3 dorsal bristle-like hairs.

Abdomen black with grey pruinescence. Abdominal hairs quite short and black, only anterior three segments with yellow hairs. Abdomen swollen and sharply pointed towards tip.

Length: body 3.5-4.0 mm, wing 4.5-5.0 mm.

Female differs as follows from male: frontal bristles and preapical bristle on palpi short, in males long; bristles and hairs on mesoscutum short and fine, in males long and strong; outer pair of scutellar bristles long, in males short; hind legs densely haired, fore basitarsus simple and without dorsal bristles, in males hind legs sparsely haired, fore basitarsus swollen and dorsally with 6-7 long curved bristles; all tibiae in females with circlet of preapical bristles and with no other distinct bristles, in males with strong, long bristles; in females basal three segments of abdomen covered with yellow hairs, abdominal hind marginal bristles short and fine, in males abdomen covered with black hairs, abdominal hind marginal bristles long and strong.

The males of *Hilara regnealai* collected in Turkey slightly differ from the Holotype. Turkish specimens (4 – 4.5 mm) are smaller than the holotype (5.5 mm), wings have distinct dark brown stigma in Turkish specimens while in the holotype stigma is indistinct. Holotype has 6 short notopleural bristles, the Turkish specimens 3 strong notopleural bristles. Fore basitarsus has 8 long curved bristles dorsally in holotype, in Turkish specimens 6-7 long curved bristles. In holotype, abdomen is yellowish brown, but in Turkish specimens black and grey dusted.

Material examined: 12 males, 3 females, Mersin, Erdemli, Üzümlü village, 610m, 17.06.2005, A. Hasbenli and M. C. Çiftçi leg.

Distribution: Romania (Pârvu, 1991). This species is newly recorded for the Turkish fauna.

Conclusion

Up to now, *Hilara regnealai* is only known from south-east Europe (Romanian Carpathian Mountains) (Pârvu, 1991). *Hilara regnealai* is described only from one male. Female description is given for the first time and the distribution of *Hilara regnealai* is extended from south-east Europe to east Mediterranean Province

(southern part of Turkey, Bolkar Mountains). Also, in the Palaearctic catalogue of Diptera (Chvála M. & Wagner R., 1989) there is no record of the genus *Hilara* Meigen from Turkey.

Acknowledgement

We thank Dr. Corneliu Pârvu for comparisons of our specimens to the holotype and his contribution to this paper.

References

- Chvála, M.**, 1983: The Empidoidea (Diptera) of Fennoscandia and Denmark, II. General Part, The Families Hybotidae, Atelestidae and Microphoridae, Volume 12. *Fauna entomologica Scandinavica*, Leiden, New York, Köln, 279 pp.
- Chvála, M.**, 1994: The Empidoidea (Diptera) of Fennoscandia and Denmark III Genus *Empis*. Volume 29. *Fauna entomologica Scandinavica*, Leiden, New York, Köln, 187 pp.
- Chvála, M.**, 1997: A revision of the European species of the *Hilara flavipes*-group (Diptera, Empididae), with new synonymies and description of a new species, *Studia dipterologica*, 4 (2): 463- 472.
- Chvála, M.**, 2001: Revision of the palaearctic species of the *Hilara abdominalis*-group (Diptera, Empididae), *Acta Universitatis Carolinae Biologica*, 45: 199- 230.
- Chvála, M.**, 2005: The Empidoidea (Diptera) of Fennoscandia and Denmark IV. Genus *Hilara*. *Fauna entomologica Scandinavica*, Vol. 40. Brill, Leiden, Boston, 234 pp.
- Chvála M. & Wagner R.**, 1989: Family Empididae. - In: Catalogue of Palaearctic Diptera (ed. by A. Soos & L. Papp), 6: 228-336.
- Collin, J. E.**, 1937: Some Empididae (Diptera) from Syria and Asia Minor, Part 2, *Proceedings of the Royal Entomological Society of London, (B)*, 6 (8): 145-148.
- Collin, J. E.**, 1961: Empididae. In *British Flies*, Volume 6. University Press, Cambridge, 782 pp.
- Engel E.O.**, 1941: Empididae (Gattung *Hilara*), In: Lindner, E. (ed.), *Die Fliegen der Palaearktischen Region IV*. Stuttgart, 205-272.
- Niesiolowski, S. & Krysiak, I.**, 1996: Genus *Hilara* Meigen, 1822 (Empididae, Diptera) in Poland, *Acta Universitatis Lodzianensis, Folia Limnologica*, 6: 77-251.
- Pârvu, C.**, 1991: *Hilara regnealai* (Diptera, Empididae), a new species from the South-East Europe (Romanian Carpathian Mountains), *Review Roumain de Biologie Animals*, 36 (1-2): 21-25.

Received / Prejeto: 23. 1. 2007