

## First Record of Xanthochlorinae and New Records of Dolichopodinae in the Turkish Dolichopodidae (Diptera) Fauna

Alper TONGUÇ

Murat BARLAS

Muğla University, Science Faculty, Department of Biology, 48170, Kötekli, Muğla, TURKEY  
e-mail: alpertonguc@mu.edu.tr

### ABSTRACT

Faunistic data are given for one species of the subfamily Xanthochlorinae and six species of the subfamily Dolichopodinae (Diptera: Dolichopodidae) collected between May 2009 and May 2010 in the Inner West Anatolia region of Turkey. The following species are recorded for the first time; *Dolichopus austriacus* Parent, 1927, *Dolichopus calinotus* Loew, 1871, *Hercostomus fulvicaudis* (Haliday, 1851), *Sybistroma crinipes* Staeger, 1842, *Sybistroma lorifera* (Mik, 1878), *Sybistroma nodicornis* Meigen, 1824. In addition, *Xanthochlorus tenellus* (Wiedemann, 1817) is the only Xanthochlorinae species recorded in Turkey .

*Key words:* Diptera, Dolichopodidae, Turkey, new records, first record

### INTRODUCTION

The long legged flies or Dolichopodidae are one of the largest groups in Brachycera. Almost all long legged flies are polyphagous predators feeding on various fine invertebrates including some pests. They live near aquatic and semi aquatic habitats in woodlands and meadows, occurring on grass, leaves and trunks of trees. The family Dolichopodidae is classified into 17 subfamilies in the world. The Palaearctic region has 11 subfamilies (Yang *et al.*, 2006; Grichanov, 2007). The Dolichopodinae contain the highest number of species in the Palaearctic region, while the Xanthochlorinae have the lowest species number (9 species). The new Dolichopodinae records from Turkey were recently given in many articles (Pârnu and Popescu-Mirceni, 2006; Grichanov *et al.* 2007; Tonguç *et al.*, 2009, Tonguç *et al.*, 2010; Grichanov & Tonguç, 2010a; 2010b).

### MATERIALS AND METHODS

Specimens were collected between May 2009 and May 2010 in aquatic and semi aquatic habitats in the Turkish provinces Afyonkarahisar, Kütahya and Uak in Inner West Anatolia. Adults were collected with an entomological hand net (40 cm diameter) and with an aspirator. They were preserved in insect envelopes or vials in the field and then pinned before drying. All specimens are deposited in the Muğla University, Science Faculty, Department of Biology, Zoology Laboratory, Muğla, Turkey (MUZL).

## RESULTS

### Subfamilia: Dolichopodinae Latreille, 1809

#### Genus: *Dolichopus* Latreille, 1796

##### *Dolichopus austriacus* Parent, 1927

Palaeartic Distribution: Turkey, Romania, Austria, Estonia, Finland, Germany, Russia, Sweden, Uzbekistan (Yang *et al.*,2006; Grichanov, 2007).

Material examined: Afyonkarahisar. Çay, Eber, Eber Lake (38° 33' N / 31° 07' E), 970 m, 12.05.2010, 12 ♂♂.

Ecological remarks: *Dolichopus austriacus* together with *Dolichopus excisus*, *D. latilimbatus*, *D. nubilus*, *D. signifer*, *Hydrophorus balticus*, *Sympycnus pulicarius* and *Syntormon pallipes* were found in humid grassland near clean brook fast surrounded with willow and poplar on the banks.

##### *Dolichopus calinotus* Loew, 1871

Palaeartic Distribution: Turkey, Romania, Ukraine, Kyrgyzstan, Kazakhstan, Sweden, Denmark, Germany, Holland, Spain, Poland (Yang *et al.*,2006; Grichanov, 2007).

Material examined: Afyonkarahisar, Basmakçı, Akçapınar Village 6. km (37° 50' N / 29° 58' E), 852 m, 28.05.2009, 1 ♂; Akçapınar Village 3.km (37° 50' N / 29° 59' E), 850 m 11.05.2010, 4 ♂♂; Çay, Çayıryazı Village, Genali Place (38° 22' N / 30° 44' E), 1016 m, 11.05.2010, 1 ♂.

Ecological remarks: *Dolichopus calinotus* together with *Campsicnemus simplicissimus*, *Chrysotus pulchellus*, *Dolichopus excisus*, *D. latilimbatus*, *D. nubilus*, *Hydrophorus balticus*, *Orthoceratium lacustre*, *Sybistroma nodicornis*, *Syntormon pumilus* and *S. subinermis* were found in humid grassland near clean slack with willow on the banks.

##### *Hercostomus fulvicaudis* (Haliday, 1851)

Palaeartic Distribution: Turkey, England, Sweden, Austria, Belgium, France, Germany, Holland, Poland, Romania, Czech Republic, Slovakia, Ukraine, Turkmenistan, Tajikistan , China (Yang *et al.*,2006; Grichanov, 2007)

Material examined: Afyonkarahisar. Dinar, Cumhuriyet Village (38° 11' N / 30° 14' E), 1020 m, 28.05.2009, 1 ♂; Kütahya, *Tavşanlı*, *Tavşanlı-Harmançık* Road 8. Km (39° 37' N / 29° 19' E), 982 m, 24.07.2009, 13 ♀♀.

Ecological remarks: *Hercostomus fulvicaudis* together with *Campsicnemus curvipes*, *C. umbripennis*, *Hercostomus phoebus*, *Sybistroma impar*, *Sympycnus pulicarius*, *Syntormon denticulatus* and *S. pallipes* were found in humid grassland near clean brook with willow and poplar on the bank and in humid grassland surrounded with coniferous forest.

##### *Sybistroma crinipes* Staeger, 1842

Palaeartic Distribution: Turkey, Romania, Russia, Ukraine, England, Sweden, Denmark, Belgium, France, Austria, Germany, Holland, Italy, Switzerland, Hungary, Czech Republic (Yang *et al.*,2006; Grichanov, 2007).

*First Record of Xanthochlorinae and New Records of Dolichopodinae*

Material examined: Uşak, Banaz, Küçükler-Murat mountain Road 19.Km (38° 55' N / 29° 36' E), 1716 m, 10.06.2009, 1♂.

Ecological remarks: *Sybistroma crinipes* together with *Campsicnemus umbripennis*, *Hydrophorus balticus*, *Syntormon denticulatus*, *S. monilis* and *S. pallipes* were found in coniferous forest near clean shallow brook with humid grassland on the banks.

***Sybistroma lorifera* (Mik, 1878)**

Palearctic Distribution: Turkey, Greece, France, Italy, Yugoslavia, ?Macedonia (Yang *et al.*, 2006; Grichanov, 2007).

Material examined: Uşak, Merkez, Üç kuyular Village (38° 47' N / 29° 08' E), 720 m, 22.04.2010, 13 ♂♂, 12 ♀♀.

Ecological remarks: *Sybistroma lorifera* together with *Campsicnemus umbripennis* and *Medetera muralis* were found on stone and sandy in dry river bed surrounded with scrub.

***Sybistroma nodicornis* Meigen, 1824**

Palearctic Distribution: Turkey, France, Belgium, Germany, Holland, Switzerland, Austria, Italy, Greece, Romania, Hungary, Russia, Czech Republic, Slovakia, Yugoslavia, Bulgaria, Iraq, Egypt, Israel (Negrobov, 1991; Yang *et al.*, 2006; Grichanov, 2007).

Material examined: Uşak. Banaz, Karacahisar, Küçükler Dam, East Place (38° 52' N / 29° 37' E), 1277 m, 10.06.2009, 1♂; Afyonkarahisar. Basmakçı, Akçapınar Village 3.km (37° 50' N / 29° 59' E), 850 m 11.05.2010, 9 ♂♂; Çay, Devederesi Village, Acılı Place (38° 28' N / 30° 50' E), 1024 m, 11.05.2010, 1♂, 4♀♀.

Ecological remarks: *Sybistroma nodicornis* together with *Argyra argyria*, *Campsicnemus curvipes*, *Dolichopus calinotus*, *D. excisus*, *D. nubilis*, *Hercostomus apollo*, *H. gracilis*, *H. phoebus*, *Poecilobothrus regalis*, *Rhaphium appendiculatum*, *R. caliginosum*, *Scellus notatus*, *Syntormon pallipes*, *S. pumilus* and *Sympycnus pulicarius* were collected from marshland surrounded with willow, reedmarsh and humid grassland on the banks.

**Subfamilia: Xanthochlorinae Loew, 1857****Genus: *Xanthochlorus* Loew, 1857*****Xanthochlorus tenellus* (Wiedemann, 1817)**

Palearctic Distribution: Turkey, Ireland, England, Norway, Sweden, Finland, Denmark, Germany, France, Belgium, Holland, Austria, Italy, Switzerland, Poland, Czech Republic, Slovakia, Estonia, Bulgaria, Hungary, Romania, Russia, Ukraine, Lithuania, Georgia (Negrobov, 1991; Yang *et al.*, 2006; Grichanov, 2007).

Material examined: Kütahya. *Domaniç*, Karayayla Village (39° 52' N / 29° 39' E), 1265 m, 24.07.2009, 2♂♂.

Ecological remarks: *Xanthochlorus tenellus* together with *Liancalus virens* were found in humid grassland surrounded with poplar.

## CONCLUSION AND DISCUSSION

The new records in the research region are composed of 6 species belonging to Dolichopodinae and one species belonging to Xanthochlorinae subfamilies. The distribution of these species in this area is presented in figure 1. The Xanthochlorinae subfamily is recorded from Turkey for the first time. The number of known subfamilies in the Turkish Dolichopodidae fauna reaches now ten in total. It contains Diaphorinae, Dolichopodinae, Hydrophorinae, Medeterinae, Neurigoninae, Peloroepodinae, Rhabphiinae, Sciapodinae, Sympycninae, Xanthochlorinae subfamilies and 46 species from Dolichopodinae subfamily. The Dolichopodinae contain the highest number of species in Turkey. Finally, records of 7 new species and one subfamily of dolichopodid flies are important in terms of showing the biodiversity of Turkey.

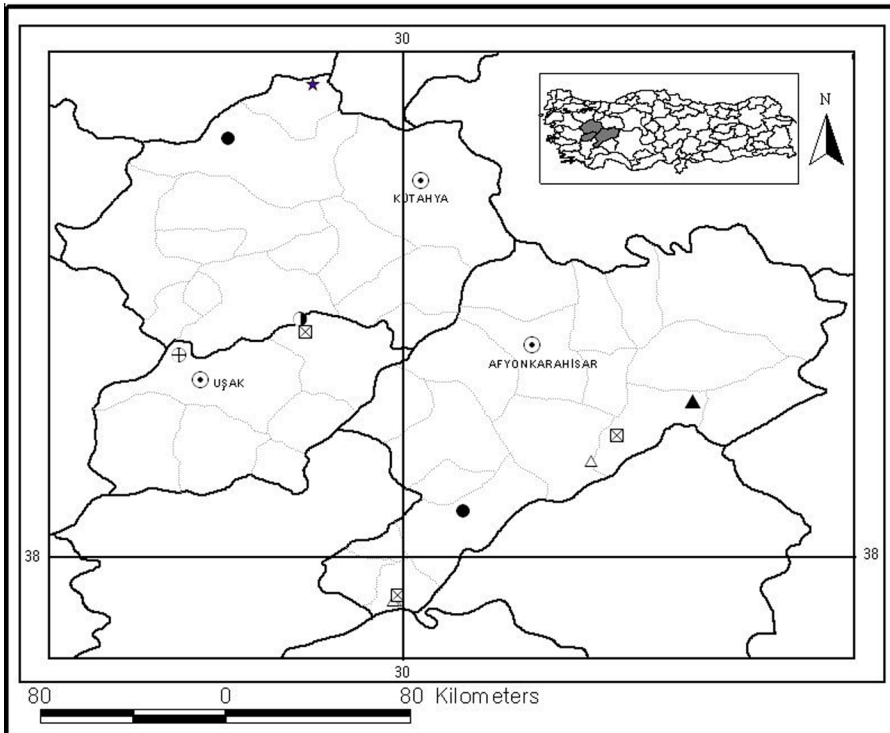


Fig. 1. Distribution of the new records of Dolichopodidae in Inner West Anatolia. *Dolichopus austriacus* (▲), *Dolichopus calinotus* (Δ), *Hercostomus fulvicaudis* (●), *Sybistroma crinipes* (⊙), *Sybistroma lorifera* (⊕), *Sybistroma nodicornis* (⊗), *Xanthochlorus tenellus* (★)].

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