

## ADDITIONAL NOTES ON GYRINIDAE FAUNA OF TURKEY (COLEOPTERA)

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**ABSTRACT:** A total of 58 samples were collected in the provinces of Antalya, Aydın, Afyon, Burdur, Denizli, Isparta and Muğla located in southern west Mediterranean region of Turkey by area studies and then identified between 2000-2002. *Gyrinus dejeani* Brullé, 1832, *G. suffriani* Scriba, 1855, *G. caspius* Ménetries, 1832 and *G. distinctus* Aubé, 1836, *Orectochilus villosus* (Müller, 1776), *Aulonogyrus concinnus* (Klug, 1833), *A. striatus* (Fabricius, 1792) were stated as first records for the southern west Mediterranean region of Turkey as the result of the identification. The habitats and the phenologies of these species found in the area and their distribution data were given. Distribution of each species were given in two categories; as in Turkey shown on the map and in the world.

**KEY WORDS:** Coleoptera, Gyrinidae, New records, southern west, Turkey.

The Gyrinidae is the second largest of the families of aquatic Adepaga with more than 900 described species. The family occurs in all faunal regions, with the majority of species in the tropics. The Holarctic region is totally dominated by the almost world-wide distributed genus *Gyrinus*. Only rather few species of the subfamilies Orectochilinae and Enhydrinae, which are dominant in the tropics, occur in the Palearctic and Nearctic's regions (Franciscolo, 1979; Holmen, 1987). The species of Gyrinidae inhabit both fresh and brackish waters. They may be met with near the shores of lakes, in ponds and marshes, and in slowly running streams (Holmen, 1987). Gyrinidae are equally well capable of flight, swimming and diving. They usually occur in groups on the water surface and either swims slowly in zigzag lines or are motionless (Zaitsev, 1972).

Thirteen species of Gyrinidae have been recorded from the Turkey (Brinck, 1978; Franciscolo, 1979; Gueorguiev, 1981; Holmen, 1987; Zaitsev, 1972).

### METHODS

All samples were collected from southern west Mediterranean region in the years 2000-2002. The samples were collected from spring water area, with a sieve, ladle and net having a 1 mm mesh size. The beetles were killed with 70% alcohol and in the laboratory were cleaned of

clayey and muddy substances on their surfaces with a small paintbrush. The aedeagophore was dissected under the stereo-microscope and left in 10% KOH solution for about 1–2 hours. Materials have been deposited in the Zoological Museum of Gazi University (=ZMGU), Ankara, Turkey.

## RESULTS

### Family Gyrinidae

#### *Orectochilus villosus* (Müller, 1776)

**Materials:** Antalya: 1 male, 1 female, Alanya (Dim Çayı), 36° 33' N 32° 11' E, 100 m, 11.07.2000; 1 female, Kemer (near the Göynük), 36° 40' N 30° 31' E, 65 m, 04.08.2000.

**Phenology:** July–August. **Habitat:** Slowly flowing streams; fresh water. **Distribution in Turkey:** Malatya (Sultan) (Gueorguiev, 1981; Holmen, 1987; Zaitsev, 1972). **Distribution in the world:** Albania, Algeria, Austria, Belgium, Bosnia Herzegovina, Bulgaria, China, Croatia, Cyprus, Egypt, England, Finland, France, Germany, Hungary, Iran, Israel, Japan, Macedonia, Moldova, Morocco, Norway, Poland, Romania, Russia, Siberia, Slovenia, Spain, Sweden, Switzerland, Syria, Ukraine, Yugoslavia (Brinck, 1978; Franciscolo, 1979; Gueorguiev, 1981; Holmen, 1987; Zaitsev, 1972). **Remarks:** *Orectochilus villosus* is new record for the Gyrinidae fauna of the Mediterranean Region.

#### *Gyrinus dejeani* Brullé, 1832

**Materials:** Antalya: 2 males, 3 females, Kemer (near the Göynük), 36°40'N 30°31'E, 65 m, 04.08.2000; 1 male, Alanya (Yeşilöz deresi), 36°22'N 32°11'E, 20 m, 26.05.2001; Muğla: 1 male, Dalaman, (Yanıklar-İnlice), 22.05.2000; 3 males, 4 females, Köyceğiz (Karaböğürtlen village, Fethiye deresi), 37°00'N 28°30'E, 90 m, 18.07.2000; Aydın: 1 male, Bozdoğan, Kemer Dam, 23.05.2000.

**Phenology:** May, July–August. **Habitat:** Coast of dam lakes and slowly flowing streams; fresh water. **Distribution in Turkey:** Adana (Toros mountains-Suluhan), İzmir, Gaziantep (Ekbaz) (Brinck, 1978; Gueorguiev, 1981; Holmen, 1987; Zaitsev, 1972). **Distribution in the world:** Albania, Bosnia Herzegovina, Bulgaria, Croatia, Cyprus, France, Greece, Iraq, Israel, Italy, Lebanon, Macedonia, Romania, Spain, Syria (Brinck, 1978; Franciscolo, 1979; Gueorguiev, 1981; Holmen, 1987; Zaitsev, 1972). **Remarks:** *Gyrinus dejeani* is new record for the Gyrinidae fauna of the research area.

#### *Gyrinus suffriani* Scriba, 1855

**Materials:** Muğla: 1 male, Köyceğiz (Karaböğürtlen village, Fethiye deresi) 37°00'N 28°30'E, 90 m, 18.07.2000.

**Phenology:** July. **Habitat:** Slowly flowing streams; fresh water. **Distribution in Turkey:** Localities are not clearly (Brinck, 1978; Gueorguiev, 1981; Holmen, 1987; Zaitsev, 1972). **Distribution in the world:** Albania, Austria, Bulgaria, Caucasus, Denmark, England, Finland, Germany, Greece, Hungary, Israel, Italy, Lebanon, Macedonia, Norway, Portugal, Romania, Russia, Slovenia, Spain, Sweden,

Switzerland, Syria, Ukraine (Brinck, 1978; Franciscolo, 1979; Gueorguiev, 1981; Holmen, 1987; Zaitsev, 1972). **Remarks:** *Gyrinus suffriani* is new record for the Gyrinidae fauna of the research area.

### ***Gyrinus caspius* Ménetries, 1832**

**Materials:** Antalya: 1 female, Kalkan (Patara), 36°15'N 29°19'E, 12 m, 27.05.2001; 1 female, between Hisarcandır and Hurma, 36°50'N 30°34'E, 200 m, 25.06.2000; Afyon: 2 males, Başmakçı (Acıgöl, puddle), 37°50'N 29°58'E, 955 m, 22.06.2000; Burdur: 1 male, Karamanlı (near the Kılavuz village), 37°22'N 29°52'E, 1062 m, 23.06.2000

**Phenology:** May-June. **Habitat:** Puddles and slowly flowing streams; fresh and brackish water. **Distribution in Turkey:** Adana (Suluhan, Toros Mountains), Edirne (Çopköy, Ermenköy), Hatay (İskenderun), Aksaray (Brinck, 1978; Darılmaz, 2005; Franciscolo, 1979; Gueorguiev, 1981; Holmen, 1987; Zaitsev, 1972). **Distribution in the world:** Algeria, Armenia, Caucasian, China, Denmark, England, Estonia, France, Germany, Iran, Iraq, Ireland, Israel, Italy, Lebanon, Lithuania, Morocco, the Netherlands, Norway, Poland, Russia, Sweden, Syria (Brinck, 1978; Franciscolo, 1979; Gueorguiev, 1981; Holmen, 1987; Zaitsev, 1972). **Remarks:** *Gyrinus caspius* is new record for the Gyrinidae fauna of Aegean Region.

### ***Gyrinus distinctus* Aubé, 1836**

**Materials:** Isparta: 1 male, Aksu (Aksu çayı), 37°49'N 31°06'E, 1340 m, 14.07.2000; 1 female, Aksu (Karağı köyü, stream), 1220 m, 14.09.2000; 1 male, Yalvaç (Süciüllü, Yalvaç dam), 38°22'N 31°08'E, 1200 m, 20.06.2001; 1 female, Eğirdir (Aşağı Gökdere crossroads), 37°33'N 30°47'E, 365 m, 21.06.2002; Antalya: 1 female, Manavgat (Kızılot, Karpuzçay), 36°43'N 31°33'E, 10 m, 27.06.2002; 3 males, 1 female, Konyaaltı (Boğaz Çayı), 36°51'N 30°37'E, 15 m, 26.05.2001; 1 male, Alanya (Yeşilöz Deresi), 36°22'N 32°11'E, 20 m, 26.05.2001; Denizli: 1 male, Honaz (Akbaş köyü, stream), 1050 m, 18.07.2000.

**Phenology:** May-July, September. **Habitat:** Coasts of dam lakes and slowly flowing streams; fresh and brackish water. **Distribution in Turkey:** Adana (Suluhan, Bolkar Mountains), Bursa (Uludağ Mountain, Karacabey), İzmir (Efes), Aksaray (Brinck, 1978; Darılmaz, 2005; Franciscolo, 1979; Gueorguiev, 1981; Holmen, 1987; Zaitsev, 1972). **Distribution in the world:** Afghanistan, Armenia, Caucasia, China, Cyprus, Denmark, Egypt, England, Estonia, Finland, Hungary, Iran, Iraq, Israel, Latvia, Lebanon, Lithuania, Mongolia, Norway, Russia, Sudan, Sweden, Syria (Brinck, 1978; Franciscolo, 1979; Gueorguiev, 1981; Holmen, 1987; Zaitsev, 1972). **Remarks:** *Gyrinus distinctus* is new record for the Gyrinidae fauna of Aegean Region.

### ***Aulonogyrus concinnus* (Klug, 1833)**

**Materials:** Aydın: 5 males, 4 females, Sultanhisar (Akçay, DSİ canal), 37°51'N 28°05'E, 62 m, 19.05.2001; Denizli: 2 males, 1 female, Sarayköy (near the Karakıran, Büyük Menderes river), 37°56'N 28°52'E, 165 m, 22.08.2001.

**Phenology:** May, August. **Habitat:** Coasts of lakes, watering Canals and slowly flowing streams; fresh and brackish water. **Distribution in Turkey:** Eskişehir, Adana (Toros Mountains), Hakkari (Şemdinli), Aksaray (Brinck, 1978; Darılmaz, 2005; Franciscolo, 1979; Gueorguiev,

1981; Holmen, 1987; Zaitsev, 1972). **Distribution in the world:** Afghanistan, Albania, Algeria, Austria, Belgium, Bulgaria, Caucasia, Chine, Cyprus, France, Germany, Greece, Hungary, Iran, Iraq, Italy, Lebanon, Macedonia, Mongolia, the Netherlands, Poland, Romania, Slovenia, Spain, Switzerland, Syria, Tibet, Ukraine (Brinck, 1978; Franciscolo, 1979; Gueorguiev, 1981; Holmen, 1987; Zaitsev, 1972). **Remarks:** *Aulonogyrus concinnus* is new record for the Gyrinidae fauna of Aegean Region.

***Aulonogyrus striatus* (Fabricius, 1792)**

**Materials:** Antalya: 1 male, Serik (East of Kayadibi), 37°19'N 30°52'E, 300 m, 21.06.2001; Muğla: 6 males, 5 females, Milas (between Taşlı and Kızılağaç), 37°18'N 27°39'E, 50 m, 17.04.2000.

**Phenology:** April, June. **Habitat:** Puddle; fresh water. **Distribution in Turkey:** Adana (Toros Mountains-Suluhan, Ceyhan) (Brinck, 1978; Franciscolo, 1979; Gueorguiev, 1981; Holmen, 1987; Zaitsev, 1972). **Distribution in the world:** Albania, Algeria, Austria, Bulgaria, Cyprus, England, France, Greece, Iran, Iraq, Israel, Italy, Lebanon, Macedonia, Morocco, Portugal, Romania, Spain, Syria, Tunisia, Yugoslavia (Brinck, 1978; Darılmaz, 2005; Franciscolo, 1979; Gueorguiev, 1981; Holmen, 1987; Zaitsev, 1972). **Remarks:** *Aulonogyrus striatus* is new record for the Gyrinidae fauna of Aegean Region.

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