Check list of the Hydrophilidae (Coleoptera) Species of Turkey and a New Record for the Turkish Fauna

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Abstract: A check list of Hydrophilidae species known in Turkey is presented for the first time. In addition, their distributions in Turkey are given. Fifty-four species are determined. Of these, Hydrophilus atterimus Eschscholtz, 1822, a new record for the Turkish fauna, is reviewed and compared with H. piceus (Linnaeus, 1758).

Key Words: Coleoptera, Hydrophilidae, Systematics, New record, Turkey.

Materials and Methods

The samples were collected by means of a sieve, ladle and net with 1 mm pores from shallow areas of various springs, streams and ponds in May 1999-October 2002. The beetles were killed by ethyl acetate or in 70% alcohol solution. Aedeagophores were dissected out under the stereomicroscope and exposed in 10% KOH solution for nearly 1-2 h. The figures of aedeagophores were drawn using a Nikon type 104 microscope.

Fifty-four species were determined belonging to eight tribes. The tribes are listed according to phylogenetic order. Subtribes are listed under the relevant tribe. Species are listed alphabetically by their valid name under each genus (in some cases subgenus).

Systematics

Family Hydrophilidae

Body in general oblong-oval to broadly oval, its outline not or only weakly interrupted between pronotum and elytra (except Horelophinae) (2). Ocelli absent.
Scutellum distinct. Abdomen with visible sternites, seldom with 6th retractable sternite visible, in a few exotic genera the number of visible abdominal sternites is reduced to 4. Antennae 7 to 9 segmented with a pubescent 3 segmented club. Tarsi 5 segmented, only very seldom 4 segmented (Cymbiodyta and Berosus), claw segment almost always much shorter than preceding segments. Hind wing venation of the cantharoid type. Aedeagus of the trilobed type (1).

List of Hydrophilidae Species Known From Turkey

Fifty-four species belonging to eight tribes were determined. Of these, 22 belong to the tribus Laccobiini Bertrand, 1967; 11 to Berosini Mulsant, 1844; three to Anacaeinini Hansen, 1991; one to Chaetarthriini Bedel, 1881; one to Coleostomatini Hansen, 1191; three to Megasternini Hansen, 1991; one to Sphaeridiini Latreille, 1802; and 12 to Hydrophilini Latreille, 1802.

Tribus: Laccobiini Bertrand, 1967
1. Laccobius (Composolaccobius) decorus (Gyllenhal, 1827)  
Distribution: without detailed locality (5).
2. L. (s. str.) albipes Kuwert, 1890  
Distribution: Ankara, Balikesir, Erzurum (3,6-13).
3. L. (s. str.) minutus (Linnaeus, 1758)  
Distribution: Kars (3,10-12,14).
4. L. (Microlaccobius) alternus Motschulsky, 1855  
Distribution: without detailed locality (5,15).
5. L. (M.) exilis Gentili, 1974  
Distribution: Antalya, Denizli, Mardin, Mersin, Niğde (3,10,16).
6. L. (M.) gracilis Motschulsky, 1855  
7. L. (M.) orientalis Knisch, 1924 (possibly exilis)  
Distribution: without detailed locality (5).
8. L. (M.) quaesitus Gentili, 1988  
Distribution: Adana (11,16).
9. L. (Dimorpholaccobius) bipunctatus (Fabricius, 1775)  
Distribution: Afyon, Bolu, Kastamonu (1,3,11-14,16,18,20).
10. L. (D.) chiesai Gentili, 1974  
Distribution: Ankara (3,11,16).
11. L. (D.) halophilus Gentili, 1982  
Distribution: Antalya, Diyarbakır, Erzurum, Mersin, Muğla (3,10,11).
12. L. (D.) hauersianus Kniz, 1914  
Distribution: Mersin (3,10,11).
13. L. (D.) hindukuschi Chiesa, 1966  
Distribution: Adıyaman, Antalya, Artvin, Aydin, Bingöl, Denizli, Erzurum, Gümüşhane, Kastamonu, Kilis, Mardin, Niğde, Tunceli (3,10,11,14,16).
Distribution: Muğla (Fethiye) (11).
15. L. (D.) obscuratus Rottenberg, 1874  
15a. L. (D.) obscuratus aegaeus Gentili, 1974  
15b. L. (D.) obscuratus obscuratus Rottenberg, 1874  
Distribution: Bitlis (Tatvan), Hakkari (Yüksekova), Şemdinli and Van (11,12,19).
15c. L. (D.) obscuratus orchymonti Gentili, 1976  
Distribution: Adıyaman, Antalya, Gaziantep (11).
16. L. (D.) sculptus d’Orchymont, 1936  
Distribution: Diyarbakır, Şanlıurfa (3,10,11,16).
17. L. (D.) scutellaris Motschulsky, 1855  
Distribution: Adana, Antalya, Bitlis, Kahramanmaraş, Konya, Mersin, Şırnak (3,6,11-13,16,17,19,20).
18. L. (D.) simulatrix d’Orchymont, 1932
Distribution: Ağrı, Ankara, Antalya, Aydın, Bayburt, Bitlis (Tatvan), Bolu, Bursa, Çanakkale, Çorum, Denizli, Edirne, Erzurum, Erzincan, Hakkari, Isparta (Eğirdir), İstanbul, İzmir, Kahramanmaraş, Kars, Kayseri, Kirkkale, Manisa, Muğla, Niğde, Osmaniye, Samsun, Sivas, Trabzon, Toros Mountains, Van (3,6,11,12,16,19).

19. L. (D.) sipylus d’Orchymont, 1939
Distribution: Antalya, Artvin, Balıkesir, Çanakkale, Çorum, Denizli, Diyarbakır, Hatay (Antakya), Kayseri, Mersin, Tokat (3,7,10-13,16,19).

20. L. (D.) striatulus (Fabricius, 1801)
Distribution: Adapazarı, Ankara, Antalya, Artvin, Bayburt, Bitlis, Bolu, Bursa, Çanakkale, Erzurum, Eskişehir, Gümüşhane, Isparta, İstanbul, Kocaeli (İzmit), İzmir, Kütahya, Konya, Manisa, Muğla, Sivas, Van (1,3,7,10-14,18,19).

21. L. (D.) sulcatulus Reitter, 1909
Distribution: Amasya, Ankara, Antalya, Ardahan, Bayburt, Bitlis, Bolu, Bursa, Çanakkale, Erzurum, Erzincan, Gümüşhane, Kars, Konya (Eregli), Manisa, Toros Mountains, Van (3,6,10-13,19).

22. L. (D.) syriacus Guillebeau, 1896
Distribution: Adana, Ankara, Antalya, Ardahan, Bayburt, Bitlis (Tatvan), Burdur, Diyarbakır, Erzurum, Erzincan, Gümüşhane, Kars, Konya (Eregli), Manisa, Toros Mountains, Van (3,6,10-13).
Tribus: Coleostomatini Hansen, 1991
38. Coleostoma (s. str.) orbiculare (Fabricius, 1775)
Distribution: without detailed locality (3,5,21).

Tribus: Megasternini Hansen, 1991
39. Cercyon (s. str.) haemorrhoidalis (Fabricius, 1775)
Distribution: without detailed locality (3).
40. Cercyon (s. str.) marinus Thomson, 1853
Distribution: without detailed locality (3).
41. Cercyon (s. str.) putricola Wollaston, 1867
Distribution: without detailed locality (3).

Tribus: Sphaeridiini Latreille, 1802
42. Sphaeridium substratium Falderman, 1838
Distribution: without detailed locality (3).

Tribus: Hydrophilini Latreille, 1802
Subtribus: Acidocerina Hansen, 1991
43. Enochrus (Methydrus) nigrus (Sharp, 1872)
Distribution: İstanbul, Kırklareli (3,27).
44. Enochrus (Lumetus) ater (Kuwer, 1888)
Distribution: without detailed locality (3,28).
45. E. (L.) bicolor (Fabricius, 1792)
46. E. (L.) salmonis (Shalberg, 1900)
Distribution: without detailed locality (3,28).
47. E. (L.) segmentinotatus Kuwert, 1888
Distribution: Adana, Aydın, Çanakkale, Hakkari, İçel, İzmir, Konya, Mersin (Erdemli), Muğla (3,29).
Subtribus: Hydrobiina Mulsant, 1844
48. Hydrobius rufipes (Linnaeus, 1758) record needs confirmation (3).
49. Limnoxenus niger Camelin, 1790
Distribution: without detailed locality (3).
Subtribus: Hydrophilina Mulsant, 1856
50. Hydrochara caraboides (Linnaeus, 1758)
İzmir (3,30).
51. H. dichoroma (Fairmaire, 1892)
Distribution: Adana, Ankara, İstanbul (3,30).
52. H. flavipes (Steven, 1808)
Distribution: Adana, Ankara (3,30).
53. Hydrophilus (s. str.) piceus (Linnaeus, 1758)
Distribution: without detailed locality (3).
54. H. (s. str.) atterimus Eschscoltz, 1822

Description
Body 30 mm in length, head black, sometimes greenish, all surface micropunctuate. Antennae reddish and asymmetrical. Maxillary palpi reddish brown. Posterior margin of the head emarginated. “Y” groove distinct. Pronotum black with greenish tinge. Spots large, untidy and sparsely scattered. Between the large spots with micropunctuation. Heaps of spots located in antero-laterally are distinct. Elytra black or greenish, rows of punctures more distinct apically. Elytra narrowed posteriorly and its apex at the stural angle with a small obtuse spine (Fig. 1A). Legs black, sometimes reddish. Claw segment fairly enlarged and triangular (Fig. 1B). All segments bear a setae bunch on dorsal side (Fig. 1B). Claws fairly long and curved.

Aedeagophore 0.80 mm in length. Parameres shorter than basal piece, tapered and curved outwards at the apex bearing an additional projection resembling a hat. Median lobe shorter than parameres, struts long and sinuate.

Material examined: rather eutrophic water with muddy bottom, sunny pond, 28.IX.1999, 3 ♂, Plateau
of Tuzluca village, Çat, Erzurum; 15.VIII.1993, 1♂, Erzurum.

It is a new record for the Turkish fauna.

Discussion

Fifty-four species and three subspecies of the Hydrophilidae are known in Turkey (1-31). This study adds one new record to Turkish fauna.

B. (E.) bispina had been given as a new record for the Turkish fauna by Özemsı and Önder (31). However, this species had been recorded from Turkey by lenistea previously (5). Furthermore, L. (s. str.) minutus and Chaetarthria seminulum were recorded from Erzurum and Rize, and Coleostoma orbiculare and Hydrochara dichroma from Erzurum for the first time.

Hydrophilus atterimus is a very rare species in Europe and has not been collected for about 50 years anywhere.
else. *H. atterimus* is similar to *Hydrochara* species, but its body shape is more oval than in *Hydrochara*, and elytra are more strongly narrowed posteriorly. The head and pronotum are almost the same as in *Hydrochara*, but the anterior margin of the clypeus is broadly and feebly emarginated, exposing the articulating membrane of the labrum. The group of setiferous punctures of the head and pronotum are arranged as in *Hydrochara*, especially those of the pronotum; also the elytral rows of setiferous punctures are finer than in *Hydrochara* (1).

Another similar species is *Hydridulus piceus* (a common species), but it differs by the less strongly narrowed elytra posteriorly, more bluntly raised abdominal sternites, which are more sharply tectiform (except for the last sternite), absence of spines at the sternal angle of elytra and longer median furrow of the mesosternal keel (Figs. 1 A,C), the furrow reaching almost the anterior apex of the keel (Figs. 1 D,E) and smaller protarsal segments (Figs. 1 B,F).

The aedeagophore smaller than in *piceus* (Figs. 2 A,B).

**References**


