

SOME AQUATIC COLEOPTERA FROM ANKARA PROVINCE, TURKEY

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ABSTRACT: Fourty species of water beetle were recorded from 36 sites in Ankara. Twenty-one species appeared to be new for the area.

KEY WORDS: Coleoptera, Gyrinidae, Noteridae, Dytiscidae, Hydrophilidae, Helophoridae, fauna, Ankara province, Turkey.

The aquatic Coleoptera fauna of Ankara is imperfectly known. 54 Species of aquatic beetles have been recorded from the studied region in the following published works, D'Orchymont (1932), Gentili & Chiesa (1975), Angus (1988; 1992), Gentili (1981; 2000), Van Berge Henegouwen (1986), Schödl (1991; 1998), Mart & Erman (2001), İncekara et al. (2003) Darılmaz & Kiyak, 2009.

The aim of this study was to make a contribution to Turkish aquatic beetles fauna.

MATERIALS AND METHOD

This study is based on 642 specimens of aquatic beetles and all the specimens were collected by the first author from Ankara province, between April – September in 2006 and 2007. Specimens were collected from a 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 muddy remnant on their surfaces with a small paintbrush. Aedeagophore was dissected under the stereomicroscope and on to add 10% KOH solution for about 1-2 hours. Materials have been deposited in the Gazi University Zoological Museum (=ZMGU), Ankara, Turkey.

A list of localites is given in Table 1. The 'List of species' gives the sampling locations for each species. The dates of sampling and total number of individuals are also noted. Species new for Ankara are marked with an asteriks.

RESULTS

Familya Gyrinidae

**Aulonogyrus concinnus* Klug, 1834

Materials: Ankara: 9 males, 6 females, T12, 06.05.2007.

**Gyrinus urinator* Illiger, 1807

Materials: Ankara: 1 males, 3 females, T6, 12.05.2007.

**Orectochilus villosus* O.F. Müller, 1776

Materials: Ankara: 2 males, 3 females, T20, 08.07.2007.

Familya Haliplidae

**Haliplus heydeni* Wehncke, 1875

Materials: Ankara: 2 males, T8, 13.09.2006; 1 female, T26, 02.08.2007; 1 female, T27, 05.08.2007; 9 males, 4 females, T36, 15.08.2007.

**Peltodytes caesus* (Duftschmid, 1805)

Materials: Ankara: 1 male, 1 female, T6, 12.05.2007; 3 males, T27, 05.08.2007.

Familya Noteridae

Noterus clavicornis (De Geer, 1774)

Materials: Ankara: 6 males, 2 females, T6, 12.05.2007; 1 male, T3, 14.04.2007; 2 males, 3 females, T13, 06.05.2007; 2 males, 4 females, T14, 14.04.2007; 7 males, 4 females, T25, 02.08.2007; 1 male, T3, 02.08.2007; 9 males, 3 females, T29, 05.08.2007; 1 male, T10, 05.08.2007; 2 males, 4 females, T34, 15.08.2007; 5 males, 8 females, T36, 15.08.2007; 1 male, T8, 22.08.2007.

Familya Dytiscidae

**Agabus bipustulatus* (Linnaeus, 1767)

Materials: Ankara: 1 male, T4, 04.05.2007; 1 male, T5, 22.05.2007; 1 male, 1 female, T6, 12.05.2007; 2 males, 3 females, T27, 05.08.2007.

**Agabus conspersus* (Marsham, 1802)

Materials: Ankara: 2 females, T6, 12.05.2007; 1 male, 1 female, T27, 05.08.2007.

**Agabus nebulosus* (Forster, 1771)

Materials: Ankara: 1 female, T6, 12.05.2007.

**Ilybius fuliginosus* (Fabricius, 1792)

Materials: Ankara: 2 females, T5, 22.05.2007; 3 males, 1 female, T27, 05.08.2007; 2 males, T36, 15.08.2007.

**Platambus lunulatus* (Fischer von Waldheim, 1829)

Materials: Ankara: 1 male, T17, 26.05.2007.

**Platambus maculatus* (Linnaeus, 1758)

Materials: Ankara: 4 males, 2 females, T2, 02.06.2007; 1 female, T5, 22.05.2007; 4 males, 3 females, T20, 08.07.2007.

**Rhantus suturalis* (W.S. MacLeay, 1825)

Materials: Ankara: 1 male, T6, 12.05.2007.

**Acilius sulcatus* (Linnaeus, 1758)

Materials: Ankara: 1 male, T3, 17.09.2006.

**Graphoderus cinereus* (Linnaeus, 1758)

Materials: Ankara: 1 male, T10, 05.08.2007.

Bidessus calabricus Guignot, 1957

Materials: Ankara: 1 male, 3 females, T5, 22.05.2007.

Bidessus exornatus (Reiche & Saulcy, 1855)

Materials: Ankara: 1 male, T5, 04.08.2007.

Hydroglyphus geminus (Fabricius, 1792)

Materials: Ankara: 1 male, T4, 04.05.2007; 5 males, 2 females, T13, 06.05.2007; 1 male, T11, 02.06.2007; 1 male, T12, 06.05.2007; 1 female, T15, 14.04.2007; 1 female, T20, 08.07.2007; 10 males, 6 females, T4, 31.07.2007; 1 male, 3 females, T23, 31.07.2007; 14 males, 6 females, T24, 02.08.2007; 2 males, 2 females, T5, 04.08.2007; 1 male, 1 female, T10, 05.08.2007; 2 males, T14, 14.08.2007; 4 males, 1 female, T34, 15.08.2007.

**Hydroporus palustris* Linnaeus, 1761

Materials: Ankara: 3 males, T8, 08.07.2007; 1 female, T3, 02.08.2007; 2 females, T24, 02.08.2007; 3 males, 1 female, T3, 02.08.2007.

***Scarodytes halensis* (Fabricius, 1787)**

Materials: Ankara: 1 male, T3, 17.09.2006; 9 males, 4 females, T5, 22.05.2007; 8 males, 6 females, T6, 12.05.2007; 7 males, 2 females, T17, 26.05.2007. 2 males, 5 females, T5, 04.08.2007; 6 males, 5 females, T30, 05.08.2007; 1 male, T36, 15.08.2007.

****Hydrovatus cuspidatus* (Kunze, 1818)**

Materials: Ankara: 1 male, T24, 02.08.2007.

****Hygrotus inaequalis* (Fabricius, 1777)**

Materials: Ankara: 1 male, T8, 08.07.2007; 2 males, T3, 02.08.2007; 1 male, 1 female, T3, 02.08.2007; 3 males, 1 female, T14, 14.08.2007.

****Laccophilus hyalinus* (DeGeer, 1774)**

Materials: Ankara: 14 males, 3 females, T1, 23.09.2006; 2 males, 1 female, T5, 22.05.2007; 2 females, T7, 23.09.2006; 1 male, T8, 13.09.2006; 5 males, 6 females, T7, 23.04.2007; 1 female, T10, 23.04.2007; 2 males, T1, 23.04.2007; 3 males, 1 female, T15, 14.04.2007; 3 males, T16, 14.04.2007; 1 female, T19, 30.05.2007; 1 female, T20, 08.07.2007; 3 males, 1 female, T8, 08.07.2007; 6 males, 3 females, T27, 05.08.2007; 2 males, 1 female, T10, 05.08.2007; 1 male, T33, 05.08.2007; 1 male, 3 females, T36, 15.08.2007; 1 male, T8, 22.08.2007.

***Laccophilus minutus* (Linnaeus, 1758)**

Materials: Ankara: 1 male, T4, 04.05.2007; 2 males, T6, 12.05.2007; 1 male, 1 female, T9, 06.05.2007; 2 males, T3, 14.04.2007; 1 male, T24, 02.08.2007; 1 male, 1 female, T25, 02.08.2007; 2 males, T3, 02.08.2007; 1 male, 2 females, T34, 15.08.2007; 1 female, T36; 15.08.2007.

Family Helophoridae***Helophorus nubilus* (Fabricius, 1777)**

Materials: Ankara: 1 male, T4, 04.05.2007; 2 males, T22, 31.07.2007.

***Helophorus brevipalpis* Bedel, 1881**

Materials: Ankara: 8 males, 4 females, T19, 30.05.2007.

***Helophorus daedalus* d'Orchymont, 1932**

Materials: Ankara: 2 males, 1 female, T26, 02.08.2007.

***Helophorus discrepans* Rey, 1885**

Materials: Ankara: 4 males, 2 females, T6, 12.05.2007.

Family Hydrophilidae***Anacaena limbata* (Fabricius, 1792)**

Materials: Ankara: 2 males, 3 females, T27, 05.08.2007.

****Berosus frontifoveatus* Kuwert, 1888**

Materials: Ankara: 5 males, 7 females, T1, 23.04.2007.

***Berosus spinosus* (Steven, 1808)**

Materials: Ankara: 1 male, 3 females, T7, 23.04.2007

***Enochrus bicolor* (Fabricius, 1792)**

Materials: Ankara: 2 males, 1 female, T5, 22.05.2007; 1 female, T1, 23.04.2007; 2 male, 1 female, T19, 30.05.2007; 5 males, 3 females, T5, 04.08.2007; 1 male, T32, 05.08.2007.

****Enochrus fuscipennis* (Thomson, 1884)**

Materials: Ankara: 5 males, 1 female, T24, 02.08.2007; 1 female, T25, 02.08.2007; 3 males, 3 females, T27, 05.08.2007.

***Helochaeres lividus* (Forster, 1771)**

Materials: Ankara: 2 males, T6, 12.05.2007; 4 males, 5 females, T24, 02.08.2007; 1 female, T25, 02.08.2007; 1 female, T26, 02.08.2007; 4 males, 3 females, T10,

05.08.2007; 8 males, 4 females, T14, 14.08.2007; 1 male, 2 females, T36, 15.08.2007.

****Helochaeres obscurus* (O. F. Müller, 1776)**

Materials: Ankara: 4 males, 5 females, T11, 02.06.2007; 2 males, T3, 14.04.2007; 2 males, T13, 06.05.2007; 5 males, 1 females, T14, 14.04.2007; 1 female, T26, 02.08.2007.

***Hydrobius fuscipes* (Linnaeus, 1758)**

Materials: Ankara: 1 male, T3, 14.04.2007; 1 female, T3, 02.08.2007.

***Laccobius obscuratus aegaeus* Gentili, 1974**

Materials: Ankara: 1 male, T17, 26.05.2007; 5 males, 7 females, T26, 02.08.2007.

***Laccobius simulatrix* d'Orchymont, 1932**

Materials: Ankara: 4 males, 2 females, T6, 12.05.2007; 2 males, T23, 31.07.2007; 20 males, 3 females, T24, 02.08.2007; 2 males, 3 females, T10, 05.08.2007.

***Laccobius striatulus* (Fabricius, 1801)**

Materials: Ankara: 4 males, 2 females, T5, 22.05.2007; 10 males, 8 females, T20, 08.07.2007; 7 males, 4 females, T26, 02.08.2007; 10 males, 5 females, T5, 04.08.2007.

***Laccobius syriacus* Guillebeau, 1896**

Materials: Ankara: 2 males, T27, 05.08.2007; 1 male, 2 females, T31, 05.08.2007; 2 females, T34, 15.08.2007; 5 males, 1 female, T36, 15.08.2007; 3 females, T7, 23.09.2006.

As a result of the present work, in freshwater habitats of Ankara Province, 40 aquatic beetle species (Coleoptera: Gyrinidae, Noteridae, Dytiscidae, Hydrophilidae and Helophoridae) belonging to 26 genera and 6 families were recorded at 36 sites. Of these, 21 species are recorded from the Ankara Region of Turkey for the first time.

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Table 1. List of sampling sites in Ankara Province (Abbreviations: No.= number, Abbr.= abbreviations of the site).

| No. | Sampling site | Coordinates | | Habitat | Abbr. |
|-----|------------------------------|-------------|----------|---------|-----------------|
| 1. | Kuş cenneti/Çayırhan | 40° 6'N | 31°35'E | stream | T ₁ |
| 2. | Kışlacık/Çubuk | 40°23'N | 32°56'E | stream | T ₂ |
| 3. | Işıkdığı/Kızılcahamam | 40°38'N | 32°45'E | lake | T ₃ |
| 4. | Köprübelde/K.Keçili | 39°34'N | 33°25'E | stream | T ₄ |
| 5. | Handere/Çubuk | 40°15'N | 33°11'E | stream | T ₅ |
| 6. | Yukarı Çavundur/Çubuk | 40°20'N | 33°03'E | puddle | T ₆ |
| 7. | Sarıyar Barajı/Nallıhan | 40° 2'N | 31°24'E | lake | T ₇ |
| 8. | Karagöl/Çubuk | 40°24'N | 32°54'E | lake | T ₈ |
| 9. | Kumocakları/K.Keçili/Bala | 39°32'N | 33°25'E | stream | T ₉ |
| 10. | Akçakanak köyü/Beypazarı | 40° 6'N | 32° 1'E | stream | T ₁₀ |
| 11. | Aykayası/Çubuk | 40°28'N | 32°56'E | puddle | T ₁₁ |
| 12. | Kalecik/Ankara | 40° 3'N | 33°26'E | stream | T ₁₂ |
| 13. | Büyükboyalık/Bala | 39°33'N | 33°15'E | stream | T ₁₃ |
| 14. | Çamkoru/Çamhdere | 40°33'N | 32°28'E | lake | T ₁₄ |
| 15. | Üçbaş köyü/Kızılcahamam | 40°24'N | 32°41'E | Puddle | T ₁₅ |
| 16. | Oğlakçı köyü/ Kızılcahamam | 40°31'N | 32°39'E | puddle | T ₁₆ |
| 17. | Sarkoz köyü/Çubuk | 40°20'N | 33° 0'E | puddle | T ₁₇ |
| 18. | Merkez/Çubuk | 40°12'N | 33° 2'E | stream | T ₁₈ |
| 19. | Çubuk Çayı/Güldarpi/Çubuk | 40°11'N | 33° 1'E | stream | T ₁₉ |
| 20. | Yeşilkent/Çubuk | 40°26'N | 32°54'E | stream | T ₂₀ |
| 21. | Köprübelde/K.keçili/Kırkkale | 40° 3'N | 33°26'E | stream | T ₂₁ |
| 22. | Kesikköprü/Bala | 39°23'N | 33°24'E | stream | T ₂₂ |
| 23. | Acısu/Kesikköprü/Bala | 39°27'N | 33°18'E | puddle | T ₂₃ |
| 24. | Değirmenönü/ Kızılcahamam | 40°20'N | 32°31'E | stream | T ₂₄ |
| 25. | Çay köyü/ Kızılcahamam | 40°26'N | 32°38'E | stream | T ₂₅ |
| 26. | Sayhamamı/ Kızılcahamam | 40°35'N | 32°39'E | stream | T ₂₆ |
| 27. | Çanıllı/Ayaş | 40°09'N | 32°24'E | puddle | T ₂₇ |
| 28. | Orta Bereket/Ayaş | 40°07'N | 32°25'E | puddle | T ₂₈ |
| 29. | Kırzadibi piknik alanı/Ayaş | 40°00'N | 32°20'E | puddle | T ₂₉ |
| 30. | Ilıca/endik mevki/Ayaş | 40°03'N | 32°15'E | stream | T ₃₀ |
| 31. | Ilıca/suat mevki/Ayaş | 40°03'N | 32°15'E | stream | T ₃₁ |
| 32. | Uluköy/Çayırhan/Nallıhan | 40°08'N | 31° 39'E | stream | T ₃₂ |
| 33. | Emremsultan/Nallıhan | 40° 4'N | 31°23'E | stream | T ₃₃ |
| 34. | Çeltikçi/Kızılcahamam | 40°23'N | 32°37'E | stream | T ₃₄ |
| 35. | Yeşilöz/Güdüll | 40°14'N | 32°15'E | stream | T ₃₅ |
| 36. | Sorgun/Güdüll | 40°20'N | 32°16'E | stream | T ₃₆ |