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Research Article

A Faunistic Study on *Asiobates* Thomson, 1859 (Hydraenidae, Polyphaga, Coleoptera) Species

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Abstract: A list of *Asiobates* species known from Turkey and their distribution worldwide are presented. A brief review and discussion of the new records, *Ochthebius (Asiobates) cantabricus* Balfour-Browne, 1978 and *Ochthebius (Asiobates) remotus* Reitter, 1887, has also been added.

Key Words: Coleoptera, Hydraenidae, *Ochthebius, Asiobates*, Fauna, Turkey

Asiobates Thomson, 1859 (Hydraenidae, Polyphaga, Coleoptera) Türleri Üzerine Faunistik Bir Çalışma

Özet: Türkiye'den bilinen *Asiobates* türlerinin bir listesi ile, bu türlerin Türkiye ve dünyadaki yayılışları verilmiştir. Ayrıca Türkiye faunası için yeni kayıt olan *Ochthebius (Asiobates) cantabricus* Balfour-Browne, 1978 ve *Ochthebius (Asiobates) remotus* Reitter, 1887 türlerinin kısa tanımları verilmiş ve tartışılmıştır.

Anahtar Sözcükler: Coleoptera, Hydraenidae, *Ochthebius, Asiobates*, Fauna, Türkiye

Introduction

The genus *Ochthebius* has ten subgenera (1). They are aquatic beetles. Ninety-three species and three subspecies belonging to the subgenus *Asiobates* are distributed worldwide (2). Of these, 67 species and one subspecies are known from Palearctic region (2-4). Nine species have been collected from Turkey so far and type locality for *Ochthebius haelii*, *O. rivibelli*, *O. stygialis* and *O. thraciae* is in Turkey (3-5). The aim of this work was to determine the number of species of the subgenus *Asiobates* (*Ochthebius*, Hydraenidae) and their distribution in Turkey.

Materials and Methods

The specimens were collected from running and stagnant water in Erzurum province between 1997 and 2000 using a sieve, strainer and dropper. They were put in small bottles containing 70% ethyl alcohol and were brought to the laboratary. Male genitalia were dissected under stereomicroscope using insect pins. Aedeagi were placed in lactic acid for 24 so as to become transparent and were illustrated under a microscope. In addition, specimens were compared with the specimens in Natural History Museum in Vienna, Austria.

In general, only *Asiobates* males can be determined with confidence, by examination of the genitalia, and in most cases the females remain unidentifiable.

Findings

List of *Asiobates* species known from Turkey

1. ***Ochthebius* (*Asiobates*) dilatatus** Stephens, 1829

   Distribution: Palearctic: Albania, Algeria, Britain, Bulgaria, Croatia, Cyprus, Denmark, France, Germany, Greece, Ireland, Italy, Malta, Morocco, Netherlands, Portugal, Slovenia, Spain, Sweden, Tunisia, Yugoslavia, Turkey (Edirne, İstanbul, İzmir, Kastamonu, Kırklareli, Samsun) (2,3,6).

2. ***Ochthebius (Asiobates) haelii*** Ferro, 1983

   Distribution: Palearctic: Turkey (Afyon, Konya) (2,3,5).

3. ***Ochthebius (Asiobates) minimus*** Fabricius, 1792

   Distribution: Oriental: Nepal. Palearctic: Austria, Belarus, Bosnia-Herzegovina, Britain, Croatia,

Czechia, Denmark, Egypt, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Macedonia, Netherlands, Norway, Poland, Romania, Russian Fed., Slovenia, Spain, Sweden, Switzerland, Ukraine, Yugoslavia, Turkey (Samsun) (2,3,6,7).

4. ***Ochthebius (Asiobates) monichus*** Orchymont, 1941

   Distribution: Palearctic: Greece, Italy, Turkey (Aydın, Denizli, İzmir) (2,3,8,9).

5. ***Ochthebius (Asiobates) rivibelli*** Jach, 1990

   Distribution: Palearctic: Turkey (Van) (2,3).

6. ***Ochthebius (Asiobates) striatus*** Castelnau, 1840

   Distribution: Palearctic: Albania, Croatia, Greece, Israel, Lebanon, Yugoslavia, Turkey (Artvin, Balıkesir, Bitlis, Çanakkale, Diyarbakır, Gaziantep, Hakkari, Hatay, İstanbul, İzmir, Kastamonu, Mersin, Siirt, Sinop, Şırnak, Tekirdağ) (2,3).

7. ***Ochthebius (Asiobates) stygialis*** Orchymont, 1937

   Distribution: Palearctic: Turkey (Erzincan, Mersin) (2,3).

8. ***Ochthebius (Asiobates) subopacus*** Reitter, 1885

   Distribution: Palearctic: Georgia, Turkey (Artvin) (2,3).

9. ***Ochthebius (Asiobates) thraciae*** Jach, 1990

   Distribution: Palearctic: Bulgaria, Turkey (Bursa, Kastamonu, Kırklareli) (2,3).

10. ***Ochthebius (Asiobates) cantabricus*** Balfour-Browne, 1978

    Body 2.0 mm long, pronotum black and wide, pronotal disc deeply and densely punctured. Median sulcus long, reachs almost anterior and posterior margins. Anterior admedian foveae small, posterior ones long (Fig. 1A). Elitra dark brown-black, striae regular, no accessory stria developed, punctures densely and deeply impressed. Aedeagus 0.33 mm long, main piece curved, slender, distal lobe very long and sinuous, parameres longer than main piece, without setae on apex (Figure 1B).

    Material Examined: Erzurum, Özbek Village, stream, 30.IX.2000, 1 ♀, Pazaryolu-Erzurum road 30. km, stream, 3.VII.2000, 2 ♂♂, 2 ♀♀.

    Distribution: Spain (2,3).

    New record for Turkish fauna.

11. ***Ochthebius (Asiobates) remotus*** Reitter, 1885

    Quite wide, surface glabrous and shining, head black, outer edge of mandibles with stiff setae in male. Pronotum brown, wide, with few large punctures and a median sulcus (Figure 1C). Elytra wide, brown and with regular striae. No accessory stria developed, last segment of mesotarsus curved. Aedeagus 0.35 mm long, basal part of main piece well sclerotised, dilated and curved, lateral sclerite not well developed, distal lobe quite wide (Figure 1D).

    Material Examined: Erzurum, Karagöbek Village, stream, 8.VII.2000, 1 ♂, 3 ♀♀; Erzurum-Çat road 7. km, stream, 12.VII.1999, 1 ♂; Ilıca, Ilıca brook, 9.VIII.1997, 1 ♂; Köprüköy, Aras River, 3.VII.1998, 1 ♂; Tekman-Erzurum road, 7. km, stream, 7.X.2000, 1 ♂.

    Distribution: Caucasus, Russia, Europe (2,3,4,10).

    New record for Turkish fauna.

Discussion

The subgenus *Asiobates* was erected by Thomson, 1859. It differs from other subgenera by pronotal and aedeagal characteristics: 1) sides of pronotum pronouncedly excised in posterior half, anterior (convex) portion always longer than excised (concave) portion. 2) Parameres distinctly divergent from main piece at their bases.

Two species groups of *Asiobates* (*minimus* and *bicolon*) are distinguished. The species of the minimus group are mainly united by the missing anterior and posterior foveae of the pronotum. The bicolon group differ from the minimus group by the presence of anterior and posterior foveae on the pronotum. Except *O. minimus*, other species of *Asiobates* known from Turkey belong to the bicolon group. The features of two species, which are new records for Turkish fauna, discussed below.

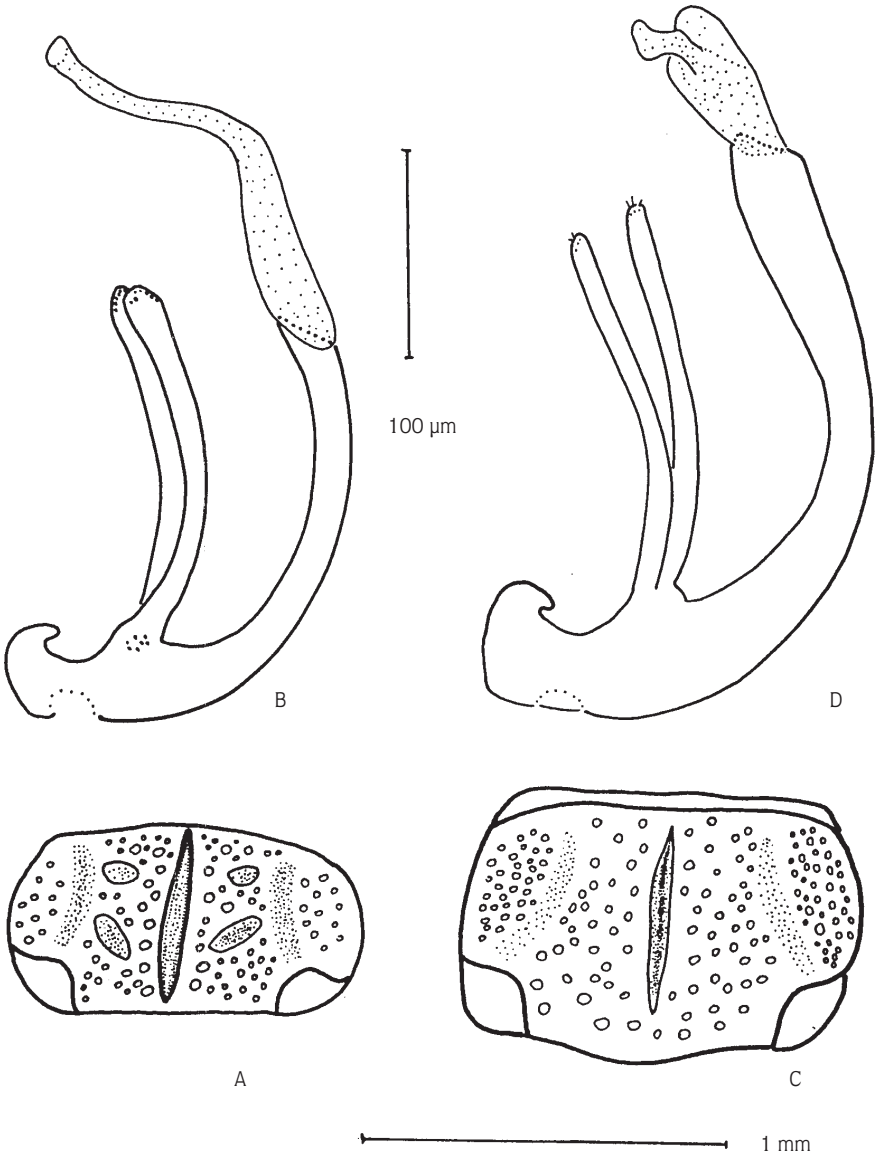

Figure 1. Pronotum: A) *Ochthebius cantabricus*, C) *Ochthebius remotus* Aedeagus: B) *Ochthebius cantabricus*, D) *Ochthebius remotus*;

O. (Asiobates) cantabricus was described from Spain. There is no record from any other place so far. As can be understood, this species has a wide geographical distribution. It is a new record not only for Turkey but also for Asia.

It is very similar to *O. bellieri*. Elitral punctures deeply impressed and densely arranged. No accessory stria developed. Differs from *O. dilatatus* by smaller size, convex pronotum and especially by strongly and densely punctured elytra. Distal lobe of aedeagus very long, slender and sinuous (3).

It closely resembles the *bicolon* group because of the presence of anterior and posterior admedian pronotal faveae. Our specimens are in agreement with both the morphological and aedeagal features of *O. cantabricus* given above.

O. (Asiobates) remotus Reitter, 1885, is a very broad species, 2.2 mm long, pronotum and elytra uniformly brown, head black, body surface glabrous and shining, pronotum with few large punctures, last segment of mesotarsus curved. Main piece of aedeagus rather long (about 0.41 mm), lateral sclerites not well developed, its apex inconspicuous, apical tube apically widened (3).

Our specimens closely resemble the *minimus* group because of missing anterior and posterior admedian pronotal foveae. They are in agreement with both the morphological and aedeagal characters of *O. remotus* as briefly given. However, they differ by longer body size (2.3-2.5 mm) and shorter (0.35 mm) aedeagus.

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