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Two New Records of Hydrophilid (Coleoptera: Hydrophilidae) Species of the Turkish Fauna*

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Abstract: Two newly recorded Hydrophilid species (Water Beetles) of the Turkish fauna, *Hydrobius arcticus* Kuwert, 1890 and *Coelostoma (Lachnocelostoma) transcaspicum* Reitter, 1906 were compared with the specimens in our department's laboratory, and their distribution in Turkey and worldwide is given.

Key Words: Coleoptera, Hydrophilidae, *Hydrobius*, *Coelostoma*, Systematics, Turkey

Türkiye Faunası İçin (Coleoptera: Hydrophilidae) İki Yeni Hydrophilid Türü

Özet: Türkiye faunası için yeni kayıt olan *Hydrobius arcticus* Kuwert, 1890 ve *Coelostoma (Lachnocelostoma) transcaspicum* Reitter, 1906 türleri örneklerimizle karşılaştırılmış, Türkiye ve dünyadaki dağılımları verilmiştir.

Anahtar Sözcükler: Coleoptera, Hydrophilidae, *Hydrobius*, *Coelostoma*, Sistematik, Türkiye

Introduction

Hydrophilidae is a large family of hydrophilid beetles, which includes numerous genera and about 2200 known species, and is represented in all zoogeographical regions (Hansen, 1987, 1991, 1999). It can be divided into 2 biologically different groups: aquatic and terrestrial. The terrestrial species form a significant portion of the family. The aquatic species occur in a wide range of habitats, but most of them frequent shallow standing water and lentic situations, such as temporary and permanent puddles, and the margins of shallow ponds and lakes. Some prefer brackish water in pools or in saltwater marshes. Only a few species require flowing water. With the exception of a few genera (e.g., *Berosus*, *Hydrophilus*), most aquatic species are fair to poor swimmers (Hansen, 1987, 1991; Smetana, 1988; İncekara et al., 2003).

The terrestrial species (subfamily Sphaeridiinae) live as scavengers in most kinds of decaying organic matter, such as compost piles and other decaying plant materials, including rotting mushrooms and seaweed, droppings of various animals, and occasionally under decomposing bodies of small animals (Hansen, 1987, 1991; Smetana, 1988).

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, brackish water, and ponds. The beetles were killed using ethyl acetate or 70% alcohol solution. Aedeagophores were dissected out under a stereo microscope and exposed in 10% KOH solution for 1-2 h. The figures of the aedeagophores were drawn using a Nikon type 104 microscope.

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Systematics

Coelostoma (Lachnocoelostoma) transcaspicum
Reitter, 1906

Body 5.6-5.9 mm in length and 3.0-3.2 mm wide. Broadly oval, moderately convex, shiny black. Surface rather finely, very densely punctate. Head, as the entire surface, rather finely, very densely punctate, shiny black. Maxillary palpi reddish yellow and shorter than antennae, which have 9 segments, last segment of maxillary palpus same length as penultimate segment. Antennae yellow, antennal club loose and black. Pronotum entirely black, shiny, and punctate, as is the head, posterior margin flat. Elytra entirely black and shiny, surface more densely punctated than the pronotum. Scutellum longer than wide. Prosternum distinctly dentate anteriorly. Mesosternum ridged like an arrow head. Legs, except tarsi, reddish black. Mesofemora densely pubescent, except apical portion. Metafemora normally flattened and not pubescent. Aedeagophore 1.0-1.2 mm length. Median lobe longer than paramere. Parameres convex on outer face, fairly deeply emarginate in the middle of the apex, sinuate and narrowed in apical third, with apices obliquely truncated and curved to midline (Figure 1a).

Material examined: Bingöl, Kös (Hot spring), 14.V.2003, 5 ♂ 4 ♀.

Distribution: Oman, Saudi Arabia and Tajikistan (Hebauer, 1997, 2000).

Hydrobius arcticus Kuwert, 1890

Body 5.5 mm long and 3.0 mm wide. Head black and surface finely and densely punctured. Maxillary palpi and antennae reddish brown, last segment of maxillary palpus usually darkened apically. Pronotum reddish brown, with lateral margins paler. Elytral stria fine, distinctly stronger than in *H. fuscipes*, also conspicuous anteriorly. Punctuation of elytral interstices on the average a little stronger than in *H. fuscipes*. Mesosternum bluntly raised posteromedially, at its maximum obtusely ridged. Metasternum a little shorter than in *H. fuscipes*. Abdomen with 5 visible sternites and dark brown. Posterior edge of 5th sternite slightly concave. Legs reddish brown with darkened femora. Aedeagophore 1.2 mm length and robust. Basal piece short and thick. Median lobe shorter than paramere. Struts very short (Figure 1b).

Material examined: Bingöl, Karlıova-Bingöl road 2 km, 14.V.2003, 1 ♂.

Distribution: Finland, Norway, Russia, and Sweden (Hansen, 1987, 1999).

Discussion

Coelostoma transcaspicum is a very rare species of the Palearctic region. To date, it has only been collected from Oman, Saudi Arabia and Tajikistan (Hebauer, 1997, 2000). Until 2005, only one species of *Coelostoma* had been recorded in Turkey. The number of *Coelostoma* species has now increased to 2. *C. transcaspicum* is similar to *C. orbiculare*, externally, but is easily distinguishable by its body size and aedeagophore shape.

In our investigation area, only one sample of *Hydrobius arcticus* was collected. It is similar to *H. fuscipes*, but it has a different ground colour and the shape of its mesosternum is also different. Thus far, only

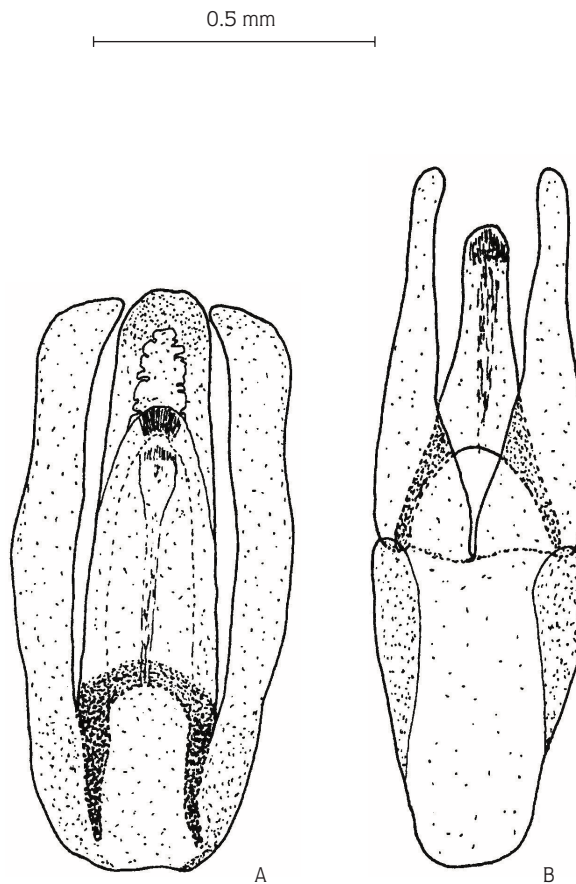


Figure 1. Aedeagophore a. *Coelostoma (Lachnocoelostoma) transcaspicum*, b. *Hydrobius arcticus*

one species of *Hydrobius* has been recorded in Turkey (İncekara, 2005). Currently, the *Hydrobius* genera is represented by 2 species in Turkey.

The present study adds 2 new records to the Turkish fauna (*Hydrobius arcticus* Kuwert, 1890 and *Coelostoma (L.) transcaspicum* Reitter, 1906).

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