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Two new species of Trichoptera from northeastern Turkey (Limnephilidae, Sericostomatidae)

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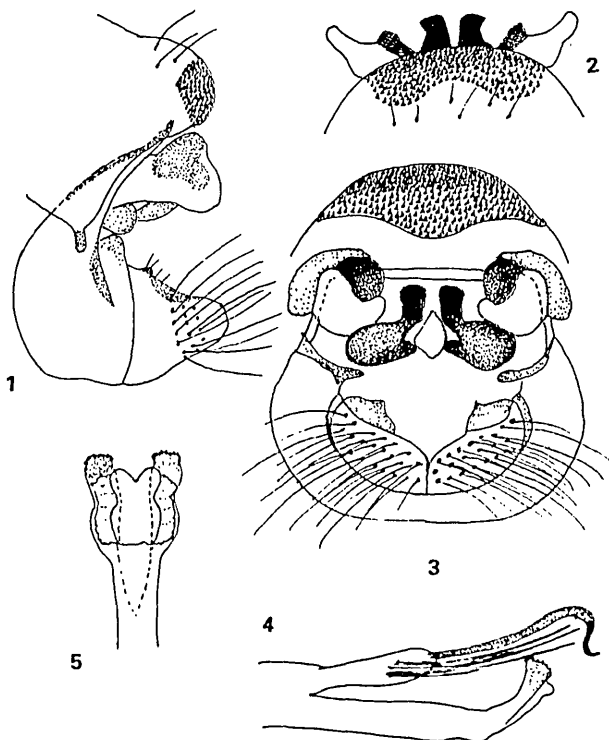
Abstract. Two new species of Trichoptera from northeastern Turkey are described and illustrated. *Chaopteryx bektasensis* sp.n. (Limnephilidae) is closely related to the Caucasian species *C. abchazica* MARTYNOV, 1916 and *Notidobia kumbetensis* sp.n. is related to *N. demelti* MALICKY, 1974.

Key words. Trichoptera, systematics, *Chaopteryx*, *Notidobia*, new species, Turkey

***Chaopteryx bektasensis* sp.n. (Figures 1-5)**

Material. Holotype ♂: Turkey, Giresun, Yavuzkema, Bektaş Yaylası, 2010 m, 40° 39' N, 38° 14' E, 12.10.2007, leg. and coll. Sipahiler.

Antennae, maxillary palps and legs brown; wings dark brown; spurs are 0.3:3; the length of the anterior wing of male 16 mm. Male genitalia (Figures 1-5). The spinulose zone of tergite VIII is broad; the median part is narrow on the anterior portion, the sides are rounded. In lateral view, the anterior edge of segment IX is roundly dilated on the ventral half. The small parts of the preanal appendages are sclerotized on the inner portions; in lateral view, the preanal appendage is dilated on the ventral edge. The intermediate appendages are short and rather broad; in caudal view, becoming broader through the apex; in dorsal view, the apical edge is smooth, broad and broadly curved on the sides. In lateral view, the inferior appendage is rather long and broad;



Figures 1-5: *Chaopteryx bektasensis* sp.n. male genitalia: 1, lateral; 2, dorsal; 3, caudal; 4, aedeagus and paramere, lateral; 5, aedeagus, ventral.

gradually narrower towards the apical margin, which is rounded; there is a small triangular projection near the base of the dorsal edge and a cavity between this projection and the apex. The aedeagus is long, the distal portion is curved towards the dorsal portion; in ventral view, the sides of the apex are sclerotized; the edge possesses small tubercles; the median part is membranous; slightly sclerotized on the distal portion and bilobed apically. The parameres are rather broad, possessing long setae, of which the inner one is thick, long and strongly curved on the subdistal part.

The female is unknown.

Chaopteryx bektasensis sp.n. is closely related to *Chaopteryx abchazica* (MARTYNOV, 1916), described from the Caucasus (MARTYNOV, 1916) and recorded from Iran and northeastern Turkey (SCHMID, 1959; SIPAHILER, 2005). It is found in Turkey in Artvin province, near the Georgian border. The following differences are seen in the male genitalia: The spinulose zone of *C. abchazica* is large and the anterior border is rounded; in *C. bektasensis* sp.n. it is narrower on the median part and the sides are broadly rounded; the preanal appendages of *C. bektasensis* sp.n. are broader on the subdistal portion and the sclerotized inner parts are smaller than those in the related species (MALICKY, 2004); in lateral view, the inferior appendage of *C. abchazica* is short, almost quadrangular, bearing a long branch located on the dorsal corner, while in *C. bektasensis* sp.n. the inferior appendage is gradually and roundly narrower towards the posterior edge and has no prolongation on the dorsal corner; the dorsal edge of the new species has a small projection near the base and a depression; the aedeagus of the new species is much curved subdistally and the longer spines are strongly curved on the sides; while in the related species the aedeagus is rather smooth; the inner spines are shorter than those of the new species and slightly bent towards the sides.

***Notidobia kumbetensis* sp.n. (Figures 6-12)**

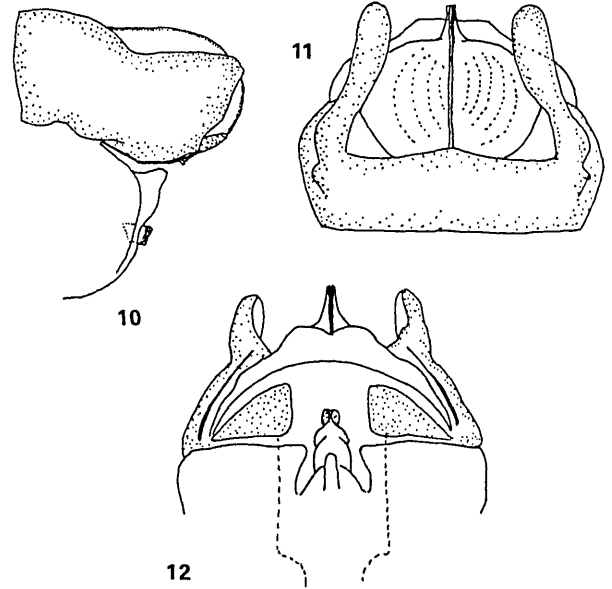
Material. Holotype ♂ and paratypes (6 ♂, 2 ♀): Turkey, Giresun, Kümbet Yaylası, 1600 m, 5.7.2007; other paratypes: Turkey, Ordu, Niksar-Ordu direction, Özdemir, 1300 m, 3.7.2007, 2 ♂, leg. and coll. Sipahiler.

Antennae and maxillary palps are dark brown; thorax and head blackish; wings dark brown; coxa and femur of the legs are blackish brown; tibia brown; the tarsal segments 1-3 are pale brown; 4 and 5 are dark brown; the forewings with two large spots on media and on fork 3. The length of the wings of males 9-9.5 mm, of females 9.5-10 mm. Male genitalia (Figures 6-9): In lateral view, the side of segment 9 is triangular in shape, strongly developing on the anterior margin. The preanal appendages are rather broad at the base; segment 10 is long the sides are sclerotized; the median part is membranous; in dorsal view, the sides are rounded, narrowing towards the tip. In dorsal view, the intermediate appendages are broad on the basal portion, protruding thin side projections in the middle, gradually narrowing towards the pointed apex, which are curved inwards; in lateral view, the subdistal portion are rather broad, strongly bent upwards. The inferior appendage is broad in lateral view, the dorsal margin is roundly dilated on the subdistal portion; the ventral margin with a small notch near the middle; in ventral view, the inner basal lobe is almost quadrangular, with a small projection on the inner corner of the apical edge; in lateral view, it is triangular in shape.

Female genitalia (Figures 10-12): In lateral view, the sides of segment 9 are triangular on the subdistal portion; in dorsal

view, the median part of segment 9 is almost quadrangular; segment 10 located between the side lobes is membranous, arising in the middle forming a carina, which is sclerotized near the margin; in lateral view, the carina of segment 10 is rounded.

Notidobia kumbetensis sp.n. is closely related to *N. demelti* MALICKY, 1974 (MALICKY, 1974) described from the Zigana Mountains in Turkey located more than 100 km further east of the type locality of the new species. It differs from the related species by many parts of the genitalia, first of all by the shape of the intermediate appendages, which are thin and almost smooth in the new species, possessing thin and long side projections, in *N. demelti* they are broad, the side projections are short and stout. The ventral lobe of the inferior appendage of *N. kumbetensis* sp.n., is almost quadrangular in shape, while in *N. demelti* it is triangular. In the new species segment 10 is rather long and triangular in shape, in *N. demelti* it is shorter and rounded on the apical margin. The female genitalia of *N. kumbetensis* sp.n. have a carina on segment 10, which is not found in the related species.



Figures 10-12: *Notidobia kumbetensis* sp.n. female genitalia: 10, lateral; 11, dorsal; 12, ventral.

Acknowledgement

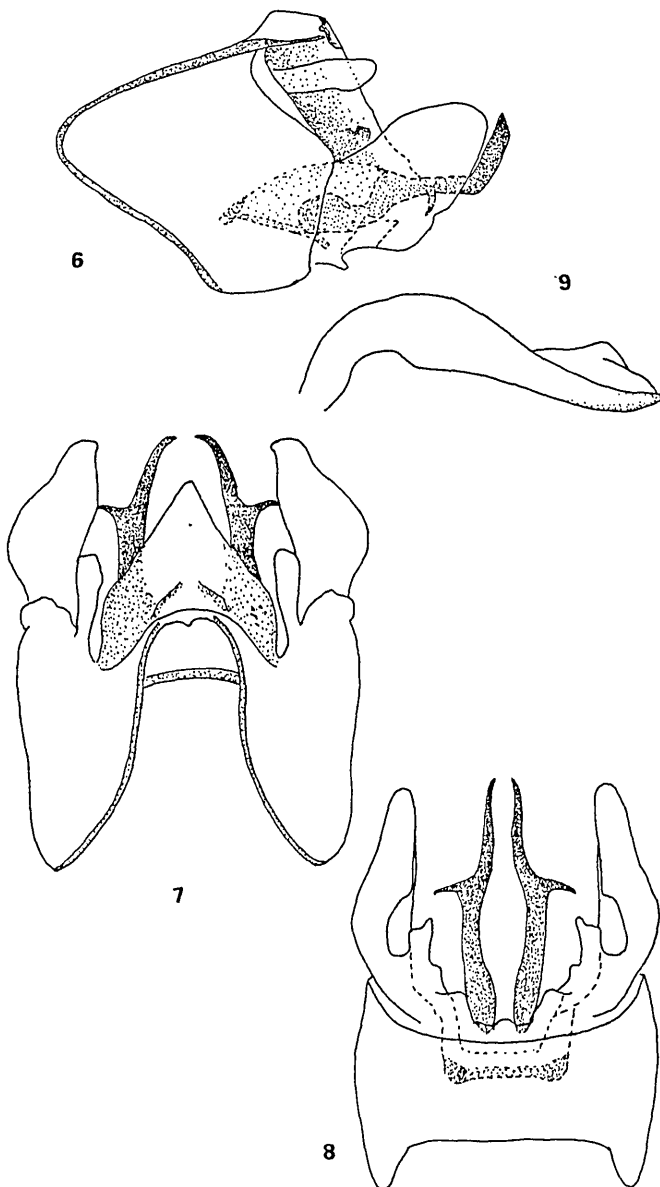
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Figures 6-9: *Notidobia kumbetensis* sp.n. male genitalia: 6, lateral; 7, dorsal; 8, ventral; 9, aedeagus, lateral.

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