

BRAUERIA (Lunz am See, Austria) 34:17-18 (2007)

*Rhyacophila kumanskii turcica* ssp.n.**A new subspecies of *Rhyacophila* from Turkey (Trichoptera, Rhyacophilidae)**

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**Abstract.** A new subspecies of the genus *Rhyacophila*, *R. kumanskii turcica* ssp.n., from north-eastern Turkey is described and illustrated.

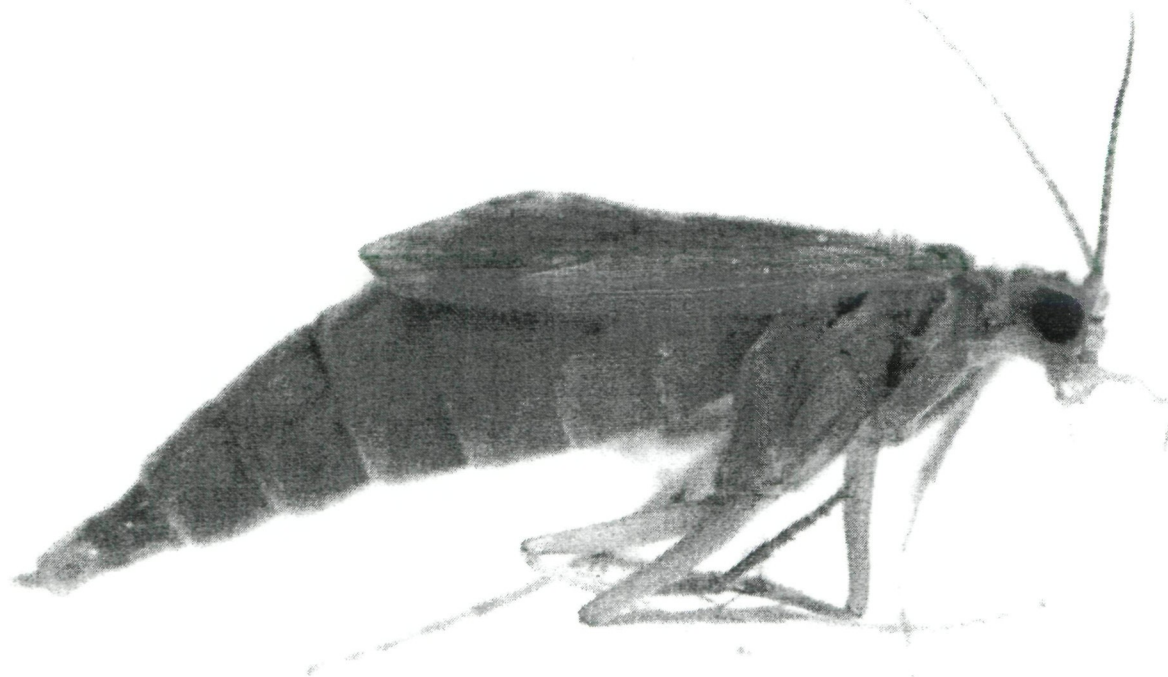
**Key words:** *Rhyacophila*, new subspecies, taxonomy, Trichoptera, Turkey.

*Rhyacophila kumanskii* SPURIS, 1988, was described by KUMANSKI in 1981 as *R. lepnevae* based on male pupae collected in 1953 and 1954 from Bakuriani, in Georgia, and deposited in the Sankt Petersburg Zoology Institute, Russia (KUMANSKI, 1981). Because this name is a homonym, it was renamed *R. kumanskii* (SPURIS, 1988). This species was discovered in north-eastern Turkey, from Karchal Mountains near the state border with Georgia (SIPAHILER, 1998). In October 2006, *Rhyacophila* specimens were collected at high altitude from a stream on the way to the summit of Kaçkar Mountains, located in Rize province in north-eastern Turkey, 70 km west of the Karchal Mountains. The Turkish populations of *R. kumanskii* are given in this paper as a new subspecies

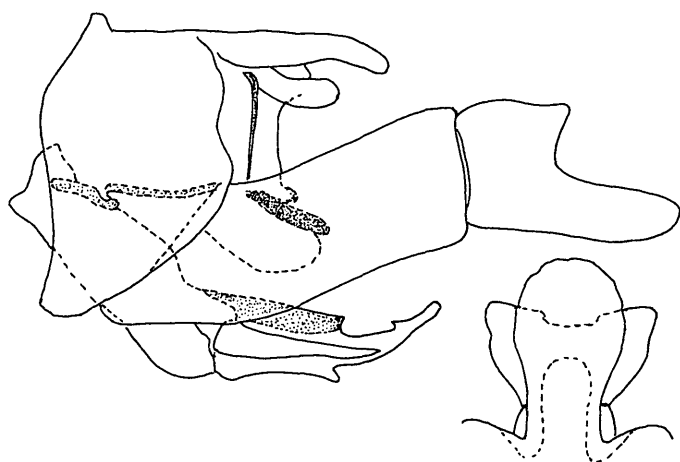
**Material:** Holotype ♂ and paratypes (4 ♂♂, 2 ♀♀): Turkey, Rize, Çamlıhemşin, Ayder, Kaçkar Mountains, Yukarı Kavron Yaylasi, (40° 49' N, 41° 04' E), 2650 m, 9.10.2006; Artvin, Borcka, Camili, direction, 1350 m, 29.10.1997, (41° 26' N, 41° 57' E) leg. and coll. Sipahiler.

Scapus and pedicellus of the antennae are dark brown; the rest of the antennal segments dark brown and yellowish annulated on the proximal and distal ends; maxillary palps are pale brown yellowish; head and thorax are dorsally dark brown; legs brown; the spurs and the claws are dark brown; dorsally, the femur of the first and second legs of male possesses a blackish area on one fourth of the distal portion, which is quadrangular, covered with short and dense dark brown-blackish hairs and the white spots; the wings are brown; pale and dark brown spotted; the length of the anterior wing of males 10.5-12 mm, (12.5-13 mm in the specimens of Artvin), of females 4.5-5.5 mm; the females are brachypterous; the forewing reaches half the length of abdominal segment V; the antennae of the females are short, slightly shorter than the wings; the total length of the body of the females is 11-11.5 mm.

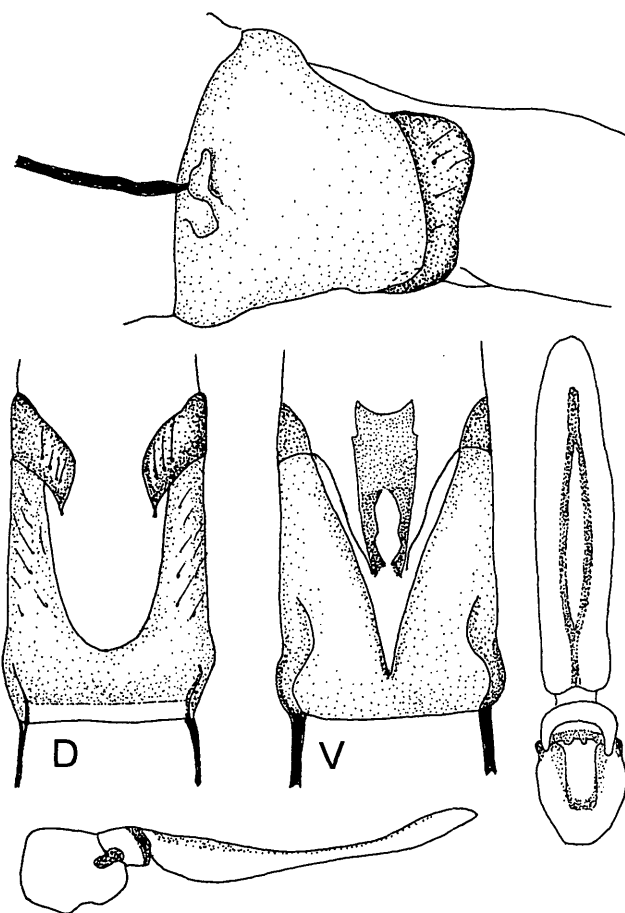
**Male genitalia:** The sides of segment 9 are sinuate, broadly dilated on the dorsal half of the anterior margin; protruding dorsally; the dorsoapical lobe is long; in dorsal view, the basal portion is narrower; gradually dilated towards the apex; the preanal appendages are large and short,



*Rhyacophila kumanskii turcica* ssp.n. female



*Rhyacophila kumanskii turcica* ssp.n. male genitalia: lateral and dorsal.



*Rhyacophila kumanskii turcica* ssp.n. female genitalia: lateral; dorsal; ventral; bursa copulatrix, lateral and dorsal.

developing transversally; its median portion is smooth; segment 10 is rather broad; its ventroapical portion roundly protruded; the apical band of segment 10 is large; ventral edge rounded; the coxopodite of the inferior appendages is long; the ventral edge is dilated towards the ventral; the dorsoapical incision reaches half of the length of the harpago, forming a dorsal and ventral lobe; the ventral one is long, with rounded apex; the dorsal lobe is short; pointed at the tip. The aedeagus with a small ventral lobe; the parameres are rather broad at the

base, narrowing towards the tips; the ventral and dorsal edges are almost smooth.

Female genitalia: In lateral view, the sclerotized part of segment VIII is broad; the apical portion is strongly sclerotized forming a broad band, of which the posterior edge is sinuated; in ventral view, the sclerotized part is V-shaped excised medially; a rectangular sclerite is seen in the middle; in dorsal view, the excision is U-shaped.

#### Remarks

*Rhyacophila kumanskii turcica* ssp.n., belonging to the *vulgaris* species group, differs from *R. k. kumanskii* SPURIS, 1988 in many parts of the male genitalia. The following differences are evident: In *R. k. kumanskii*, the anterior margin of segment 9 is straight and the dorsoapical lobe is narrow at the base, dilating on the subdistal part; the dilatation on the subdistal part is more than twice the width of the base, while in the new subspecies, it is slightly broader than the width of the base and the anterior margin of segment 9 is sinuate; the preanal appendages of *R. k. kumanskii* are slightly broader and shorter than the dorsoapical lobe and the apical margin is broadly V-shaped; in *R. k. turcica* ssp.n. it is much shorter and broader than the nominate subspecies, the apical margin is smooth in the middle; in *R. k. kumanskii*, the ventral and the dorsal edges of the coxopodite of the inferior appendages are parallel to each other (KUMANSKI, 1981); in the new ssp.n. the ventral edge is dilated ventrally; the harpago of *R. k. kumanskii* is deeply and roundly excised on the distal margin, in *R. kumanskii turcica* ssp.n. the excision is almost L-shaped on the distal edge; the parameres of *R. k. kumanskii* are broad and the ventral edge is somewhat rounded; the aedeagus is without ventral lobe, in *R. k. turcica* ssp.n. the parameres are thin, the ventral and the dorsal edges are smooth; the aedeagus with a small ventral lobe in the most of the specimens.

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Band/Volume: [34](#)

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Artikel/Article: [A new subspecies of Rhyacophila from Turkey \(Trichoptera, Rhyacophiliidae\) 17-18](#)