

BRAUERIA (Lunz am See, Austria) 24:15-17 (1997)

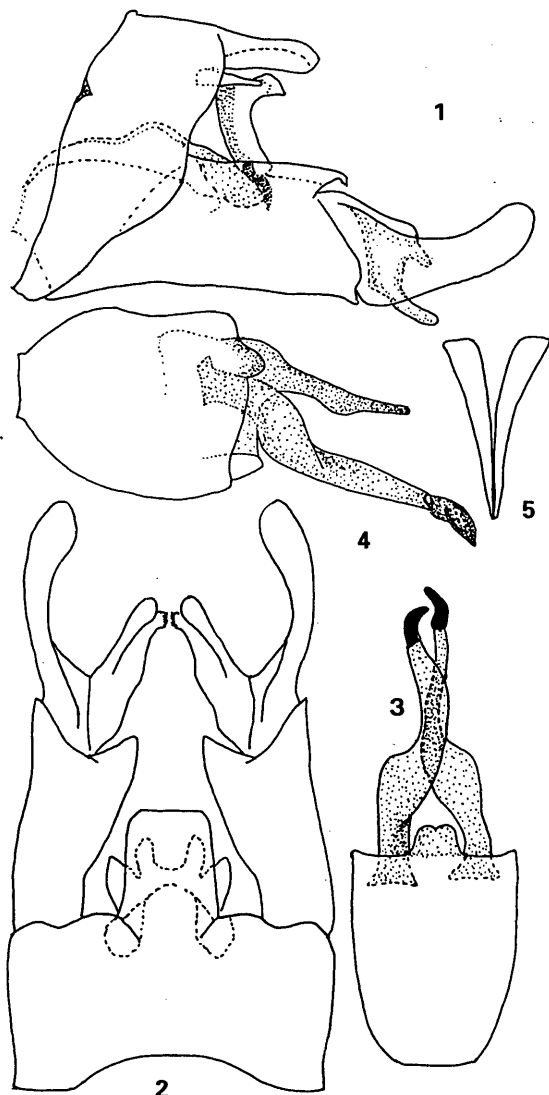
NEW SPECIES OF CADDISFLIES FROM TURKEY
(TRICHOPTERA: RHYACOPHILIDAE, HYDROPTILIDAE, BERAEDIAE)

Füsün SIPAHILER

Abstract. The following new species of Trichoptera from Turkey are described and illustrated: *Rhyacophila gorgitensis* sp.n. (Rhyacophilidae), *Hydroptila erkakanae* sp.n. (Hydroptilidae) and *Ernodes macahelensis* sp.n. (Beraeidae).

***Rhyacophila gorgitensis* sp.n.** (Rhyacophilidae)

Antennae, legs and wings pale brown; length of the anterior wing 12,5 mm. Male genitalia (Figs.1-5): Dorso-apical lobe of segment 9 broadly quadrangular in shape; preanal appendages are shorter than the dorso-apical lobe and combined with the dorsal branch of segment 10; in dorsal view, dorsal branch U-shaped excised medially, protruding two lobes on the sides, which are as long as the preanal appendages. The anal sclerites are narrow at the base and gradually dilated towards the apex and form a V-shape in dorsal view; they are almost separate, the minute connection is seen at the base. In lateral view, dorsal and ventral edges of the first segment of the inferior appendages are almost parallel to each other; posterior edge is deeply excised and forms a triangular lobe on the dorsal part, which is curved inside; the second segment is divided in two branches at the base: the outer branch is rather thin, long and directed dorsally in lateral view; the apex is rounded; the inner branch is broad, directed



Figs. 1-5: *Rhyacophila gorgitensis* sp.n. male genitalia: 1..lateral, 2..dorsal, 3..parameres ventral, 4..aedeagus and paramere lateral, 5..anal sclerites dorsal.

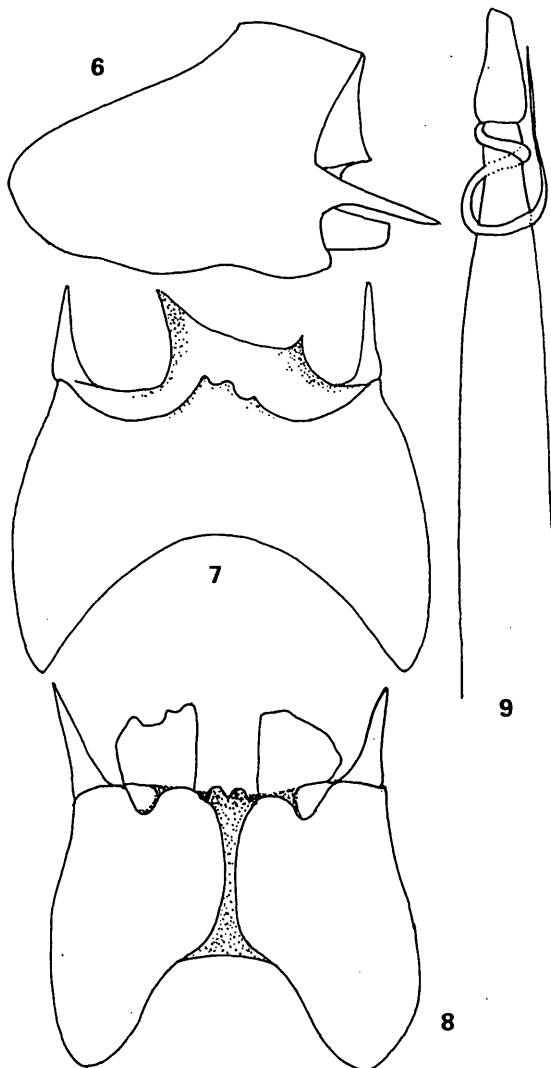
medially and as long as the half outer branch; in lateral view, the posterior edge is largely excised forming rounded lobes apically, of which the ventral lobe is longer than the dorsal lobe. In lateral view, the aedeagus is long, broad at the base, dilated in the middle on the ventral edge and narrow at the apex; the parameres are longer than the aedeagus, rather thin at the base, broader in the middle, curving inwards and narrower towards the apex; the apex possesses a sclerotized "spine" which is broad, oval and curved inwards.

Holotype male: Turkey, Artvin, Borcka, Camili, Karchal mountains, Gorgit yaylasi, 1600m, 26.10.1995 (at light), leg. and coll.Sipahiler.

Rhyacophila gorgitensis sp.n. belongs to the *vulgaris* group (Schmid 1970) and differs from all known species of genus *Rhyacophila* by the shape of the second segment of the inferior appendages, which have two branches arising from the bases, and the parameres, ending with oval "spines". These primitive characters of the genitalia indicate an early split of this species, found in the Caucasian part of Turkey, in the Karchal Mountains, which is an important refuge area, characterized by many endemic and relict species. Close relationships are not evident.

***Hydroptila erkakanae* sp.n.** (Hydroptilidae)

Wings dark brown, length of the anterior wing of male 2,5 mm. Male genitalia (Figs.6-9): Segment 9 largely excised in the middle; ventral excision is narrower; in lateral view, anterior edge of segment 9 is moderately and roundly elongated; in dorsal view, posterior edge is roundly excised on the sides, protruding as an asymmetrical triangle in the middle; the left side of this medial projection is emarginated. The latero-posterior



Figs. 6-9: *Hydroptila erkakanae* sp.n. male genitalia: 6..lateral, 7..dorsal, 8..ventral, 9..aedeagus dorsal.

projections of segment 9 are symmetrical, rather long, narrow and pointed at the apex; in lateral view, they are directed ventrally. Segment 10 is short and asymmetrical in shape, the apical margin is obliquely truncated, protruding pointed projections on the sides; the left margin is shorter than the right margin; in lateral view, segment 10 is developed vertically, forming an acute projection on the ventral corner of the posterior margin. Inferior appendages are short and rather broad, somewhat longer than segment 10 in lateral view; in ventral view, inner margins are smooth; the apical margin of the right inferior appendage protrudes pointed projections. Proximal part of the aedeagus broad and long; distal part is very short, sharply and somewhat obliquely truncated at the apex. The female is unknown.

Holotype male: Turkey, Ankara, Beypazari, Urus, Kirmir Çayı, 6.6.1996, leg. and coll. Sipahiler.

Hydroptila erkakanae sp.n. belongs to the *tigurina* group (Marshall 1979) which is composed of three distinct species in Europe. It resembles somewhat *H.rheni* Ris 1896 (Malicky 1983), found in Switzerland (Botosaneanu & Malicky 1978), which has also a narrow segment 10, developing vertically in lateral view and has pointed projections on the sides. *H.erkakanae* sp.n. differs from this species by the shape of several parts of the genitalia, namely, long and thin latero-posterior projections of segment 9, which are broad and rounded in *H.rheni*; the asymmetric segment 10, broad and short inferior appendages and the short and simple shape of the distal part of the aedeagus.

This new species is dedicated to my friend Prof.Dr.Füsun Erkakan (Hacettepe University).

Ernodes macahelensis sp.n. (Beraeidae)

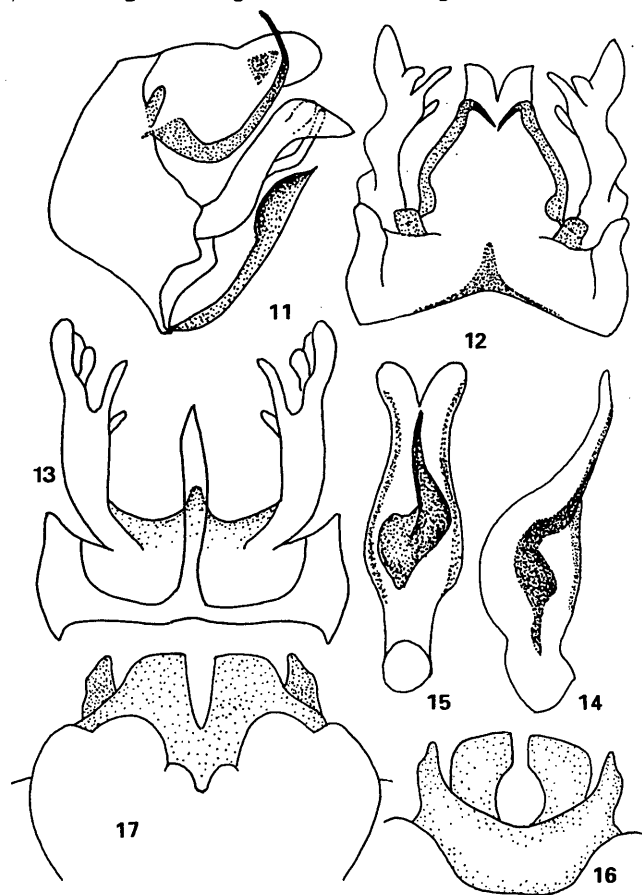
Antennae, legs and wings dark brown-blackish; the tubercle of the head between scapi is big and rather rounded at the apex. Medial projection of sternite 7 is thin, long and pointed at the apex; the length of the anterior wing of the male 4,5-5 mm, of the female 5 mm. Male genitalia (Figs.10-14): in lateral view, segment 9 is narrow dorsally and dilated anteriorly; posterior edge is also dilated in the ventral half, which is slightly excised and forms two small triangle projections; ventrally very narrow; there is a long median projection arising from the posterior edge; in lateral view this projection is dilated subdistally on the dorsal margin, directed somewhat dorsad and acute at the tip; in ventral view, the median projection is smooth and pointed at the tip. The preanal appendages are almost quadrangular in dorsal view. In lateral view, segment 10 is rounded on the posterior margin; subdistally with the triangular sclerotisations on the sides; in dorsal view, apically V-shaped excised. Intermediate appendages are long, rather broad at the base and strongly curved upwards. Intermediate appendages are long, rather broad at the base and strongly curved upwards. The inferior appendages are elongate and have three lobes, of which the inner lobe is long and the others short; the inferior appendages are connected to each other with a large plate, which protrudes medially as a rounded small lobe on the apical margin in ventral view. The aedeagus is largely bilobed at the apex, with a curved spine inside; the side of the aedeagus are sclerotized.

Female genitalia (Figs.15-16): The lateral lobes of segment 9 are thin, somewhat dilated on the sides and narrow at the tips. They are directed posteriorly. In dorsal view, the apical margin of segment 10 is straight; deeply split in the middle; there is a rounded membranous area on the posterior part of segment 9; the sides of the membranous part are sclerotized.

Holotype male, allotype female and paratypes (21 males and 3 females): Turkey, Artvin, Borcka, Camili (Macahel), Karchal mountains, Mereta yaylasi, direction Ugurköy, 1300m, 4.8.1995; other paratypes: same place, Ugurköy 1000m, 5.8.1995, 3 males, 3 females; Lodivake yaylasi, direction Efeler köyü, 1600m, 2 males; same place, 850-1300m, 1 female, 10.8.1996, leg.& coll. Sipahiler.

Ernodes macahelensis sp.n. is closely related to *E.saltans* Martynov 1913 (Malicky 1983), which was described from Caucasus and distributed through southern Anatolia and Levant. It is also found in Iran

(Schmid 1959). The main differences in the male genitalia are seen in the shape of segment 9, especially the ventro-median prolongation, which becomes thinner subdistally, curving at the apex, and the inferior appendages are close to each other at the base, forming a V-shape in the middle in *E.saltans*, while in *E.macahelensis* sp.n. ventro-median prolongation is strongly dilated subdistally in lateral view; straight in ventral view, and the inferior appendages are connected to each other with a large plate, protruding as a small projection in the middle. The differences in the female genitalia are also remarkable: in dorsal view, in *E.saltans* the lateral projections of segment 9 are directed on the sides and the apical margin of segment 10 is rounded (Sipahiler 1987); in *E.macahelensis* sp.n. the lateral projections are directed posteriorly and the apical margin of segment 10 is straight.



Figs. 10-14: *Ernodes macahelensis* sp.n. male genitalia: 10..lateral, 11..dorsal, 12..ventral, 13..aedeagus lateral, 14..aedeagus ventral.

Figs.15-16: *Ernodes macahelensis* sp.n. female genitalia: 15..dorsal, 16..ventral.

Acknowledgement. I wish to express my thanks to Dr.Ian Crichton, University of Reading, for correcting the English text.

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LIST OF RESEARCH WORKERS ON TRICHOPTERA

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Research subject: Trichoptera in general; water quality; competition; feeding ecology; Philopotamidae, Hydroptychidae. Area: Benelux / Europe. Wanted: Reference specimens. Information wanted: Field and laboratory experiments; rearing larvae. Other interests: Aquatic ecology, Plankton, Birds.

Mathias HOHMANN, Mitarbeiter am Biologielabor STAU Wittenberg/Sachsen-Anhalt.
Breite 4, D - 39261 Zerbst. Interests: Trichoptera from Northern Germany, esp. Sachsen-Anhalt. Other interests: Ephemeroptera, Plecoptera.

Dr.Sára NOGRADI & Dr.Ákos UHERKOVICH, Curators
Natural History Department, Janus Pannonius Museum
P.O.Box 347, H - 7601 Pécs.
Interest: Trichoptera from Europe, also South America, SE Asia. Previously studied: Faunistics, zoogeography, communities in C.Europe. Willing to identify smaller samples for other workers. Information wanted: Taxonomy, zoogeography, summarizing works from all over the world. Other interests of A.U.: Lepidoptera (Macrolepidoptera) of the Carpathian Basin.

Dr.Zandis SPURIS, Miera iela 19-6, LV - 2169 Salaspils, Latvija. Interests: Trichoptera of East Baltic (Estonia, Latvia, Lithuania). Other interests: Odonata, Heteroptera. Editor of 2 entomological journals, viz. Acta hydroentomologica latvica and Latvijas Entomologijas arhivs.

Heribert ZINTL, Großherzogin Maria Anna Weg 16a,
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Research subject: Spontaner Baumaterialwechsel von Potamophylax sp. Information wanted: Alle Arten mit spontanem Baumaterial-Wechsel. Ursachen ? Other interests: Ornithology, Bird protection.



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BRAUERIA (Lunz am See, Austria) 24:17 (1997)

EINE NEUE ARCTOPSYCHIDE AUS THAILAND

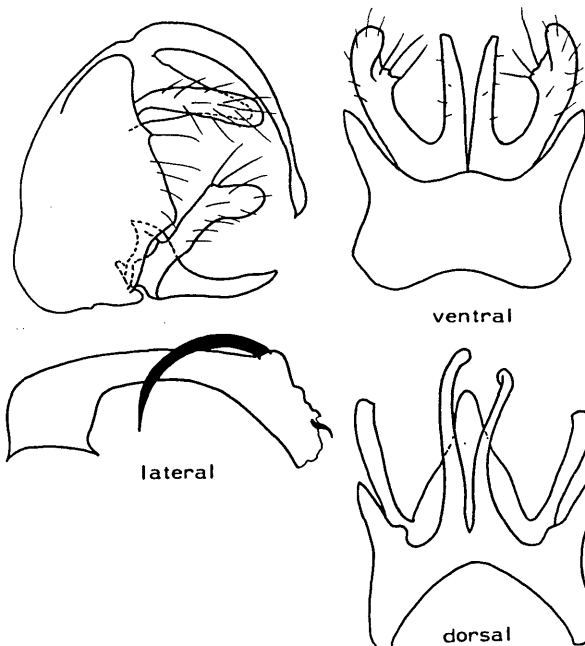
Hans MALICKY

(21.Arbeit über thailändische Köcherfliegen)

Herr Dieter Stengel überließ mir eine Ausbeute von Köcherfliegen aus Thailand, in der sich die hier beschriebene Art befand, die ich ihm mit vielem Dank widme:

Maesaipsyche stengeli n.sp.

Grundfärbung von Körper und Anhängen fahlgelblich, Antennen leicht geringelt. Thorax dorsal lang braun und gelblich behaart. Flügel breit dreieckig, graubraun mit vielen hellgelben Flecken. Sporne 244, Innensporn der Vordertibia sehr kurz. Länge eines Vorderflügels 6,5mm. Geäder wie beim Gattungstypus *M.prichapanyai*. Die ♂ Kopulationsarmaturen (Abbildungen) sind ähnlich wie bei dieser. Das 10.Segment ist häutig, aber ungeteilt; die dorsalen Dornen sind in einem gleichmäßigen Bogen nach unten gekrümmt, distal sind sie leicht blattförmig erweitert und terminal kurz zugespitzt. Die Präanalanhänge sind ziemlich parallelrandig und nicht keulig. Die unteren Anhänge sind tief zweigeteilt: der innere Teil ist schmal und leicht spitz und verläuft gerade nach hinten, der äußere Teil ist in einem Winkel von ungefähr 60° nach oben-hinten gerichtet, in Lateralansicht relativ breit, distal abgerundet und subdistal mit einem stumpfen Höcker an der Dorsalkante versehen, in Ventralansicht mit einem subdistalen dreieckigen Vorsprung innen. Der phallische Apparat ist mehr gestreckt als bei *prichapanyai*, und das dorsolaterale Dornpaar ist viel länger, d.h. halb so lang wie der ganze Apparat, und wie ein Ziegenhorn im Bogen nach zephal gekrümmt. - Diese Art fällt durch ihre Kleinheit und die tief gegabelten unteren Anhänge auf. Zwischen den beiden Ästen ist keine Naht zu erkennen, so daß es nicht klar ist, welcher davon eventuell das 2.Glied sein soll.
Holotypus ♂: Thailand, Provinz Chiangmai, Pai, 600m, 30.-31.3.1997, leg.Stengel, in meiner Sammlung.



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