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A NEW GENUS OF THE CHAETOPTERYGINI - TRIBE (Trichoptera: Limnephilidae)

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Chaetopteryx maximus was described by Kumanski (1968) as the most isolated member of the genus because of a number of atypical features. Soon afterwards, C.bulgaricus with similar features was discovered, and the maximus group was established as the most primitive one in the genus (Kumanski 1969). The discovery of the female of C.maximus then called for a re-examination of the position of the group. The general appearance, spur formula and structure of male and female genitalia of these two species differ so much from other species of Chaetopteryx that I now place them in the new genus described below.

Chaetopteroides gen.nov.

Type species: Chaetopteryx maximus Kumanski, 1968.
Spur formula (♂,♀) 1,3,4. A large insect. Wings showing sexual dimorphism. Male forewing relatively narrow, 17 - 22 mm in length, reaching well beyond the end of abdomen, e.g. like the wings of Allogamus uncatus; their apical portion dilated, apical margin convex and obtuse; wing membrane rather fine, yellow-brown, with an irregular pattern of numerous light spots occupying the greater part of the wing; veins fine; chaetae relatively stronger on the veins in the basal and posterior part of the wing, those on the membrane weaker and increasingly bent towards the apex. Female forewing 12 - 15 mm long, scarcely projecting beyond the abdomen, brachypterous mainly because of the reduction of the apical wing portion with shortened cells and blunt-obtuse apical margin. Female wings appear to be broader than male ones, with their veins more robust and chaetae longer and stronger, especially those in the basal area; membrane pattern similar to that in the male wings. Last tarsal segment with black ventral spines, other parts of the legs also with black spines. Leg segments elongate; male front tibia as long as the femur, first tarsal segment not longer than the rest, with its length 5-6 times greater than its width. Female front tibia somewhat shorter, with the femur as long as the tibia and half the length of the pretarsus.

Male genitalia. Eighth tergum with dark spinulae. Superior appendages small, elongate. Intermediate appendages elongate, straight, horizontal and acute, with an anterior pointing, more or less well developed, preapical tooth. Lateral bulges of the 10th segment large, in lateral view sharply protruding; ventral sclerites of the segment fused basally, encircling the anal region. Inferior appendages simple, with prominent distodorsal tip. Aedeagus feebly sclerotized; parameres much stronger, acute, with a row of denticles along their inner edge.

Female genitalia. Dorsal portion of 9th segment fused with 10th segment. Tenth segment short, its lateral processes obtuse, more or less developed. Ventral lobes of 9th segment flattened, either broadly separated or brought together and protruding.

Discussion. Chaetopteroides gen.nov. has so far been considered, rather artificially, as a species-group of Chaetopteryx. Because of a number of features its two species resemble those of some genera of the Stenophylacini-tribe such as Potamophylax, Halesus or Allogamus.

Such features are, for instance, the spur formula 1,3,4 in both sexes (in the rest of Chaetopterygini genera hind tibia with no more than three spurs), their large size, presence of a light spotted pattern on the forewing membrane, and the general far from robust appearance of the insects. On the other hand, the relatively well developed chaetae, with the obvious brachypterism and robust venation in the female forewings puts them in the Chaetopterygini-tribe. However, the new genus should be considered as the most primitive and least specialized within the tribe, being simultaneously a transitional element to that most advanced big taxon of the Limnephilidae as a whole.

Both species of Chaetopteroides gen.nov. inhabit the high mountain rhithral zone in the northern part of the Balkan Peninsula. They also belong to the autumn complex there, although adults of one of them (C.bulgaricus) have been collected in late August. However, the latter fact could be regarded as another indication of a lesser degree of specialization.

Chaetopteroides maximus (Kumanski) comb.nov.

Synonymy: Chaetopteryx maximus Kumanski, 1968, pp.59-61, fig. 1-4; 1971, p.106; 1972, pp.197-202; Botosaneanu & Malicky, 1978, p.354 (maxima); Marinković-Gospodnetić, 1980, p.74; Malicky, 1983, p.208. - Only males of this species were first known. I take the opportunity to describe here a female specimen most probably belonging to the same species.

Description of the female. Brachypterous; forewing 15 mm in length, scarcely projecting beyond the abdomen. Veins and chaetae stronger than in the male. Colour, spur formula and other details as in the male. Genitalia: 8th tergum without spinulae. 9th segment with short and broad, caudally protruded dorsal part. The dorsal part of the 9th and 10th segments fused, the latter presented by a pair of short, obtuse and pubescent lateral lobes (Fig.2) and by one also short, somewhat larger and strongly pubescent ventral part. Ventral part of the 10th segment with acute dorsolateral angles and a deep ventromedial concavity; this concavity surrounds ventrally the anal region (Fig.3). Ventral part of the 9th segment laterally rounded (Fig.1), its hairy lateral lobes less defined, broadly separated by a flat zone whose ventral portion replaces the proper supragenital plate which is lacking. Vulvar plate with big, laterally complicated lateral lobes and a considerably shorter and acute central lobe (Fig.3). Processus spermatecae very complicated; Fig.3 shows only the symmetrical, S - shaped internal cuticular ridges.

Distribution. The single female was found on Vitosha Mountain on 19 October 1974, near the type locality of this species. A second find has been published (Marinković-Gospodnetić, 1980) from Kopaonik Mountain, Yugoslavia.

Chaetopteroides bulgaricus (Kumanski) comb.nov.

Synonymy: Chaetopteryx bulgaricus Kumanski, 1969, pp.21-27. fig. 1-9; 1971, p.106; 1972, pp.197-202; Botosaneanu & Malicky, 1978, p.354 (bulgarica); Malicky, 1983, pp.208, 214.

This is the earliest species of Chaetopterygini. It begins to emerge in the last third of August and continues to the end of October.

Distribution. C.bulgaricus is known only from the mountains Rila and Pirin and, most probably, is endemic in Bulgaria.

References.

Botosaneanu,L., Malicky,H., 1978. Trichoptera. In: Illies,J.(ed.), Limnofauna Europaea, 2nd rev.ed., Stuttgart-New York-Amsterdam: 333-359.

Kumanski,K., 1968, Chaetopteryx maximus n.sp. aus Bulgarien (Trichoptera, Limnephilidae). - C.R.Acad.bulg.Sci., 21,1:59-61.

Kumanski,K., 1969, Chaetopteryx bulgaricus - eine neue Art aus der maximus-Gruppe (Trichoptera, Limnephilidae). - Reichenbachia 12, 3:21-27.

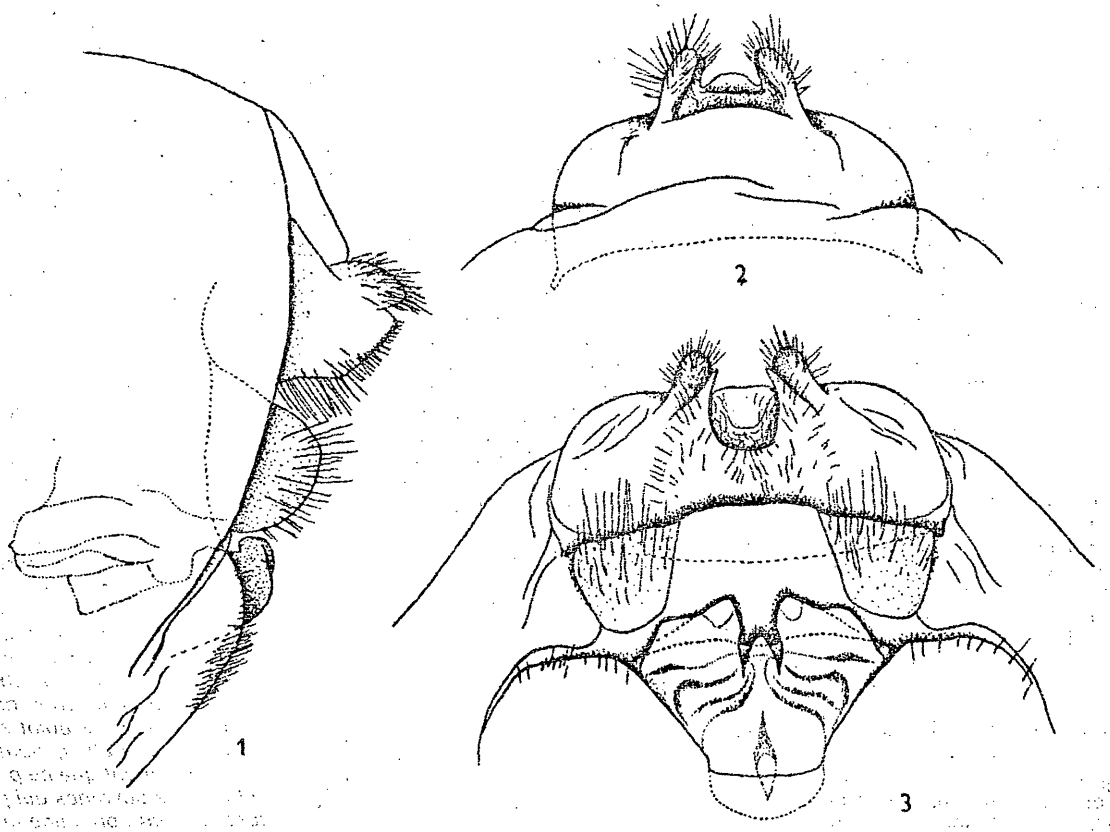
Kumanski,K., 1971, Beitrag zur Untersuchung der Köcherfliegen (Trichoptera) Bulgariens. III. - Bull.Inst.zool.Mus, 33:99-109 (In Bulgarian, summaries in Russian and German).

Kumanski,K., 1972, Review of autumn species of caddisflies in Bulgaria (Insecta: Trichoptera). - Bull.Inst.zool.Mus. 34:197-202.

Kumanski,K., Malicky,H., 1976, Beiträge zur Kenntnis der bulgarischen Köcherfliegen (Trichoptera). - Bull.ent.Pol. 46:95-126.

Malicky,H., 1983, Atlas of European Trichoptera. - Junk: The Hague, Boston, London. X + 298 pp.

Marinković-Gospodnetić,M., 1980, Trichoptera Fauna of SR Serbia. - Proc.Fauna SR Serbia 1:71-84.



Chaetopteroides maximus (Kumanski), female genitalia:

1 .. lateral, 2 .. dorsal, 3 .. ventral