

***Baetis baksan* sp. n., a new species of mayfly
(Ephemeroptera, Baetidae) from Central Caucasus**

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During an excursion to the Central Caucasus by students from the Faculty of Natural Sciences, Charles University, Praha, a new species of the genus *Baetis* LEACH was found. This species is now described and is named after the locality of the holotype.

***Baetis baksan* sp. n.**

(Plate I, 1—9)*

Adult male (holotype): Head light brown, eyes and ocelli dark grey. Antennal flagellum whitish. Turban-shaped eyes oval, 1.5 times as long as wide; faceted surface of eyes ferruginous or dark orange with a lighter ring round the margin; shaft of eyes paler with a ring of the same colour as the faceted surface. Thorax pitch-brown. Abdominal segments I—VI whitish, translucent, without markings; segments VII—X light brown, terga with a pair of diffuse triangular dark spots. Forewings translucent, venation including the three anterior longitudinal veins brown; pterostigma light grey with 7—9 simple cross veins. Hindwings with a triangular protuberance and only two longitudinal veins; third vein fused with the posterior margin of wing. Fore legs brown, tarsi longer by 1/8 than tibia. Middle and hind legs yellowish brown, tarsi darker. Basal segment of forceps approximately as long as wide. Segment 2 slightly enlarged towards segment 3; inner margin of segment 2 straight or very slightly concave; segment 3 oval, slightly longer than wide. Cerci whitish, basal part ringed.

Adult female (paratype No. 1): Head and thorax dark brown, eyes dark grey, antennae brown. Abdominal terga light brown without markings; a pair of V-shaped pitch-brown spots in the middle of abdominal sternae II—VI. Forewings translucent, all veins dark brown; pterostigma grey with partially forked cross veins. Hindwings with two longitudinal veins, the posterior vein usually forked. Legs light brown, tarsi darker. Cerci light brown, not ringed.

Body length: Male 11 (9—12) mm, female 8 (7—10) mm; length of cerci: male 22 (20—24) mm, female 17 (15—18) mm.

Subimago female (paratype No. 2): Head yellowish brown, thorax paler. Metanotum with a pair of pale spots as in *Baetis rhodani*. Abdominal segments yellowish brown; terga I—IX with two pale spots and two stripes

* Plate I will be found at the end of this issue.

which are usually fused on terga I—II; tergum X always paler, yellow; sterna II—IV with pale V-shaped spots. Wings dark grey. Legs yellowish brown with dark brown triangular spots on femora. Cerci grey, not ringed.

Larva (paratype No. 3): Head and body greenish brown. Eyes black, antennae yellowish. Pronotum with diffuse pale smudges, with spatulate scales on the protrusions of the anterior margin. Mesonotum with pale bands and spots. Wing pads paler. Abdominal terga with diffuse smudges; terga I, IV, V, IX and X paler than the others; a pair of small circular pale spots in the middle of terga V—VII. Spatulate scales and impressions on the surface of terga; scales and hairs irregularly alternate on the posterior margin of tergites. Ventral side of body yellowish; abdominal sterna VII—IX brown with a pair of yellowish spots. Labrum with 1 + 13 (11—14) pairs of bristles. Outer incisors with 5—6 rounded teeth; inner incisors nearly same length as outer ones. Apical part of segment 2 of maxillary palps with a group of setae and hairs. Segment 3 of labial palps oval, slightly pointed. Paraglossae and the inner margin of glossae with a large number of bristles. Femora greenish brown; oblong shaped pale spots projecting in a narrow band from near base to middle; long pointed bristles and pointed scales on the posterior margin. Tibiae light brown, tarsi darker. Claws with 8—12 blunt teeth gills oval, asymmetric; gill 3 nearly as long as two abdominal segments; teeth alternate with hairs on the margin of gills. In several specimens also 2—3 spines were observed, always located near the bases of gills 3, 4 and 5. Paraproct plate with several scales and only 2—4 teeth on the margin. Cerci yellowish, terminal filament shorter by 1/3 than cerci.

Body length: 8.5 (7.5—10.0) mm; length of cerci: 5 (4.5—5.5) mm.

Holotype (adult male): USSR, Kabardino-Balkar ASSR, Central Caucasus, river Baksan, Verchovyj, 28. vi. 1976 leg. M. Tonner. Paratype No. 1 (adult female), paratype No. 2 (subimago female), paratype No. 3 (larva): USSR, Kabardino-Balkar ASSR, Central Caucasus, river Garabashi, S foot of Elbrus, 3000 m, 26. vi. 1976 leg. M. Tonner. Further paratypes (10 ♂♂, 5 ♀♀, 150 larvae) from locality of holotype, coll. Soldán, Institute of Entomology, Czechoslovak Academy of Sciences, Praha.

Differential diagnosis: *Baetis baksan* sp. n. belongs to the *rhodani* species-group (MÜLLER-LIEBENAU, 1970). Critical adult characters are apparent from this key to males:

- 1 (2) Turban-shaped eyes without a lighter ring round the margin; shaft of eyes same colour as faceted surface (France, Italy, USSR, USSR) *B. gemellus* EATON, 1885
- 2 (1) Turban-shaped eyes with a lighter ring round the margin; shaft of eyes light and encircled by dark rings.
- 3 (4) Turban-shaped eyes liver-brown. Hindwing with three longitudinal veins. Inner margin of segment 2 of forceps somewhat convex (West Palaearctic) ... *B. rhodani* (PICTET, 1845)
- 4 (3) Turban-shaped eyes ferruginous or orange. Hindwing with two distinguishable longitudinal veins. Inner margin of segment 2 of forceps straight or slightly concave (Central Caucasus) *B. baksan* sp. n.

Critical characters distinguishing the larvae of *B. baksan* sp. n. from other species of the *rhodani* group are keyed in following work (SOLDÁN, 1977). The larvae can be distinguished by the following combination of characters: paracercus fully developed, no setae near the top of claws, a group bristles and hairs on the apex of segment of maxillary palps, outer incisor with blunt teeth, teeth of the same length on the margin of gills, less than 5 teeth on the margin of paraproct plate.

Bionomy: Taking into account the bionomy of related species (LANDA, 1968), probably two generations a year occur at lower altitudes. Larvae live in mountain streams together with *Epeorus* (*Iron*) and *Rhithrogena* spp. larvae. Adults fly in June and July. Older larvae may be found in May, June and July.

Distribution: This species is very abundant in alpine and subalpine zones of the Central Caucasus at altitudes of 2000—3000 m; at lower altitudes it is solitary to rare. So far known only from the basin of the river Baksan.

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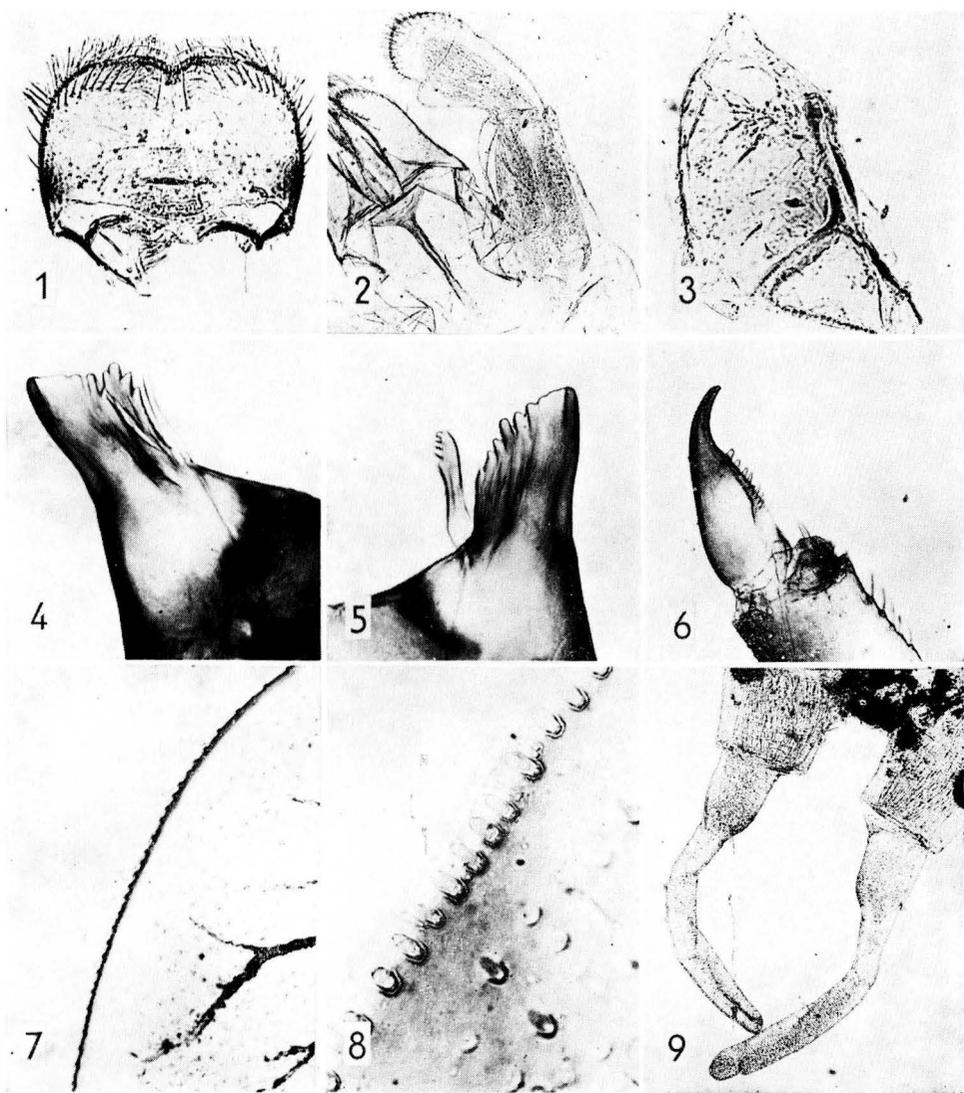


Plate I, 1—8: *Baetis baksan* sp. n., larva (paratype No. 3). Fig. 9. *Baetis baksan* sp. n. adult male (holotype). Fig. 1 — labrum. Fig. 2 — glossa, paraglossa and labial palpus. Fig. 3 — paraglossa. Fig. 4 — outer and inner incisors of left mandibula. Fig. 5 — the same, right mandibula. Fig. 6 — margin of the 3rd gill. Fig. 7 — posterior margin of abdominal tergum III. Fig. 9 — forceps. Figs. 1—7, 9 — objective 10, projection 8. Fig. 8 — objective 64, projection 8.