

# The larva of *Hydropsyche botosaneanui* MARINKOVIĆ-GOSPODNETIĆ 1966 (Trichoptera, Hydropsychidae)

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## 1 Introduction

*Hydropsyche botosaneanui* is a rare species of the *H. pellucidula*-group described by Marinković-Gospodnetić (1966, 1979) from the Balkan peninsula. It is distributed from Central to Southeast Europe. Within the Central European species of the *H. pellucidula*-group (*Hydropsyche pellucidula* (Curtis 1834), *H. botosaneanui* Marinković 1966, *H. dinarica* Marinković 1979, *H. incognita* Pitsch 1993) only the larva of *H. botosaneanui* was unknown.

## 2 Examined material

The description of *H. botosaneanui* is based on 10 specimens (4 pupae, 2 larvae 5<sup>th</sup> instar, 4 larvae 4<sup>th</sup> instar) from the epirhithral region of the Weierbach (580 m a.s.l., tributary system: Dill→Lahn→Rhein) downstream the village Liebenscheid (Top. map 5314 Rennerod, 8°06'19"E, 50°41'58"N; Rhineland-Palatinate, Germany). For the differential diagnosis larval sclerites of *H. pellucidula* and *H. incognita* (different locations in Germany; leg. Pitsch 1984-1987) were provided by Dr. Pitsch (Berlin).

## 3 Description of the final instar larva

**Parietalia** (Fig. 1a-d, i): Dorsal: Complete dark brown, only in brighter specimens a narrow, slightly brighter posterior band is visible. Lateral: Light brown with a dark brown saddle shaped dorso-medial pattern which could reach to the dark brown ventral boundary. Eyes surrounded by a yellowish ring. Ventral: complete dark brown. **Frontoclypeus** (Fig. 1e-f): Ground coloring dark brown to blackish. Frontoclypeal anterior spot less distinct and not fused with median marks. These are brighter and run along the clypeal edge not reaching the outer clypeal margins. They enclose a black spot (pretentorina) on each side. Posterior spot indistinct and barely visible. Frontoclypeal edge continuous. Outline rough-edged, with nearly trapezoid posterior part, rectangular median part and triangular posterior part. **Submentum** (Fig. 1g): Lateral lobes narrow and elongated. Anterior median margin with a distinct hump. Posterior margin slender and pointed. **Posterior prosternites** (Fig. 1h): Proximal parts sclerotized, rectangle to rhombic in shape and dark brown in color. Lateral parts light and less sclerotized. **Nota** (Fig. 1i): Pronotum dark, mesonotum middle and metanotum light brown.



Fig. 1: *Hydropsyche botosaneanui*; a) head dorsal; b) parietalia lateral; c) head lateral; d) head ventral; e) frontoclypeus dorsal; f) frontoclypeus dorso-lateral; g) submentum; h) posterior prosternites; i) larva dorso-lateral.

## 4 Discussion

### 4.1 Differential diagnosis

The larva of *Hydropsyche botosaneanui* is very similar to *H. incognita*. Most significant feature for separating *H. botosaneanui* from *incognita* and *pellucidula* is the distance between the center of the black spots (pretentorinae) on the frontoclypeus expressed as ratio of  $m / (s1 + s2)$  (Fig. 2a) with  $m$ : distance between the pretentorinae and  $(s1+s2)$ : sum of distances between pretentorinae and lateral clypeus margin. In *H. botosaneanui* this ratio (1.31-1.74) is smaller than in *incognita* (1.94-2.28) and *pellucidula* (2.26-2.52) ( $n = 10$  each). Further characteristics of *H. botosaneanui* which separates it from *H. pellucidula* are: the broader and rough-edged shape of the frontoclypeus (Fig. 2a-c), the coloring patterns on the parietalia (Fig. 2d-i), the median hump on the submentum and its shape (Fig. 2j-l).

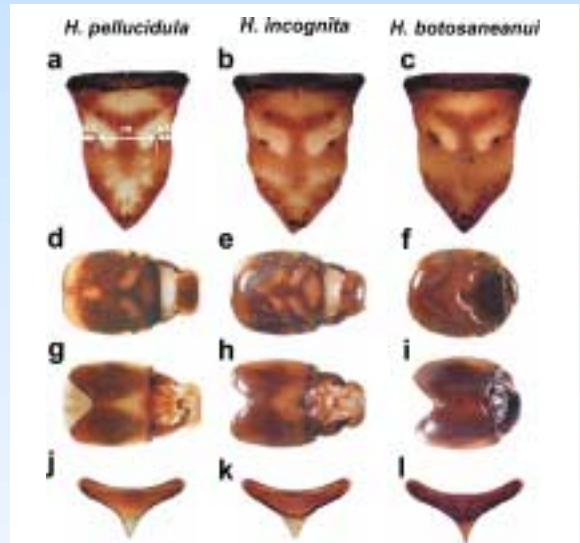


Fig. 2: a,d,g,j) *Hydropsyche pellucidula*; b,e,h,k) *H. incognita*; c,f,i,l) *H. botosaneanui*; a-c) Frontoclypeus; d-f) head dorsal; g-h) head ventral; j-l) submentum.

### 4.2 Ecology and Chorology

In Central Europe *H. botosaneanui* seems to be an inhabitant of (epi)rhithral stream regions of montane altitudes with an early flight period from May to June. The presence of *H. botosaneanui* has been ascertained for Germany, Bosnia-Herzegovina, Romania, Greece and Turkey.

## 5 References

- Marinković-Gospodnetić, M. (1966): New species of Trichoptera from Yugoslavia. – Bull. Sci. Cons. Acad. RSF Yugoslavia, Sect. A 11: 110-112.  
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