

# A new stonefly from Greece, *Leuctra pavesii* sp. n. (Plecoptera : Leuctridae)

Autor(en): **Vinçon, Gilles**

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## A new stonefly from Greece, *Leuctra pavesii* sp. n. (Plecoptera: Leuctridae)

GILLES VINÇON

55 Bd Joseph Vallier, F 38100 Grenoble, France; vincon@kls-logistic.fr

*Leuctra pavesii* sp. n. from the Cephalonia Island (Greece) is described and compared with closely related species: *L. hippooides* Kačanski & Zwick, 1970, *L. pseudohippopus* Raušer, 1965 and *L. hippopus* Kempny, 1899.

Keywords: Plecoptera, Stoneflies, *Leuctra pavesii* sp. n., new species, Greece, Cephalonia.

### MATERIAL AND METHODS

This study deals with stoneflies collected in 2001 on the Cephalonia Island by Dr. Pavesi. They were previously stored in the collection of Carlalberto Ravizza, Milan, Italy, and given to me for study in 2012.

The specimens are preserved in 70 % ethanol. The holotype and 1 male, 1 female (paratypes) are deposited in the collection of the Museum of Zoology, Lausanne (MZL) (Switzerland). Other paratypes are stored in the Gilles Vinçon Collection.

### RESULTS AND DISCUSSION

#### *Leuctra pavesii* sp. n.

(Figs 1–2)

**Material examined.** **Holotype** male: Greece, Cephalonia Island, 2 km east of Nikolaos Mount, 140 m, 20.03.2001, deposited in the MZL (Pavesi leg.). 1 ♂, 1 ♀ **paratypes** same locality and date, deposited in the MZL. **Other paratypes:** same locality and date: 1 ♂, 1 ♀ (Pavesi leg.). **Other material:** Cephalonia, Koulourata Mount, 180 m a.s.l., 15.03.2001, 2 ♂♂, 2 ♀♀ (Pavesi leg.).

**Description** (Figs 1a–e). Medium sized *Leuctra* species: ♂ body length 5.1–5.5 mm, ♀ 6.5–8.2 mm. Fore wing length ♂ 6.3–6.5 mm, ♀ 7.2–8.5 mm. General color brown. Head dark brown. Antennae brownish, with short erect bristles at the tip of each segment; bristles as long as antennal segment width. Pronotum brown with dark pattern. Legs light brown with tarsal segments darker. Body, wings and legs covered with short hairs.

**Male abdomen** (Figs 1a–b, 1d–e): terga I–VI simple, terga VII–X modified. Tergum VII with median bell-shaped membranous field; anterior margin interrupted on nearly one third of segment's width (Fig. 1a). Tergum VIII: antecosta interrupted medially on nearly one fourth of segment's width. From the inner corners of

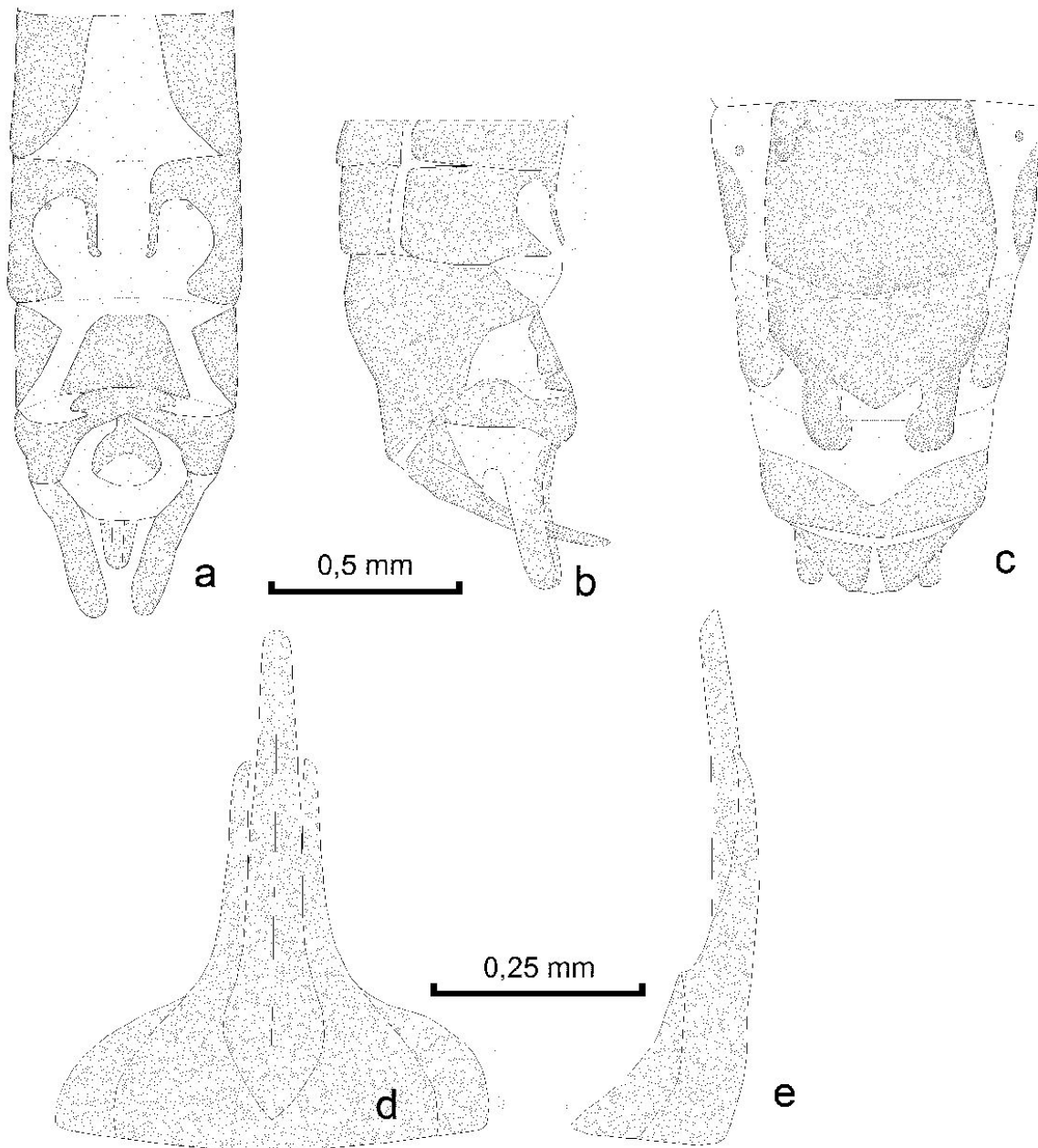


Fig. 1. *Leuctra pavesii* sp. n.: male abdomen in dorsal view (a), lateral view (b), paraprocts in ventral view (d), lateral view (e). Female abdomen in ventral view (c).

the antecosta, two long sclerotized expansions extend backwards, nearly reaching two thirds of segment's length (Fig. 1a). Expansions parallel, hardly prominent in lateral view (Fig. 1b), ending in a blunt tip and separated by a median membranous field. Tergum IX: anterior margin divided for more than half segment's width; wide trapezoidal sclerite in middle of median membranous field. Tergum X anteriorly bilobed and with wide rounded posterior notch where the epiproct is placed. Cerci very long, covered with long erect setae. Epiproct rounded with short stalk (Fig. 1a). Style of paraprocts with rounded base flanked by well visible lateral lobe, and with long thin inner expansion (Fig. 1d); expansions sickle-shaped ending in a sharp



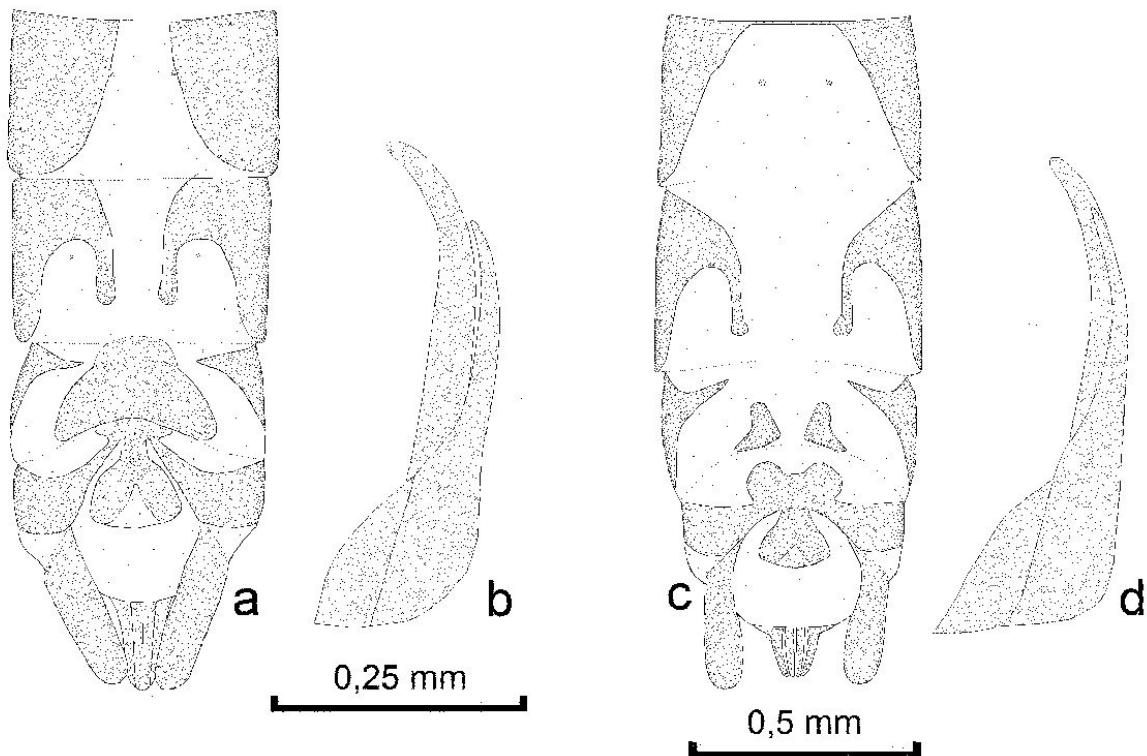


Fig. 2. *Leuctra hippopoides*: male abdomen in dorsal view (a), paraprocts in lateral view (b). — *Leuctra pseudohippopus*: male abdomen in dorsal view (c), paraprocts in lateral view (d).

point in lateral view (Fig. 1e). Specilla long, straight, blade-shaped, much longer than styles, progressively getting narrower toward sharp tip (Fig. 1d–e). Sternum IX without vesicle (Fig. 1b).

Female abdomen (Fig. 1c): sternum VII with wide sub-rectangular median sclerite; posterior edge slightly rounded, partly projecting on anterior part of sternum VIII (Fig. 1c). Sternum VIII: subgenital plate nearly semicircular with two long lateral lobes and a median small triangular expansion between them. Each lobe about two times longer than wide, ending in a rounded tip slightly bent inward, and widely separated by a median membranous field (Fig. 1c). Plate brownish, less pigmented than dark sclerotized lobes.

*Affinities.* In the *L. hippopus* group, *L. pavesii* sp. n. is characterised by the two parallel sclerotized expansions on tergite VIII, also characterizing other species of the same group: *L. andalusiaca* Aubert, 1962 (Iberian Peninsula), *L. artvinensis* Vinçon & Sivec, 2001 (eastern Anatolia), *L. collaris* Martynov, 1928 (Anatolia, Caucasus and Elburz), *L. elisabethae* Ravizza, 1985 (Italian Peninsula), *L. fraterna* Morton, 1930 (Corsica), *L. gallica* Aubert, 1953 (Iberian Peninsula and France), *L. hippopoides* (western and southern Balkan Peninsula), *L. hippopus* (Europe, Anatolia and Lebanon) and *L. pseudohippopus* (eastern Balkan Peninsula). It is more closely related to the three last ones. It differs from *L. hippopoides* and *L. pseudohippopus* in the male by the shape of the tergal ornamentations, especially the shape of the median plate on tergite IX and the shape of the epiproct (Figs 1a, 2a, 2c), by the shape of the specilla, nearly straight in lateral view in *L. pavesii* (Fig. 1e) and with curved tip in the two other species (Figs 2b, 2d) and by the lack of ventral

vesicle, and in the female by the triangular sclerotized expansion between the two lobes of the subgenital plate in *L. pavesii* (Fig. 1c), that is absent in *L. hippopoides* (Kačanski & Zwick 1970, Fig. 3c), and in *L. pseudohippopus* (Raušer 1965, Fig. 12). It separates from *L. hippopus* in the male by: – trapezoidal sclerite of tergite IX lacking the longitudinal median depression that is present in *L. hippopus* (Ravizza & Vinçon 1998, Fig. 17a), – different shape of the epiproct, – lack of ventral vesicle and – in the female, presence of a triangular sclerotized expansion between the 2 lobes (Fig. 1c).

*Geographical distribution and ecology.* *L. pavesii* sp. n. seems to be a micro-endemic species only known from the Greek island of Cephalonia where it occurs in mountain brooks (140–180 m a.s.l.). The flight period coincides with early spring (II–IV). *Brachyptera beali beali* (Navás, 1923) and *Protonemura mattheyi* (Aubert, 1956) have been collected on the same island.

*Etymology.* This species is dedicated to Dr. Maurizio Pavesi, first collector of this species.

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