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A NEW SPECIES OF LEPTOPHLEBIIDAE
FROM SOUTHERN ITALY: *CHOROTERPES BORBONICA* N., SP.
(Ephemeroptera)(*)

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INTRODUCTION. I have recently collected and examined several nymphs and adults of a *Choroterpes* from Southern Italy with peculiar characters. Further investigations on material preserved in my collection confirmed the existence of a new species, distributed on western Southern Italy and on Sicily, which hereafter I describe.

***Choroterpes (Choroterpes) borbonica* n.sp.**

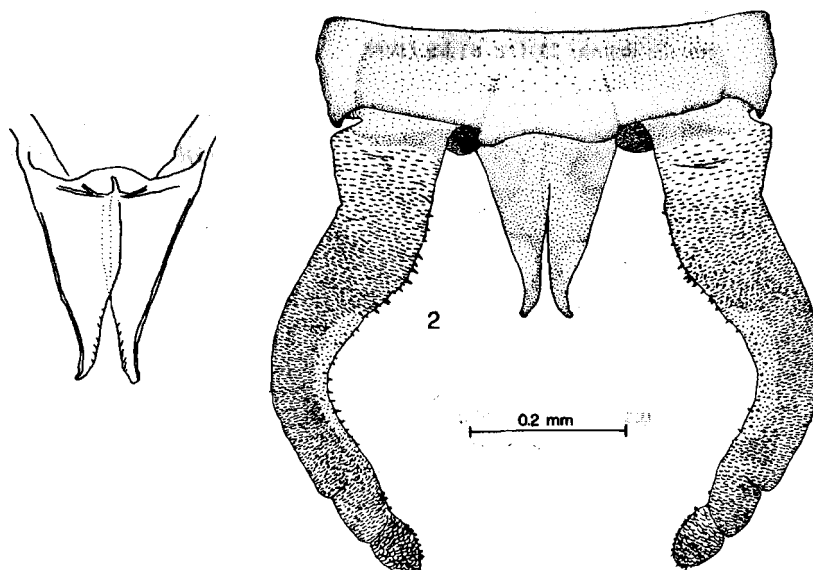
DIAGNOSIS. An Italian *Choroterpes* (subgen. *Choroterpes*) with tergites without V-shaped pale markings; male imagines with relatively short and stout penis lobes; nymphs with bristles on upper surface of femora arranged in 2-5 rows.

MATERIAL. Campania, Cilento, Celle di Bulgheria (SA), R. Mingardo, 9.7.1987: holotype (1 male imago) and 5 paratypes (6 male imagines) + 1 6 male imagines; 18.9.1987: 3 female subimagines (paratypes) and 5 nymphs (paratypes) + 7 female subimagines (reared) and 33 nymphs; Campania, Cilento, Laurito (SA), R. Mingardo, 8.7.1987: 10 nymphs; 15.9.1987: 2 male imagines. Molise, Venafro (IS), R. Volturmo, 29.7.1978: 4 nymphs (the above listed material collected by C. Belfiore). Sicilia, Marineo (PA), R. Eleutero, 450 m, 28.9.1967: 1 nymph (C. Consiglio leg.). All material preserved in the Author collection.

MALE IMAGO. Body length 7-8 mm (holotype 7.5 mm), forewing 7 mm, cerci 8 mm. Upper portion of eyes yellowish brown, lower portion greyish black. Scapus and pedicellus of antennae light brown, flagellum light greyish brown. Thorax dark brown, pleurae with light spots. Legs brown, coxae and apex of femora darker. Longitudinal veins of wings light brown, C and R slightly darker; a dark brown spot is at the basis of SC and R; cross veins light brown. Abdominal tergites 1-7 brown, translucent, 8-10 opaque; tergites 1-8 with two submedial light rounded spots near fore margin. Two longitudinal dark stripes, are at sides of a narrow pale median line

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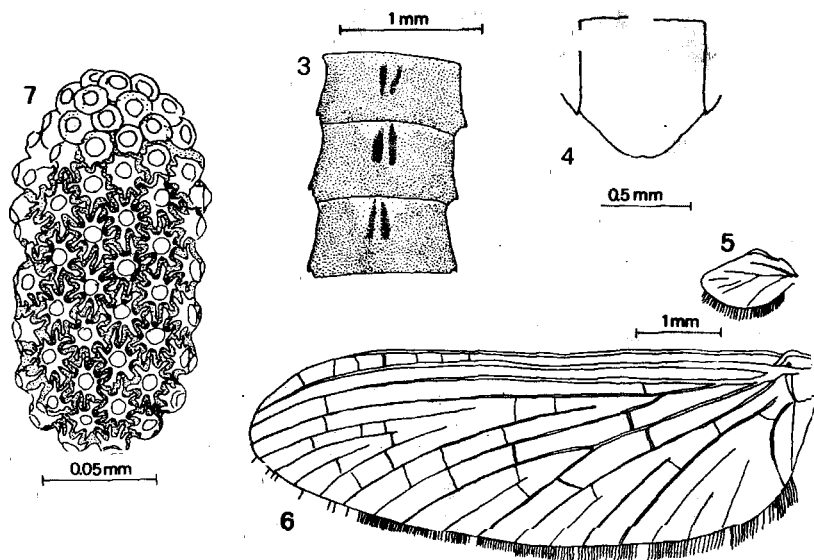
Figs. 1-2—*Choroterpes borbonica*, male imago: penis, dorsal view (2); gonopodes and penis, ventral view (1).

(fig. 3). Sternites 2-8 with a large violet obovate spot at the centre of a pale area, lateral margins washed with brownish. Cerci brown with basal part of segments slightly darker. Penis (figs. 1-2) with wide basis, relatively stout and with apex slightly bent outwards.

FEMALE SUBIMAGO. Length 5-7.5 mm, forewing 7-8.5 mm, cerci 9 mm. Flagellum of antennae greyish brown, proximally lighter, scapus and pedicellus yellowish brown with brown spots on dorsal part. Thorax dorsally dark brown, pleurae and sterna light brown with dark brown stripes. Wings (figs. 5, 6) opaque light brown. Legs yellowish brown. Mid part of femora and joints of leg segments washed with dark greyish brown. Abdomen uniform dark greyish brown. IX sternite with a little median emargination (fig. 4).

EGG (fig. 7). Slender (180x90 μ). Star-shaped chorionic sculptures regularly disposed on the equatorial zone and at one pole.

FULL GROWN NYMPH. 7-9 mm. General colour brown with a violet tinge. Abdominal tergites brown with a pale longitudinal stripe and two submediai pale spots near fore margin (fig. 12). Sternites with violet nervous ganglia on a pale background. Sides of sternites darker.



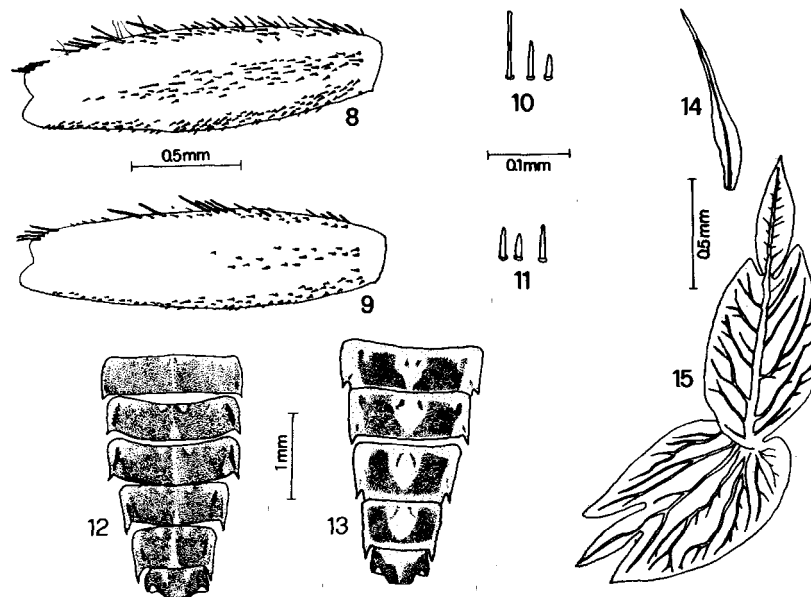
Figs. 3-7 — *Choroterpes borbonica*, male imago: IV-VI abdominal tergites (3); female subimago: IX sternite (4), fore (5) and hindwing (6); egg (7).

Mouthparts as *C. picteti* (see Grandi, 1941). Femora (fig. 8) with several narrow bristles on upper surface, arranged in 2-5 rows which attain more than 2/3 of femora length. On hind femora some of these bristles are very long (Fig. 10). Tarsal claws little hooked at apex. First gill (fig. 14) long and narrow, tapering toward apex. Other gills (fig. 15) like *C. picteti*.

DERIVATIO NOMINIS. The species is named after the Bourbon dynasty, whose kingdom extended from Campania to Sicily.

DISTRIBUTION, PHENOLOGY AND AFFINITIES. *C. borbonica* is distributed on the Tyrrhenian part of Southern Italy, to Sicily. From the collection dates of adults we can assume two flight periods, on Summer (June-July) and on Autumn (September).

The new species is somewhat intermediate between *C. picteti* Eaton, distributed all over Northern and Central Italy and on the Adriatic versant of Southern Italy, and *C. lindrothi* Peters, described from Morocco (Peters, 1980). *C. borbonica* has paired pale obovate spots on abdominal tergites unlike the wide V-shaped pale markings of *C. picteti*: *C. lindrothi* shares quite uniformly pigmented tergites. Penis lobes of *C. borbonica* are stouter than *C. picteti*, more slender



Figs. 8-15 — Nymphs: hind femur of *Choroterpes borbonica* (8) and *C. picteti* (from Apulia) (9); bristles on hind femur of *C. borbonica* (10) and *C. picteti* (11); V-X abdominal tergites of *C. borbonica* (12) and *C. picteti* (13); gills of *C. borbonica*: I (14) and IV (15).

than *C. lindrothi*. Nymphs of the new species differ from that of *C. picteti* (figs. 9, 11, 13) mainly for the amount and the shape of bristles on upper surface of femora, longer and more abundant in the former. Nymphs of *C. lindrothi* are unknown, as unknown are the nymphs of *C. lesbosensis* Gaino & Sowa, a species described on the basis of only female subimago (Gaino & Sowa, 1985). From this latter species, *C. borbonica* differs for the narrower eggs.

SUMMARY

Male imagines, female subimagines, eggs and nymphs of *C. borbonica* n. sp. are described from Tyrrhenian part of Southern Italy. The new species is distinguishable from the closely related *C. picteti* Etn. for a more uniform pigmentation of abdomen, for penis lobes shorter and stouter (male imago) and for the amount of bristles on upper surface of nymphal femora.

RIASSUNTO

Vengono descritti gli stadi alati, l'uovo e la ninfa di una nuova specie raccolta in Italia meridionale, dalla Campania alla Sicilia: *Choroterpes borbonica* n. sp. I caratteri che permettono di distinguere tale specie dalla affine *C. picteti* Etn., distribuita più ampiamente in Italia ed in Europa, sono la pigmentazione dell'addome delle immagini maschili e delle ninfe, che non presentano le caratteristiche macchie chiare a forma di V, i peni delle immagini maschili meno appuntiti e più corti, il maggior numero e la maggiore estensione delle setole sulla superficie dorsale dei femori delle ninfe.

LITERATURE CITED

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