

DESCRIPTION OF THE NYMPH OF *HOMOEONEURIA*
(*NOTOCHORA*) *FITTKAUI* PESCADOR & PETERS, 1980
FROM NORTHEASTERN BRAZIL
(EPHEMEROPTERA, OLIGONEURIIDAE, OLIGONEURIINAE)

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ABSTRACT. A nymph of *Homoconeuria fittkau*, collected in Bahia State, Brazil, is described and illustrated. It is the discovery of the subgenus *Notochora* in the immature stage. Nymphal morphology was found similar but distinct in the subgenera *Homoconeuria* s.s. and *Notochora*.
KEYWORDS. OLIGONEURIIDAE, *HOMOEONEURIA* (*NOTOCHORA*) *FITTKAUI*, NYMPH, BRAZIL (BAHIA).

INTRODUCTION

In the revision of the mayfly genus *Homoconeuria* Eaton, 1881, PESCADOR & PETERS (1980) established the monotypic subgenus *Notochora* for adults of *H. fittkau* Pescador & Peters, 1980, from Amazonas State, Brazil. The immature stages were unknown.

During studies carried out in the potamal section of the Mucuri River, Bahia State, northeastern Brazil, a single mature nymph of *H. (N.) fittkau* was collected and is herein described. The correlation between this nymph and the already described imagines of *H. (N.) fittkau* was established by colour pattern of abdominal terga, size and geographical distribution, a consistent trend within the genus *Homoconeuria* (PESCADOR & PETERS, 1980).

Subgenus *Notochora* Pescador and Peters, 1980

Mature nymph. Similar to *Homoconeuria sensu stricto*.

Head hypognathous. Antennae inserted below eyes, approximately 7/10 the length of head; pedicel about 4 times as long as scape. Legs: mesothoracic 1 1/3 the length of proto and metathoracic legs; tarsal claw of mesothoracic leg long and slender, with a subapical denticle; tarsal claw of metathoracic leg long and slender, without denticles. Abdomen: posterolateral spines on segments 8-9; sternum 1 with a short finger-like posteromedian process, as in *Homoconeuria* s.s. (PESCADOR & PETERS, 1980). Maximum width of gills 2-7 approximately 1/4 of their maximum length.

Species included. *Homoconeuria (N.) fittkau* Pescador & Peters, 1980.

Geographical distribution: northern and northeastern Brazil (new record).

Homoconeuria (Notochora) fittkau Pescador and Peters, 1980

(Figs. 1, 9)

Mature nymph (in alcohol) - Length: body 6.8 mm; cerci 2.0 mm; median filament 1.8 mm.

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Head pale yellow; vertex without markings. Ocelli white, inner 1/2 light grey. Eye dark grey. Antenna yellow, with 12 segments; pedicel with short and thick setae. Mouthparts: mandibular incisors with 4 apical teeth; prostheca with 4 major branches and a smaller inferior one; galea-lacinia of maxilla with a subapical row of 14-15 spinous setae; segment 2 of maxillary palpus 4 times as long as segment 1; posterior margin of superlingua of hypopharynx strongly curved; segment 1 of labial palpus approximately 3/4 length of segment 2.

Thorax yellow; mesonotum with an inconspicuous light brown spot between the median line and the lateral margins. Legs pale yellow, coxae and femora slightly darker. Prothoracic leg: coxa without spot; trochanters approximately 1/3 the length of coxa; tibia bowed, approximately as long as femur, maximum width approximately equal to maximum width of femur; distance of tarsus from the apex of tibia approximately 2/3 the maximum width of tibia; apical portion of tibia not curved downward. Mesothoracic leg: trochanter 2/3 the length of coxa; tarsus 7/10 the length of tibia; tarsal claw approximately 1/2 the maximum length of tarsus and approximately 4/5 the length of tarsal claw of metathoracic leg. Metathoracic leg: trochanter 1/3 the length of tibia; tibia approximately 7/10 the length of femur, tarsus 2/3 the length of tibia; tarsal claw as long as tarsus.

Abdomen. Terga and sterna pale yellow, slightly darker on posterior margins, without markings. Caudal filaments pale yellow; setae pale yellow.

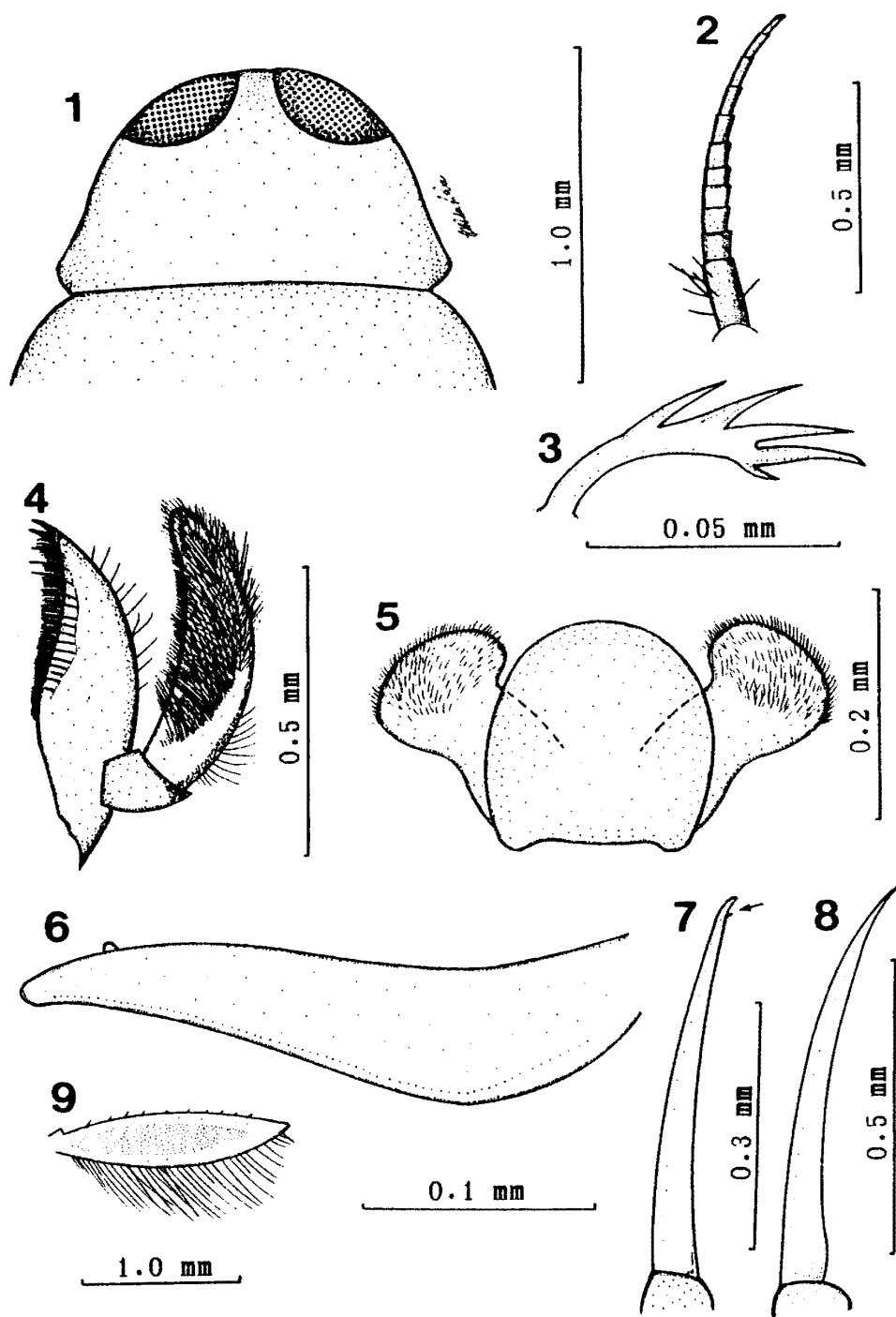
Material examined. 1 mature nymph (EP-029) - BRASIL: Bahia, Nova Viçosa, Rio Mucuri (3 km S BR-101 Road), 20.IV.1988, J.L. Nessimian, A.L. Carvalho & R.M.A. Lemos col., deposited in the Entomological Collection of Departamento de Zoologia, Instituto de Biologia, Universidade Federal do Rio de Janeiro.

Biology. The Mucuri River is a large, moderately rapid stream with shifting sand bottom. The mayfly faunal components are typically widespread potamal forms such as the genera *Baetis* Leach, 1815 (Baetidae), *Leptohyphes* Eaton, 1882 (Tricorythidae) and *Thraulodes* Ulmer, 1920 (Leptophlebiidae), as well as some Amazonian species such as *Fittkaulus maculatus* Savage & Peters, 1978 (Leptophlebiidae) and *H. (N.) fittkaui*.

The nymph of *H. (N.) fittkaui* was collected from a depth of about 70 cm; the water temperature at the moment of capture (9:15 A.M.) was 24° C the pH was 7.47 (J.L. Nessimian, pers. com.).

DISCUSSION

In the nymphal stage, *H. (N.) fittkaui* can be distinguished from the other species included in the genus by the following combination of characters: (1) antennal pedicel with short and thick setae (Fig. 2); (2) posterior margins of superlingua of hypopharynx strongly curved (Fig. 5); (3) tibia of prothoracic leg bowed (Fig. 6), as long as femur, maximum width approximately equal to maximum width of femur; (4) distance of tarsus from apex of tibia of prothoracic leg 2/3 the maximum width of tibia (Fig. 6); (5) tarsal claw of mesothoracic leg with a subapical denticle (Fig. 7); (6) abdominal terga without markings.



Figs. 1-9. *Homoeoncuria (Notochora) fittkau*, mature nymph: 1, head and prothorax, dorsal view; 2, antenna; 3, mandibular prosthema; 4, left maxilla, dorsal view; 5, hypopharynx, dorsal view; 6, tibia and tarsus of prothoracic leg; 7, claw of mesothoracic leg, showing the subapical denticle; 8, claw of metathoracic leg; 9, gill II.

PESCADOR & PETERS (1980: 387) figured the probable phyletic lineages of the *Homoeoneuria* species, and *H. (N.) fitzkau* was taken to be the sister-group of *Homoeoneuria* s.s. They considered as primitive the following characters: (1) antennal pedicel glabrous; (2) tibia of prothoracic legs slightly bowed, and slightly narrower or as broad as femur; (3) tarsus of the prothoracic leg close to the apex of tibia; (4) galea-lacinia of maxilla with a submarginal row of several spinous setae, (5) posterior margin of superlingua of hypopharynx strongly curved; and (6) abdominal terga with pronounced colour markings. If the phyletic scheme proposed by PESCADOR & PETERS (1980) is correct, some character statements must be reevaluated. They considered the presence of setae on the antennal pedicel as a derived character (synapomorphy) of *H. (H.) salvinae* Eaton, 1881 and *H. (H.) alleni* Pescador & Peters, 1980, but it also occurs in *H. (N.) fitzkau*. So, this statement should be revised.

The nymph of the subgenus *Notochora* is little distinguishable, at superespecific level, from those of *Homoeoneuria* s.s. The recognition of two subgenera in *Homoeoneuria* is consistent with the criteria adopted for generic and subgeneric status by EDMUNDS (1962), wherein he stated, in part, that subgenera status of Ephemeroptera is preferable when two groups of species demonstrate a distinct gap in structure in one stage, but only a weak or absent structural gap in the other stage. The presence of a subapical denticle on tarsal claw of mesothoracic leg appears to be an apomorphic character of *Notochora*.

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