

**FORCEPSIONEURA GROSSIORUM SPEC. NOV. FROM BRAZIL
(ZYGOPTERA: PROTONEURIDAE)***

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Received May 12, 2004 / Revised and Accepted October 15, 2004

The new sp. (holotype ♂: Nova Friburgo, Rio de Janeiro, Brasil, 25-VII-2002; deposited in the author's collection in Belo Horizonte) is described, illustrated and compared with its congeners. It differs from all congeners by the unique structure of the posterior prothoracic lobe.

INTRODUCTION

The genus *Forcepsioneura* was created by LENCIONI (1999) to contain four species: *F. ephippigera* (Selys, 1886); *F. garrisoni* Lencioni, 1999; *F. itatiaiae* (Santos, 1970) and *F. ciganae* (Santos, 1968), the latter a junior synonym of *F. sancta* (Hagen, 1860), according to MACHADO (1968). MACHADO (2000) described another species, *F. lucia*, and distinguished two species groups within the genus, the *ephippigera*-group containing a single species from the Amazonian Forest and the *sancta*-group, containing four species from the Atlantic Forest. MACHADO (2001) described two new species: *F. westfalli* from the *ephippigera*-group and *F. haerteli* from the *sancta*-group. More recently MACHADO (2004) created the genus *Amazoneura* for the species of the *ephippigera* group remaining in *Forcepsioneura*, the five species from the Atlantic Forest: *F. sancta*, *F. garrisoni*, *F. itatiaiae*, *F. lucia* and *F. haerteli*. We describe now *Forcepsioneura grossiorum* sp. n. from the Atlantic Forest of the Rio de Janeiro State.

* Studies on neotropical Protoneuridae, 17.

FORCEPSIONEURA GROSSIORUM SP. NOV.

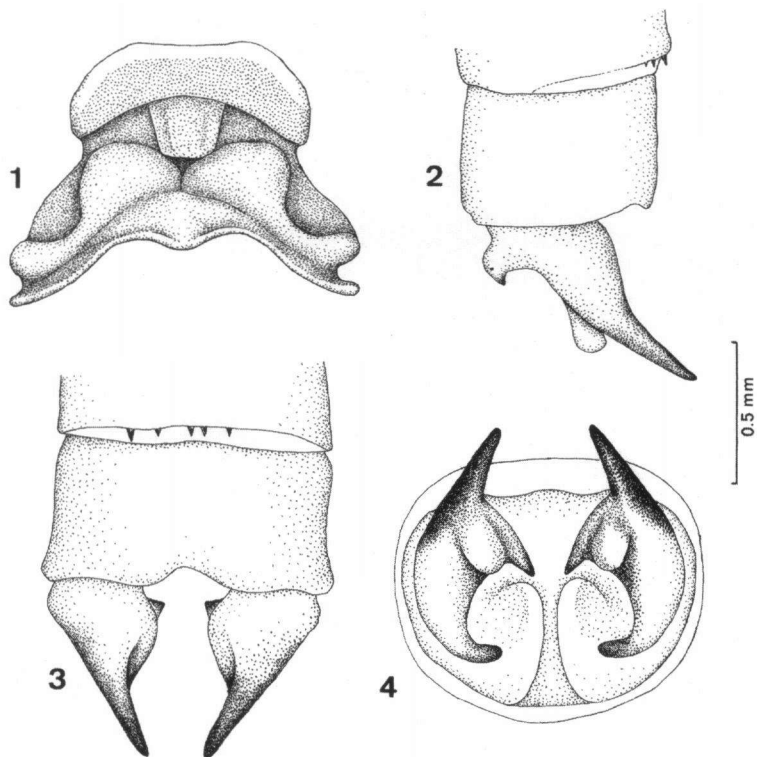
Figures 1-4

Material. – **Holotype** ♂: BRAZIL, Rio de Janeiro State: Nova Friburgo, 25-VIII-2002, E. Grossi and P. Grossi leg.; deposited in A.B.M. Machado collection, in Belo Horizonte.

Etymology. – *grossiorum*, the plural genitive of Grossi. This species is dedicated to my friends the entomologists Everardo Grossi and Paschoal Grossi who collected the specimen now described.

MALE (holotype). – **Head.** – Labium yellowish. Labrum shining black bordered with a yellow line anteriorly. Anteclypeus brown. Postclypeus and anterior part of frons black. Genae and base of mandible brownish yellow. Antennae black with pedicel brown. Upper part of frons dark with a slight metallic green shining.

Thorax. – Prothorax: black, posterior lobe about the same width as the median one, formed by a deep and broad concavity with a convex elevation in the middle ending laterally in a small flat process (Fig. 1). Postero-lateral corner of the median lobe with a well-developed tubercle (Fig. 1). Pterothorax: mesepisternum metal-



Figs 1-4. *Forcepsioneura grossiorum* sp.n. holotype ♂: (1) prothorax, dorsal view; – (2) superior anal appendages, lateral view; – (3) same, dorsal view; – (4) same, posterior view.

lic green with the dorsal carina yellowish. Mesepimeron dark metallic green. Metepisternum brownish yellow. Metepimeron and the whole ventral part of the pterothorax, yellow. Legs yellow except for the tarsi and the dorsal part of the femuræ and tibiæ which are brown. Claws with a well-developed tooth. Wings hyaline. Pterostigma brown, occupying one cell. Venation: postnodals in forewings 15; in hindwings 12. R3 in forewings originating at the 6th postnodal; in hindwings at the 5th. IR2 in forewings originating at the level of the 9th postnodal; in hindwings at the level of the 8th postnodal. Cup in forewings terminating at half the distance between the crossvein descending from the subnodus and that descending from the first postnodal; in hindwings terminating at half (50%), or two thirds (50%) of this distance. Arculus distinctly distal to the 2nd antenodal in both wings. CuA in forewings situated in the middle (50%) of the distance between the 1st and 2nd antenodal or slightly beyond (50%); in hindwing slightly beyond (100%), IR3 in fore and hindwings arising at the subnodus. IR3 in forewings distinctly separated from R4 + R5 by a small crossvein (50%) or fused with it (50%); in hindwings distinctly separated (100%). First antenodal costal space much longer than the second and about as long as the third.

A b d o m e n. – Segments 1-10 metallic green dorsally, darker on 10, with yellowish areas laterally on 1, and ventrolaterally on 2-10. A basal yellow ring at segments 3-8. Distal border of 10 with an excavation (Fig. 3). Superior anal appendages black with the base, the ventro-medial process and the ventral branch yellowish, the latter with the apex black. They are directed upwards (Fig. 2) in lateral view with the basal half dilated and the distal one slender and convergent (Fig. 3). Each appendage bears a ventral branch (Figs 2, 4) with the apex curved inwards (Fig. 4) reaching almost the level of the ventral part of abdominal segment 10. Ventro-medial process visible in lateral view (Fig. 2) bearing anteriorly a thorn like spine visible in dorsal view (Fig. 3). Inferior appendage absent.

M e a s u r e m e n t s (mm). – Abdomen with appendages 37. Appendages 0.6. Length of hindwings 23. Maximum width of fore- and hindwings 3.8. Pterostigma 0.8.

FEMALE. – Unknown.

DISCUSSION

F. grossiorum keys out to couplet 4 in the key of MACHADO (2001) together with *F. garrisoni* and *F. itatiaiae*. It differs from these two species mainly by having the posterior prothoracic lobe formed by a broad and deep concavity with a convex elevation in the middle. Indeed the posterior prothoracic lobe of *F. grossiorum* is unique in the genus and allows its rapid identification.

There is no information about the habitat where the species was collected at Nova Friburgo. However, since it is an area of Atlantic Forest it is very likely that it occurs in sluggish and shady forest streams as reported for most species of *Forcepstoneura* (SANTOS, 1968, 1970; LENCIONI, 1999 and MACHADO 2001).

ACKNOWLEDGEMENTS

I am very grateful to my friends the entomologists EVERARDO GROSSI and PASCHOAL GROSSI for having collected and presented to me this interesting species. I am also grateful to MYRIAN MORATO DUARTE for the drawings illustrating this paper.

REFERENCES

- LENCIONI, F.A.A., 1999. The genus *Phasmoneura*, with description of *Forcepsioneura* gen. nov. and two new species (Zygoptera: Protoneuridae). *Odonatologica* 28(2): 127-137.
- MACHADO, A.B.M., 1999. Studies on neotropical Protoneuridae. 9. *Phasmoneura cigana* Santos conspecific with *Phasmoneura sancta* (Hagen) comb. n. (Zygoptera). *Notul. odonatol.* 5(3): 37-38.
- MACHADO, A.B.M., 2000. Studies on neotropical Protoneuridae. 10. *Forcepsioneura lucia* sp. n. from the Parque Estadual Rola Moça, Minas Gerais, Brazil (Odonata, Zygoptera). *Bolm Mus. Biol. Mello Leitão* (N.S.) 11/12: 127-134.
- MACHADO, A.B.M., 2001. Studies on neotropical Protoneuridae. 11. Two new species of *Forcepsioneura* Lencioni (Odonata – Zygoptera) with a key to males of the genus. *Revta. brasil. Zool.* 18(3): 845-854.
- MACHADO, A.B.M., 2004. Studies on neotropical Protoneuridae. 16. *Amazonaura* gen. nov. with description of *A. juruaensis* sp. n. *Revta. brasil. Zool.* 21(2): 333-336.
- SANTOS, N.D., 1968. *Phasmoneura ciganae* sp.n. e notas sobre outras espécies (Odonata: Protoneuridae). *Atas Soc. Biol. Rio de J.* 11(6): 221-226.
- SANTOS, N.D., 1970. *Phasmoneura itatiaiae* sp. n. (Odonata: Protoneuridae). *Atas Soc. Biol. Rio de J.* 13(1/2): 25-26.