

## Studies on Neotropical Protoneuridae. 16. The female of *Neoneura gaida* Racenis, 1953 (Odonata: Protoneuridae)

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### Abstract

The female of *Neoneura gaida* Racenis, 1953 is described and illustrated. It is very close to that of *N. cristina* Racenis, 1955 but can be separated from it by the shape of the posterior pterothoracic lobe.

**Keywords:** Odonata, Protoneuridae, *Neoneura*.

### Introduction

In his recent review of the genus *Neoneura*, Garrison (1999) recorded 23 species. To this, we added two species recently described (Machado, 2002, 2003). Except for *N. gaida* and *N. jurzitzi* the females of all species of *Neoneura* have been described and can be easily separated by the shape of the posterior prothoracic lobe. In this paper is described the female of *N. gaida* and recorded new localities for the species, thus expanding its distribution.

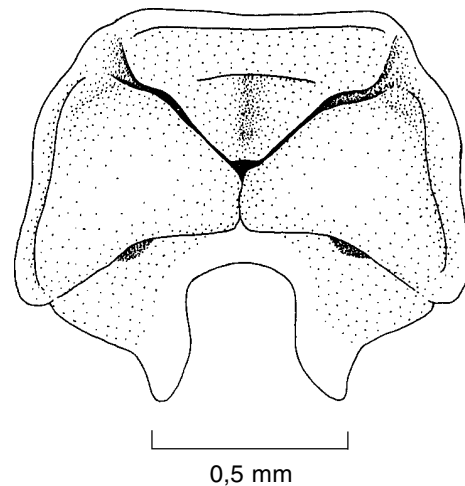
*Neoneura gaida*: description of the female (Fig. 1)

**Head.** – Yellowish grey with the following dark areas: a dot on either side of postclypeus; an oval spot on the upper part of frons and in front of median ocellus; a small spot medially to each lateral ocellus; an elongated spot between the occipital crist and eye; an oblique stripe half-way between eye and lateral ocellus and an oval spot behind it. Rear of the head yellowish with a large central black area.

**Thorax.** – Prothorax yellowish grey with dark area between pronotum and pleura; a dark spot at the outer limit between the anterior and the median lobes and a dark line enlarged in a spot at the base of the posterior lobe. Pterothorax yellowish grey with the following dark areas: a narrow stripe with irregular outer margin on each side of the middorsal carina; two elongated spots on the upper and lower parts of the humeral suture; and a central oval spot at the posterior part of the mesepimerum and an elongated spot on the upper part of the 2nd lateral suture.

**Legs.** – Yellowish grey.

**Wings.** – Hyaline, pterostigma pale yellow, occupying slightly less than one cell. Venation: postnodals in fore wings 8



**Figure 1** - *Neoneura gaida*, female from Tucuruí, PA, Brazil. Medial and posterior prothoracic lobes in dorsal view.

(50%) or 9 (50%); in hind wings 7 (100%). R3 in fore wings originating at the level of the 4th postnodal (50%), proximal to it (25%) or at middistance between the 3rd and the 4th postnodal (25%); in hind wings proximal to the 3rd postnodal (100%). IR2 in fore wings originating at the level of the 7th (75%) or 5th (25%) postnodal; in hind wings at the level of 6th (75%) or 7th (25%). CUP in all wings terminating at about half the distance between the vein descending from the subnodus and that descending from the first postnodal. Arculus in both wings distal to the second antenodal.

**Abdomen.** – Segments 1-6 yellowish grey dorsally, laterally yellowish. Segments 7-10 yellowish, 2-8 with a dark subapical triangular or rounded spot. Segments 6-7, with a lateral black stripe, 8-10 with an oval black marking. Appendages dark brown.

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Structural characters. – Posterior lobe of prothorax (Fig.1) without medial lobe, the lateral lobes very large, subtriangular, the outer border concave, the inner border convex the tips directed outwards.

Measurements (mm): abdomen 21; hind wings 15; perostigma 0.8 .

**Material examined:** Brazil, State of Para, Tucuruí, X-XII/1992, 23 males, 2 females, José Leal leg.; Belém, II-1984, 1 male, Machado leg. Deposited in the author's collection at Belo Horizonte.

## Discussion

As pointed out by Racenis (1955) and Garrison (1999), considering the unique structure of the male superior anal appendages, the closer species to *N. gaida* is *N. cristina*. In view of this similarity Garrison (1999) commented that the female of *gaída* would probably approximate that of *N. cristina*. The finding of this female confirmed Garrison's prediction since the two species are really very similar. There is no colour difference between them and both have a posterior prothoracic lobe without medial lobe and provided with very large lateral lobes covering the mesostigmal plate. A somewhat similar posterior lobe occurs also in *N. ruficollis* thus confirming the view of Garrison (1999), based on males, according to whom *cristina* and *ruficollis* constitute a species group named *ruficollis*. The female of *N. gaida* can be distinguished from that of *N. cristina* described and illustrated by Racenis (1955) and Garrison (1999) by having the lateral lobes of the posterior prothoracic lobe apically divergent (convergent in *N. cristina*) with the outer border concave (straight in *N. cristina*). *N. gaida* has been recorded from Suriname by Belle (2002); from Venezuela by Racenis (1953,1955), Santos (1956) and De Marmels (1989) and from the state of Rondonia, Brazil by Garrison (1999).

Our new records extend the species distribution to the state of Para, Brazil. All previous records of *N. gaida* indicate rivers

and streams as its habitats. The finding of an abundant population in the reservoir of Tucuruí indicates that the species, that probably occurred in the Tocantins river, was able to survive after this river was impounded and can live in lotic as well as in lentic water systems.

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## References

- Belle, J. 2002. Commented checklist of the odonata of Suriname. **Odonatologica**, **31**:1-8.
- De Marmels, J. 1989. Odonata or dragonflies from Cerro de la Neblina and the adjacent lowland between the Rio Baria, the Casiquiare and the Rio Negro (Venezuela). I Adults **Boletín de la Academia de Ciencias Físicas, Matemáticas y Naturales** (Caracas), **25**:11-76.
- Garrison, R. W. 1999. The genus *Neoneura* with keys and description of a new species *Neoneura jurzitzi* spec.nov. (Zygoptera: Protoneuridae). **Odonatologica**, **28**:343-375.
- Machado, A. B. M. 2002. *Neoneura lucas* spec.nov. from Brazilian Pantanal (Zygoptera: Protoneuridae). **Odonatologica**, **31**:199-204.
- Machado, A. B. M. 2003. Studies on neotropical Protoneuridae. 13. *Neoneura moorei* spec.nov. from the Amazonian region of Brazil. **Odonatologica**, **32**:125-130.
- Racenis, J. 1953. Una nueva especie del genero *Neoneura* (Odonata:Protoneuridae) de Venezuela. **Acta Biologica Venezuelica**, **1**:155-158.
- Racenis, J. 1955. Los representantes Venezolanos de la familia Protoneuridae (Odonata). **Memorias de la Sociedad de Ciencias Naturales "La Salle"**, **15**:48-62.