

completed, the *Neoneura* specimens in his collection had been greatly damaged, therefore only a limited number could be figured. This raised the possibility that the types of *N. rufithorax* no longer existed or had lost critical parts. While studying the Protoneuridae types in the Selys' collection, I have noticed that the Selysian types of *Neoneura* are stored in Box 27 and they are ordered in the same sequence in which the species appear in E.M. SELYS-LONGCHAMPS (1886, *Mem. Acad. r. Belg.* 38: IV+283 pp). The only exception is that after *N. sylvatica*, instead of *N. rufithorax*, there is a species labelled *Neoneura parvula*, represented by two ♂♂, one complete, the other lacking segments 8-10. This led me to think that they could be the types of *N. rufithorax*. The pin-labels in the undamaged specimen are: (1) "S. Paulo" (handwritten in ink; green label), - (2) "*Neoneura parvula* Selys" (handwritten in ink; white label), - (3) "Coll. Selys" (handwritten in ink, with No. 93 in red pencil; white label), - (4) "Dessiné Williamson" (handwritten in ink; white label), - (5) "Dessiné par Santos - 5-X-64" (handwritten in ink; white label). The same handwriting, presumably that of Selys, appears in labels 2 and 3. The damaged specimen has only one label: "S. Paulo" (handwritten in ink, green label).

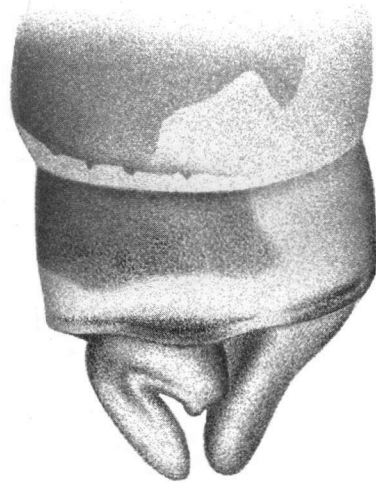


Fig. 1. Selys, ♂ lectotype: last abdominal segments in lateral view.

STUDIES ON NEOTROPICAL PROTONEURIDAE, 13: THE TYPES OF *NEONEURA RUFITHORAX* SELYS (ZYGOPTERA)

In his classical revision of the genus *Neoneura*, E.B. WILLIAMSON (1917, *Trans. Am. ent. Soc.* 43: 211-246, pls 9-19 excl.) used drawings of the types in the Selys' collection, as made by A. Menger. He mentioned that Menger could not draw *N. rufithorax* and pointed out that since the work of Selys was

The following facts corroborate my view that these specimens are the types of *N. rufithorax*: (1) they agree well with the original description of *rufithorax* made by SELYS (1886, l.c.), — (2) the data on the locality labels are in good agreement with those given in the Selysian description of *N. rufithorax*, where one reads “Patrie: S. Paulo (Haut-Amazone). Coll. Selys”, — (3) the species-group name, *parvula*, appears five times in C.A. BRIDGES (1994, *Catalogue of the family-group, genus-group and species-group names of the Odonata of the world*, Bridges, Urbana, 3rd edn), but none of them applies to a Protoneuridae, — (4) commenting on *N. rufithorax*, SELYS (1886, l.c.) mentioned that it is: “La plus petite des espèces connue”, a statement that is coherent with the name *parvula* (from the Latin *parvulus*, *-a*, *-um* = very small). Most probably Selys first named and labelled the species as *parvula*, an allusion to its small size. In the publication he changed the name to *rufithorax*, but failed to amend the label. The undamaged specimen is now designated and labelled as lectotype. The damaged specimen became the paralectotype. In both I added the label “*Neoneura rufithorax* Selys, 1886”. As indicated in the labels attached to the lectotype, drawings have been made of it by E.B. Williamson and N.D. Santos, but they have never been published, either under the name *parvula* or *rufithorax*.

Recently, R.W. GARRISON (1999, *Odonatologica* 28: 343-375) provided a very good description of a *Neoneura* from Peru that, according to him, is probably *N. rufithorax*. Assuming that the caudal appendages of the types were missing, he

emphasized that it might be possible to confirm the identity of this Peruvian species by examining the penis. Based on the notes and drawings I made of the lectotype, there is no doubt that the species redescribed by Garrison is *N. rufithorax*.

Although there is no need for a redescription of the lectotype, I deemed it interesting to publish an illustration of its appendages (Fig. 1) and to point out the following minor differences between it and the Selysian description: the lectotype has a narrow black diagonal hairline from the compound eye to near the lateral ocellus, and the abdomen has lateral dark streaks also on segments 3-6, although not very evident.

I use this opportunity to bring on record the following specimens of *N. rufithorax* in my collection, which are expanding its geographical range: Brazil, Amazonas: Estirão do Equador (Javari River), X-1979, 8 ♂, 1 ♀, M. Alvarenga leg.; — Pará: Monte Alegre, 28-IV-1952, 1 ♂, Rego leg.; — Acre: Rio Branco (on the Acre River), 10-X-1983, 5 ♂, A.B.M. Machado leg.

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