

**THE GENUS *IDIONEURA* (SELYS)
WITH DESCRIPTION OF *I. CELIOI* SPEC. NOV.
(ZYGOPTERA: PROTONEURIDAE)**

F.A.A. LENCIONI

Rua Anibal, 216 - Jardim Coleginho, BR-12310-780, Jacarei, S.P., Brazil
odonata@zygoptera.bio.br – web site: www.zygoptera.bio.br

Received October 27, 2008 / Revised and Accepted November 27, 2008

The new sp. is described from 1 ♂ and 4 ♀. Holotype ♂ and allotype ♀: Brazil: São Paulo State, Fazenda Santana do Rio Abaixo (24°14'55"S - 46°00'27"W), alt. 569 m, 30-XI-2002, collected in tandem; deposited in author's collection. It is compared with the original description of *I. ancilla* Sel., 1860 (the type sp. of the gen.) and with specimens identified as that sp. Diagnostic illustrations and notes on *Idioneura* distribution and biology are provided.

INTRODUCTION

The hitherto monotypic genus *Idioneura* was set up by SELYS (1860) to accommodate his *I. ancilla*, which was described from at least one male and one female from Bahia, Brazil. Unfortunately, as often is the case in neotropical species, the knowledge in this genus is restricted to very few additions to the original description.

KENNEDY (1917) illustrated the genital ligula of *I. ancilla* from a specimen in the Hagen collection at MCZ and stated “*No terminal fold*”, SANTOS (1962) redescribed male and female based on specimens collected in Rio de Janeiro and Espirito Santo, increasing the knowledge on its geographical distribution, and later the same author (SANTOS, 1969) described the larva. In his paper he stated the species was collected at the border of the forest (in a place which is dark even at noon).

COSTA et al. (2000) recorded *I. ancilla* from São Paulo state for the first time. LENCIONI (2005) illustrated male and female and reproduced larval drawings (LENCIONI, 2006) from SANTOS (1969).

In December 1998, October 2001 and February 2002, I collected several specimens of a new species, which differs from the original description and redescr-

tion of *I. ancilla*, and is described here.

VON ELLENRIEDER & GARRISON (2007) examined specimens identified by Selys as *I. ancilla* in IRSNB and stated: "Three specimens identified as *Idioneura ancilla* by Selys – no types – were found in IRSNB: One incomplete female which agrees with species concept by unique morphology of hind margin of prothorax; one female incorrectly labeled (not *I. ancilla* Selys but some other protoneurid); and one male that looks like *I. ancilla* but lacks appendages. Examination of types, supposed to be in Berlin Museum, needed in order to confirm correct application of name".

Although examination of type material is prudent before describing new species, the considerable differences between my specimens, verification of *I. ancilla* by VON ELLENRIEDER & GARRISON (2007) and the original description of *I. ancilla* leave no doubt that the species described here is new.

Wing venation terminology follows RIEK & KUKALOVA-PECK (1984); – **A c r o n y m s**: FAAL: F.A.A. Lencioni private collection, São Paulo, Brazil; – MCZ: Museum of Comparative Zoology, Harvard, USA; – RWG: Rosser W. Garrison private collection, Sacramento, California, USA; – ABMM: Angelo Barbosa Monteiro Machado private collection, Belo Horizonte, Minas Gerais, Brazil.

IDIONEURA CELIOI SP. N.

Figures 1A, 1B, 1C, 2A and 2B.

M a t e r i a l . – **H o l o t y p e** ♂: Brazil: State of São Paulo, Jacaréi, Fazenda Santana do Rio Abaixo (23°14'55"S-46°00'27"W), alt. 569 m, 30-II-2002, F.A.A. Lencioni leg., Specimen No. 3274. – **A l-**

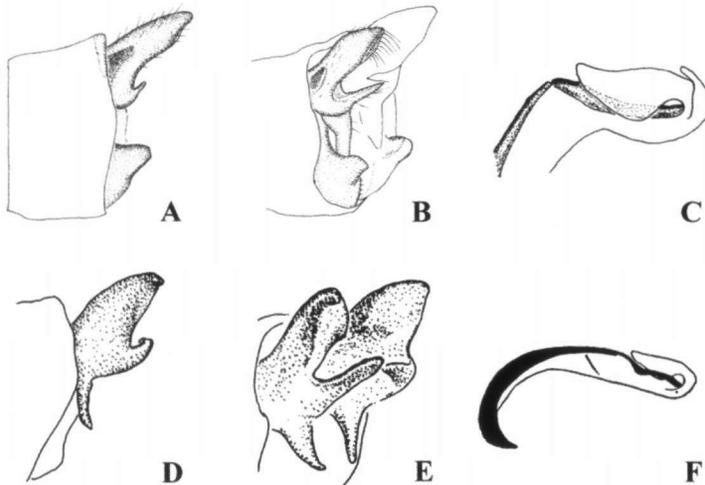


Fig. 1. Males *Idioneura celioi* sp. n., holotype (A-C) and *I. ancilla* Sel. (D-F): (A, D) appendages, lateral view; – (B) same, posterior view; – (E) same, mediiodorsal view; – (C, F) – genital ligula, lateral view. – [D and E by R.W. Garrison, F from KENNEDY, 1917].

holotype ♀: in tandem with holotype. — **Paratypes**: 4 ♀ same locality as holotype but 2 ♀ 8-XII-1998 (1 in RWG and 1 in ABMM) and 2 ♀ 23-X-2001 (FAAL). Holotype and allotype in FAAL.

E t y m o l o g y. — This species is named after my uncle Celio L e n c i o n i.

MALE (holotype). — **H e a d** — Epicranium black with brassy reflexions; postclypeus and antefrons dark brown; labrum, anteclypeus, genae and base of antennae pale yellow.

T h o r a x. — Prothorax orange. Pterothorax with almost all of mesepisternum dark metallic green, remainder of mesothorax orange; metepisternum and metepimeron yellowish white. Legs pale orange.

Wings entirely hyaline, venation black. Pterostigma ochreous surrounded by a pale line, covering 1 cell; postnodals 10 in FW and 9 in HW; arculus slightly distal to second antenodal; R3-4 distinctly separated from IR2 by a short crossvein. Antenodal spaces in FW: 1.14, 1, 1.32, HW: 1.18, 1, 1.37. MP terminating just beyond midway between crossvein descending from subnodus and that descending from first postnodal.

A b d o m e n. — Segments 1-2 orange; 3-6 dorsally brown forming an enlarged distal ring, ventrally light orange; 7-10 dark orange. Appendages as in Figures 1A and 1B. Genital ligula as in Figure 1C.

M e a s u r e m e n t s (mm). — Total body length (with appendages) 34, abdomen 29, forewing 18, hindwing 17.

FEMALE (allotype). — **H e a d** as in holotype but postclypeus and antefrons pale.

T h o r a x. — As in holotype. Prothorax as in Figure 2B.

Wings as in holotype; 12 postnodals in FW; 10 (left) and 9 (right) in HW. Antenodal spaces FW: 1, 1, 1.26; HW 1.11, 1, 1.44.

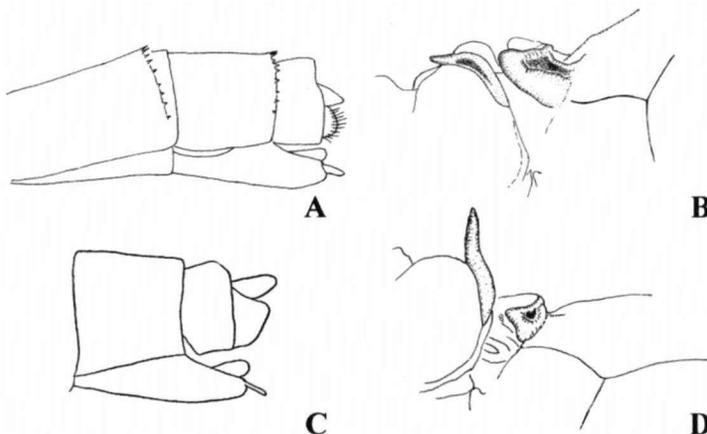


Fig. 2. Females *Idioneura celioi* sp. n. (A-B) and *I. ancilla* Sel. (C-D): (A) abdominal segments 8-10; — (B) prothorax and part of pterothorax (allotype), mediiodorsal view; — (C) tip of abdomen, with ovipositor; — (D) prothorax, lateral view. — [C from SANTOS, 1962].

Table I
Diagnostic features of *Idioneura ancilla* and *I. celioi* sp. n.

Species	Male (Fig. 1)		Female (Fig. 2)	
	Paraproct	Terminal fold of genital ligula	Posterior lobe of prothorax	Mesostigmal plate
<i>ancilla</i>	rudimentary	absent	enlarged and upwards	slightly enlarged
<i>celioi</i>	present	present	small and directed cephalad	greatly enlarged

Abdomen. – Segments 1-2 dorsally dark brown and ventrally light yellow; 3-5 dorsally dark brown forming an enlarged distal ring, and ventrally orange (basal annulus light yellow); 6-8 dorsally dark brown forming an enlarged distal ring, and ventrally orange; 9-10 orange.

Measurements (mm). – Total body length 34, abdomen 28, forewing 19, hindwing 18.

BIOLOGY

The range of the type species of the genus *I. ancilla*, extends from the South of the State of São Paulo (Iguape: 24°40'4.48"S, 47°25'32.36"W) northwards to the South of the state of Bahia (13°11'35.42"S, 39°0'40.30"W). It was always collected from the coastal slope of the Atlantic Forest and seems to have a preference for the understory habitats at low elevations. The population in the state of Rio de Janeiro occurs at somewhat higher altitude. In the state of Espírito Santo, *I. ancilla* occurs sympatrically with another, as yet undescribed *Idioneura* species. *I. celioi* sp. n., on the other hand, is known from the interior slope of the Atlantic Forest, at elevations above 500 m, and has likewise a preference for the understory habitats.

Diagnostic features of the two species are shown in Table I.

ACKNOWLEDGEMENTS

I thank Dr ROSSER W. GARRISON who has always helped me with bibliographic references and material, and Dr R.W. Garrison, Dr NATALIA VON ELLENRIEDER and Dr BASTIAAN KIAUTA for critically reviewing the manuscript.

REFERENCES

- COSTA, J.M, A.B.M. MACHADO, F.A.A. LENCIONI & T.C. SANTOS, 2000. Diversidade e distribuição dos Odonata (Insecta) no Estado de São Paulo, Brasil, 1: Lista das espécies e registros bibliográficos. *Publções avuls. Mus. Nac., Rio de J.* 80: 1-27.
- KENNEDY, C.H., 1917. Notes on the penes of Zygoptera, No. 3. The penes in *Neoneura* and related genera. *Ent. News* 28: 289-294, pls 21-23.

- LENCIONI, F.A.A., 2005. *Damselflies of Brazil, an illustrated identification guide*, Vol. 1. *Non-Coenagrionidae families*. All Print Editora, São Paulo.
- LENCIONI, F.A.A., 2006. *Damselflies of Brazil, an illustrated identification guide*, Vol. 2. *Coenagrionidae*. All Print Editora, São Paulo.
- RIEK, E.R. & J. KUKALOVA-PECK, 1984. A new interpretation of dragonfly wing venation based upon Early Upper Carboniferous fossils from Argentina (Insecta: Odonatoidea) and basic character states in pterygote wings. *Can. J. Zool.* 62(6): 1150-1166.
- SANTOS, N.D., 1962. Fauna do estado da Guanabara: redescoberta de *Idioneura ancilla* Selys, 1860 (Odonata: Protoneuridae). *Bol. Mus. Nac., Rio de J.* 234: 1-5.
- SANTOS, N.D., 1969. Contribuição ao conhecimento da fauna do estado da Guanabara, 68: descrição da ninfa de *Idioneura ancilla* Selys, 1860 (Odonata: Protoneuridae). *Atas Soc. Biol. Rio de J.* 12(5/6): 265-268.
- SELYS-LONGCHAMPS, M.E., 1860. Synopsis des agrionines. Dernière légion: Protoneura. *Bull. Acad. r. Belg. (II)* 10: 431-462.
- VON ELLENRIEDER, N. & R.W. GARRISON. 2007. Untangling some taxonomic riddles on damselfly genera (Zygoptera) from the neotropical region. *Int. Dragonfly Fund Rep.* 11: 1-34.