

**TELAGRION NATHALIAE SPEC. NOV.
(ZYGOPTERA: COENAGRIONIDAE)**

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Both sexes of the new sp. are described and illustrated. Holotype ♂: Brazil: São Paulo state, Jacareí, Fazenda Santana do Rio Abaixo, alt. 608 m, 07-II-1999, deposited in author's collection; allotype and paratypes from the same locality. It differs from *T. macilentum* by the ♂ cerci possessing elongate, ventrally-directed projections, and by being straight in lateral view. 6 Brazilian spp. are keyed.

INTRODUCTION

The genus *Telagrion* was established by SELYS (1876) under his "seconde partie" (females lacking ventral spine on abdominal segment 8) of his "5^{me} légion Agrion" for the inclusion of four new species, *T. fulvellum*, *T. inversum*, *T. longum*, and *T. mecistogastrum*. He characterized it by the following combination of characters: wings stalked at level of anal crossing (ac), postocular spots lacking, and abdomen long to very long. MUNZ (1919) included *Telagrion* in his Zygoptera key based primarily on the original concept of Selys. Since then, the genus has suffered vicissitudes of inclusion and shifting of species so that it has been difficult to characterize it. GARRISON (1986) included it in the neotropical Zygoptera lacking postocular spots, based on the following combination of characters: A1 at least 7 cells long, tarsal claw with or without supplementary tooth, both sexes with anterior portion of mesepisternum lacking a tubercle or horn, cercus of male longer than or equal in length to paraproct, and paraproct visible in lateral view.

Although eighteen names have at one time or another been included under *Telagrion*, current consensus recognizes eight species (Tab. I).

T. (?) daeckii was placed by BYERS (1927) in *Enallagma*. *T. serraccipoensis* and *Metaleptobasis sooretamae* were synonymized with, respectively, *Miniagrion waltheri* (SANTOS, 1965a) and *T. longum* (SANTOS, 1965b). ST. QUENTIN (1962) provided a

Table I
List of species ever described or included in *Telagrion*

Species	Original genus	Current generic affiliation
<i>cornicauda</i> Calvert, 1909	<i>Telagrion</i>	<i>Telagrion cornicauda</i>
<i>daeckii</i> Calvert, 1903	<i>Telagrion?</i>	<i>Enallagma daeckii</i>
<i>diceras</i> Selys, 1877	<i>Leptobasis</i>	<i>Telagrion diceras</i>
<i>fulvellum</i> Selys, 1877	<i>Telagrion</i>	<i>Telagrion fulvellum</i>
<i>inversa</i> Selys, 1876	<i>Telagrion</i>	<i>Leptobasis inversa</i>
<i>longissimum</i> * Hagen, 1861	<i>Agrion</i>	<i>Telagrion longum</i>
<i>longum</i> Selys, 1876	<i>Telagrion</i>	<i>Telagrion longum</i>
<i>macilentum</i> Rambur, 1842	<i>Agrion</i>	<i>Telagrion macilentum</i>
<i>mecistogastrum</i> Selys, 1876	<i>Telagrion</i>	<i>Minagrion mecistogastrum</i>
<i>mourei</i> Santos, 1970	<i>Telagrion</i>	<i>Telagrion mourei</i>
<i>oreas</i> Ris, 1918	<i>Telagrion</i>	<i>Telagrion oreas</i>
<i>prothoracicum</i> Kimmins, 1945	<i>Telagrion</i>	<i>Leptagrion prothoracicum</i>
<i>quadricolor</i> Ris, 1918	<i>Telagrion</i>	<i>Telagrion quadricolor</i>
<i>raineyi</i> Williamson, 1915	<i>Telagrion</i>	<i>Leptobasis raineyi</i>
<i>ribeiroi</i> Santos, 1962	<i>Telagrion</i>	<i>Minagrion ribeiroi</i>
<i>serracipoense</i> Santos, 1956a	<i>Telagrion</i>	<i>Minagrion waltheri</i>
<i>sooretamae</i> Santos, 1957	<i>Metaleptobasis</i>	<i>Telagrion longum</i>
<i>tenax</i> St. Quentin, 1960	<i>Telagrion</i>	<i>Telagrion ?longum</i>

* nomen nudum

brief key for the then known species. SANTOS (1965b) established a new genus, *Minagrion*, for *Agrion waltheri*, *T. mecistogastrum* and *T. ribeiroi*. He also placed *Leptobasis diceras*, *Agrion macilentum* and *Metaleptobasis cornicauda* in *Telagrion*. GARRISON (1986) suggested removing *Telagrion raineyi* to *Leptobasis* and added that males "...of *Leptagrion beebeanum* Calvert, *L. fernandezianum* Rácenis, and *L. obsoletum* Selys have visible [paraprocts] and may belong in *Telagrion*". Unfortunately, *Telagrion*, as with so many coenagrionid genera, is not easily to define; species are added primarily by similarity to other described species.

A few notes on the behaviour of *T. macilentum* were provided by SANTOS (1956a).

In March-April 1999, I visited the IRSNB where, through the courtesy of Mr Jérôme Constant, I was able to compare the type of *Telagrion longum* with the specimens in my collection. I also had the opportunity to examine the photographs of the type specimens of *T. fulvellum* and *T. diceras*, kindly supplied by Mr Constant.

The below described species is the ninth member of the genus. A key to the five well-known Brazilian species is also included.

Telagrion is endemic to South America and all but two species (*T. quadricolor* from Peru and *T. oreas* from Colombia) occur in Brazil.

TELAGRION NATHALIAE SP. NOV.

Figures 1C, 2B, 2D-F, 3-4

Material. — **Holotype** ♂ (No. 1266): BRAZIL: São Paulo State, Jacareí, Fazenda Santana do Rio Abaixo (23°14'52"S, 46°00'06"W; alt. 608 m), 7-II-1999, F.A.A. Lencioni leg. — **Allotype** ♀ (No. 1980): same data as holotype but 23-XII-2000. — **Paratypes**: 3 ♂, 6 ♀: same locality as holotype: 1 couple & 1 ♂: 20-X-2001; 2 ♀: 25-X-2001; 1 ♀: 8-XI-2001; 1 ♀: 27-XI-2001; 1 ♂, 1 ♀: 5-I-2002. — Holotype, allotype and paratypes deposited in the author's collection (except a pair in R.W. Garrison's collection).

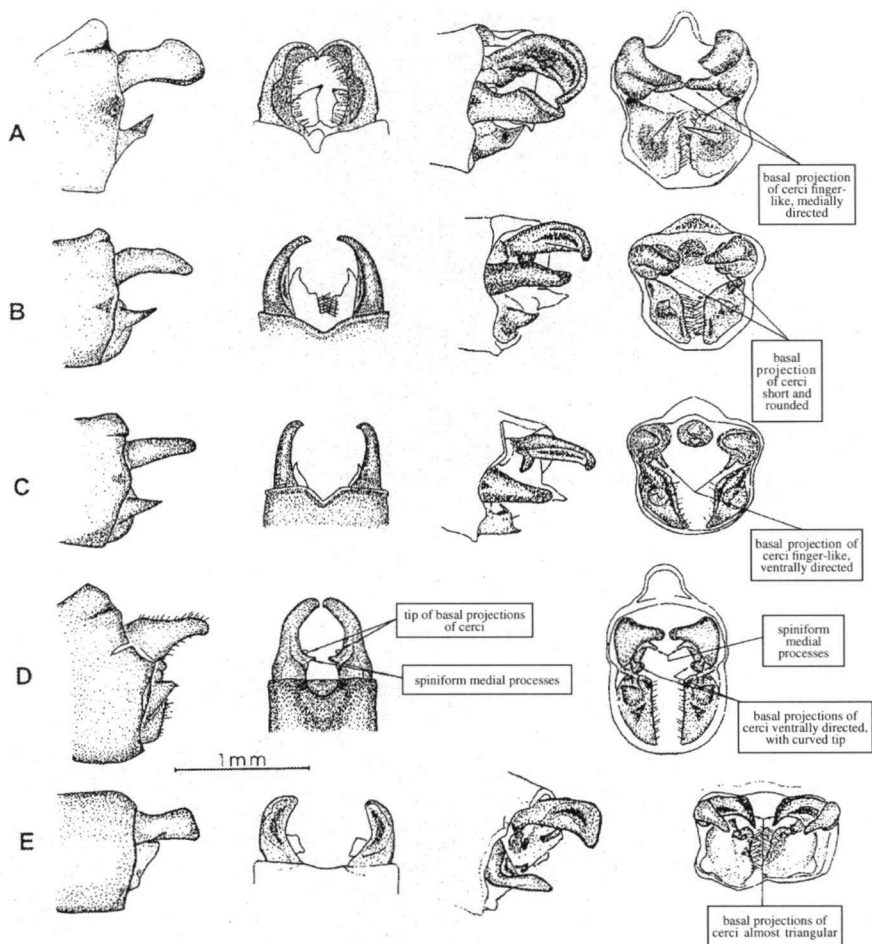


Fig. 1. *Telagrion*, male structural features: (A) *T. conrnicauda*; — (B) *T. macilentum*; — (C) *T. nathaliae* sp. n.; — (D) *T. mourei*; — (E) *T. longum*. — [1: lateral view, — 2: dorsal view, — 3: mediodorsal view, — 4: posterior view].

Etymology. — This species is named for my daughter Nathalia R. Lencioni.

MALE (Holotype). — **H e a d.** — Black with following areas pale: distal border of labrum, anteclypeus, genae, antefrons, and two small comma-like spots on each side between the lateral ocellus and compound eyes.

T h o r a x. — Prothorax black, covered with white pruinosity, posterior lobe of prothorax rounded; pterothorax with mesepisternum black with metallic green reflections with bluish pruinescence forming two V-shaped stripes covering 0.60 of mesepisternum (Fig. 9A); broad black stripes along humeral and interpleural sutures, remaining parts of metepisternum and metepimeron pale. Legs: femora black; tibiae pale except for black internal face; tarsi, claws, and spines black.

Wings. — Entirely hyaline, venation black; pterostigma brown, covering 1 cell in all wings; postnodal crossveins 14 in all wings; R2 in right FW originating just before 7th postnodal, in left FW just before 6th postnodal, in right HW just before 6th and in left HW just before 5th; A1 ending at level of 4th postnodal in all wings.

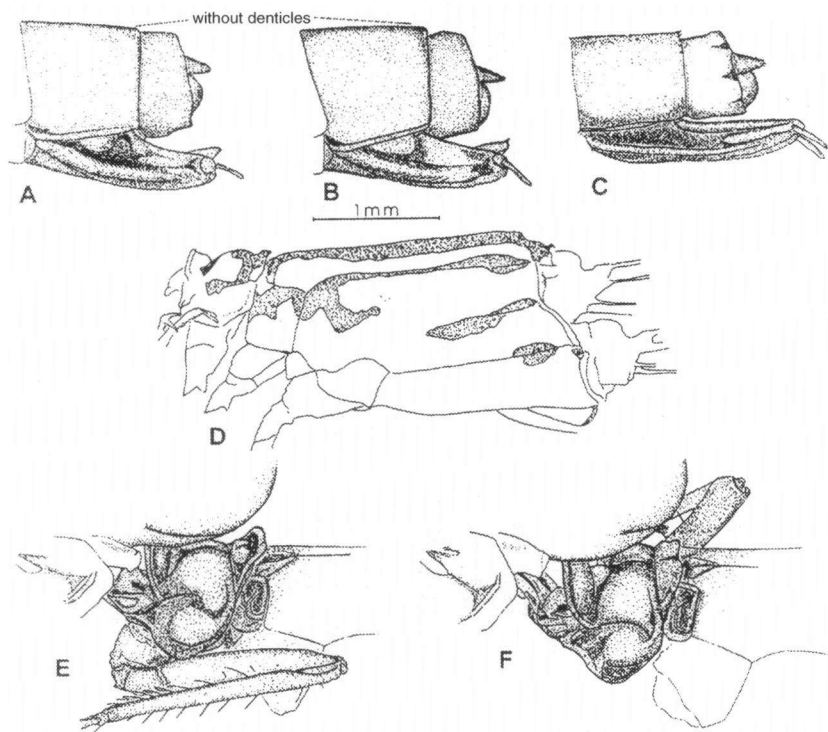


Fig. 2. *Telagrion*, structural features: (A-C) female appendages, lateral view, of *T. macilentum* (A), *T. nathaliae* sp. n. (B), and *T. longum* (C); — (D) *T. nathaliae* sp. n. female thorax, lateral view; — (E-F) *T. nathaliae* sp. n., prothorax, mediadorsal view: male (E) and female (F).

Abdomen. — Segments 1-6 black dorsally and pale ventrally; on segments 3-6 the pale colour forming a proximal ring interrupted dorsally and the black colour forming a distal ring, segments 1-2 only with the distal black ring; segment 7 only with a pale proximal ring; segments 8-10 black covered with white pruinescence.

Measurements (mm). — Total body length (with appendages) 41, abdomen 34, fore wing 21, hind wing 19.8.

FEMALE (Allotype). — **Head.** — Black with metallic bronze reflections. Following areas green: distal border of labrum, anteclypeus, genae, antefrons (except for a triangle-like black medial stain), and two small comma-like spots on each side between the lateral ocellus and compound eyes.

Thorax. — Prothorax and pterothorax as shown in Figures 5 and 9B. Legs: femora pale with black stripe on external surface widening at distal end, black covering entire external distal region; tibiae pale except for black externally on prothoracic legs; distal end of tibiae, tarsi, claws, and spines black.

Wings. — Entirely hyaline, venation black; pterostigma brown surrounded by pale line, covering 1 cell in all wings; postnodal 14 in FW and 12 in HW; R2 in FW originating just after 6th postnodal, in HW just after 5th; A1 ending just after 8th postnodal in all wings.

Abdomen. — Segments 1-10 black dorsally and pale ventrally, pale colour on segments 3-7 forming a proximal ring interrupted dorsally and with distal black annulus, segments 1-2 only with the distal black annulus.

Measurements (mm). — Total body length (with appendages) 39, abdomen 32.5, fore wing 23, hind wing 21.5.

DISCUSSION

Telagrion nathaliae sp. n. is similar to *T. macilentum*, but differs in size (*T. macilentum* is longer) and morphology of the basal projections of male cerci (in *T. nathaliae* is an elongate, ventrally-directed basal projection, in *T. macilentum* the basal projection is very short and rounded) and in the lateral view of cerci (in *T. nathaliae* the cerci are straight and in *T. macilentum* they are bent down). The behaviour described by SANTOS (1956a) for *T. macilentum* "They fly, softly and slowly for small distances and as soon as they land they hung."



Fig. 3. *Telagrion nathaliae* sp. n., topographic position of type locality.

was also observed in *T. nathaliae*. The latter was collected along a shaded road, in a small secondary forest.

Specimens of *Telagrion diceras* and *T. fulvellum* were not studied for the present paper, I could only examine their photographs. *T. diceras* is represented in the IRSN by a single male specimen, missing the last seven abdominal segments. Analyzing the structures (appendages and mesothoracic horns) illustrated by CALVERT (1909) and the photographs of the IRSN's specimens, I assume that the two specimens are conspecific, but they differ from all other members of the genus. This species does neither belong to *Telagrion* (mainly for the presence of mesothoracic horns), nor to *Metaleptobasis* or *Leptobasis* (for the structure of anal appendages). A new genus will have to be erected for it, but I refrain from doing so now since it was impossible to obtain the specimens on loan.

T. fulvellum is represented in the IRSN by a single female specimen, in poor condition. Unfortunately I was unable to locate the material used by SANTOS (1956) in his description of the male.

MATERIAL EXAMINED. — *Telagrion cornicauda* (♂, No. 92, donated by Dr A.B.M. Machado); — *T. macilentum* (♂, No. 1806, Estação Ecológica Juréia-Itatins, SP [permit: COTEC 608/99–SMA 42.086/99], 9-III-2000; ♀, No. 177, Iguape, SP, 23-IV-1995); — *T. longum* (♂, No. 894, compared with holotype, Fazenda Santana do Rio Abaixo, Jacaref, SP, 23°4'52"S and 46°59'58"W, 624 m, 10-IV-1998; ♀, No. 1703, Fazenda Santana do Rio Abaixo, Jacaref, SP, 23°14'52"S and 46°59'58"W, 624 m, 27-XI-1999); — *T. mourei* (♂, No. 1959, Espírito Santo, C. da Barra, Mata Nova, 7/13-I-1973, Elias e Paulo leg., exchanged with Museu Nacional, Rio de Janeiro). Photographs of *Telagrion diceras* (Selys, 1877) and *Telagrion fulvellum* Selys, 1876, type specimens, provided by Mr Jérôme Constant.

KEY TO ADULT MALES OF THE BRAZILIAN SPECIES OF *TELAGRION*

(except *T. diceras* and *T. fulvellum*)

- 1 Segments 8-10 red or reddish-yellow 2
- Segments 8-10 not red or reddish 3

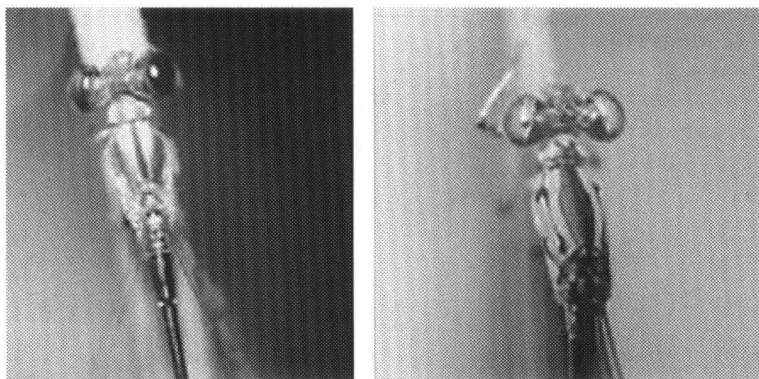


Fig. 4. *Telagrion nathaliae* sp. n., male (A) and female (B).

- 2 Cerci in lateral view dilated in the distal end, basal projections of cerci almost triangular (Fig. 1-E4), and tip of paraprocts bifid; posterior lobe of prothorax square-shaped and erected (Fig. 2-E) *longum*
- 3 Cerci in lateral view spoon-like, in dorsal view with the distal half strongly curved touching the tips (Fig. 1-A2), basal projection of cerci finger-like, directed mediad (Fig. 1-A4); abdomen 50 mm . *cornicauda*
 – Cerci not as above 4
- 4 Cerci in dorsal view with spiniform medial processes (Fig. 1 – D2) *mourei*
 – Cerci not as above (Fig. 1 – B2 & C2) 5
- 5 Cerci in lateral view bent, in dorsal view forceps-like, basal projection of cerci short and rounded (Fig. 1 –B4) *macilentum*
 – Cerci in lateral view not bent, basal projection of cerci finger-like, ventrally directed (Fig. 1-C4)
 *nathaliae*

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