

**OLIGOCLADA TERETIDENTIS SPEC. NOV. FROM EASTERN
ECUADOR (ANISOPTERA: LIBELLULIDAE)**

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The new sp. is described and illustrated (holotype ♂, allotype ♀: Ecuador, Orellana prov., forested shore of oxbow lagoon near Rio Tiputini, approximately 1 km. NW of Biological Research Station, Parque Nacional Yasuni, 11-X-2001; deposited in UMMZ, Ann Arbor, MI, USA). Species is peculiar in having a large yellowish patch on the ventral mesepisternum and by discrete lateral bands of pruinosity on synthorax (these bands yellow in ♀ ♀) and, in the ♂, by the ventral, rounded tooth at 1/2 length of cercus.

INTRODUCTION

BORROR (1931) treated 14 species of *Oligoclada* as valid in his revision of the genus. Seven species and 1 subspecies have been described since then (see SANTOS, 1945a, 1951; FRASER, 1947; GEIJSKES, 1984; DE MARMELS, 1989, 1992; MACHADO & MACHADO, 1993). The monotypic *Podothemis nemesis* Ris was transferred to *Oligoclada* by SANTOS (1945b), and GEIJSKES (1984) synonymized *O. raineyi* Ris with *O. abbreviata* (Rambur), bringing the current number of species to 21. The species described herein brings the total to 22.

OLIGOCLADA TERETIDENTIS SP. NOV.

Figures 1-8

Material. – **Holotype** ♀: ECUADOR: Orellana province, forested shore of oxbow lagoon near Rio Tiputini, approximately 1 km. NW of the Biological Research Station, Parque Nacional Yasuni, 11-X-2001, Andrew C. Rehn leg. – **Allotype** ♀: same data as holotype. – **Paratype** ♂: same data as holotype. Holotype and allotype are deposited in the University of Michigan Museum of Zoology in Ann Arbor, Michigan, USA. The paratype male is in the personal collection of the author.

Etymology. – The name *teretidentis* is Latin for “rounded tooth”, referring to the ventral, rounded

tooth located at mid-length on the male cercus.

MALE (holotype). — **H e a d.** — Labium whitish-yellow except mesal margins of palps black; labrum, postclypeus and anteclypeus whitish-yellow with black setae; frons bi-colored, a thin pale band just above fronto-clypeal suture, remainder of frons and vertex metallic steel-blue; antennae brownish-black; occiput shiny black except for a small posterior pale spot on either side of midline, and with long posterior setae; rear of head shiny black.

T h o r a x. — Prothorax mostly black, dorsum and sides of median lobe diffusely dark brown; posterior lobe erect, slightly emarginated medially with a fringe of long, white setae.

Pterothorax entirely black except for a large, rounded, triangular yellowish patch on ventral 1/2 and external 3/4 of each mesepisternum, this patch entirely surrounded by brownish margin and adjacent ventrally to mesopleural (humeral) suture although slightly obscured by pruinosity there, slightly narrowed dorsally. Lateral bands of pruinosity as follows: one on posterior half of mesepimeron, connected dorsally and ventrally with second band covering much of metepisternum, area surrounding spiracle black, a third triangular band covering the posterior-dorsal half of the metepimeron, fused with metepisternal band on its upper end (Fig. 1).

Legs black, with proximal flexor surfaces of all femora pruinose.

Wings. — Membrane lightly smoky throughout, venation as for the genus; anal loop comprising 10 cells in right hind wing, 11 cells in left hind wing, heel and toe poorly developed; 2 rows of cells in anal field at level of midrib origin; discoidal field of fore wing comprising 2 cell rows to beyond level of nodus; fore wings with 9 antenodal crossveins, right fore wing with 8 postnodals, left fore wing with 9 postnodals; hind wings with 6 antenodals, right hind wing with 8 postnodals, left hind wing with 9 postnodals. Pterostigma brown.

A b d o m e n. — Black, with diffuse dorsal bands of pruinosity on basal 1/3 of segments 1 and 2; anterior hamules black, extending just beyond level of anterior lamina, but slightly less prominent than rounded genital lobes (Fig. 2), medial hooks of anterior hamules diverging caudally, external edge of hamular ridge developed anteriorly into small square lobe (Fig. 3). Cerci black basally, dark brown in distal half, longer than segment 9; in lateral view ventral margin strongly up curved in basal half, with one prominent, rounded ventral tooth at 1/2 length (Fig. 4), preceded by three smaller, more external teeth best seen in dorsal oblique view, tips broadly pointed; in dorsal view tips pointed and slightly divergent, inner margins convex at base, becoming concave to 3/4 length, covered with fine whitish setae (Fig. 5). Epiproct black, slightly shorter than cerci, tapered to blunt, up curved, emarginated tip (Figs 4, 6).

M e a s u r e m e n t s (mm). — Total length 25, abdomen length 17, hind wing length 21.

FEMALE (allotype). — **H e a d.** — Similar to holotype except face brown, entire vertical surface of frons brown, horizontal surface of frons and vertex as in holotype; posterior margin of occiput emarginate, with small lateral lobes (Fig. 7).

T h o r a x. — Prothorax as in holotype except fringe of long setae on hind margin of

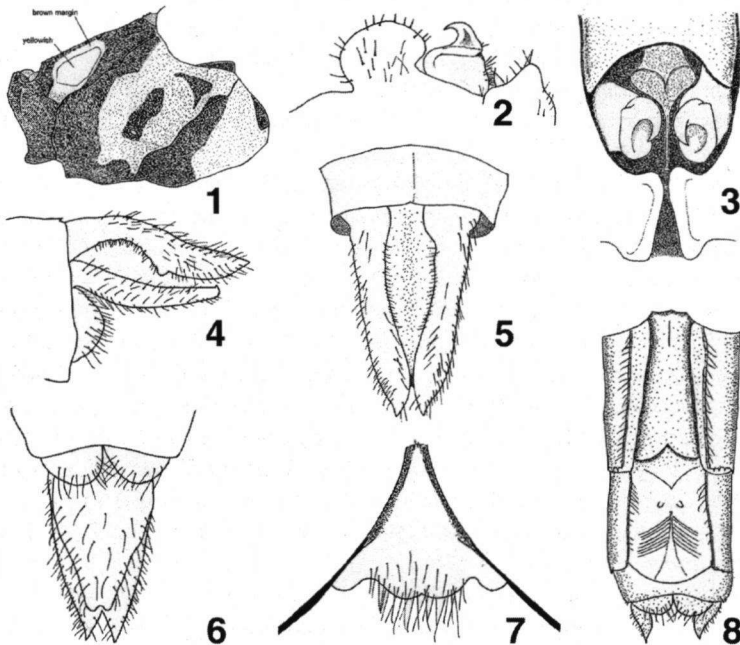
posterior lobe golden.

Pterothorax similar to holotype except brown; ventral mesepisternal patch entirely yellow with no color change around margins; ventral 1/5 of mesepimeron and area around stigma black; lateral yellow bands on mesepimeron, metepisternum and metepimeron where holotype is pruinose.

Legs black, except coxae brownish.

Wings. — Membrane lightly smoky throughout; right fore wing with 8 antenodals, 9 postnodals, left fore wing with 9 antenodals, 9 postnodals; hind wings with 7 antenodals, 8 postnodals.

A b d o m e n. — Stockier than holotype, entire dorsum of segments 2 and 3 yellowish-brown above lateral carina, blackish-brown below lateral carina; dorsum of segment 4 yellowish-brown above lateral carina except for small black area immediately above apical 1/5 of lateral carina; pale areas more restricted and forming a mid-dorsal brown band on segments 5-7, this band occupying dorsal 1/3 of area between mid-dorsal carina and lateral carina on segment 5, and dorsal 1/4 of the same area on segments 6



Figs 1-8. *Oligoclada teretidentis* sp. n., holotype ♂ (1-6), and allotype ♀ (7, 8): (1) synthorax, left lateral view (lightly stippled areas indicate pruinosity); — (2) hamule, genital lobe and anterior lamina, lateral view; — (3) hamules, ventral view; — (4) caudal appendages, left lateral view; — (5) caudal appendages, dorsal view; — (6) caudal appendages, ventral view; — (7) occiput, dorsal view; — (8) abdominal segments 8-10, ventral view.

and 7; remainder of segments 5-7 and segments 8-10 black. Vulvar lamina as in Figure 8. Sternite 9 convex, overlapping sternite 10. Ventral carina of segments 2-9 fringed with long, white setae.

Measurements (mm). — Total length 25, abdomen length 16, hind wing length 21.5.

VARIATION IN PARATYPE. — The single paratype male shows little variation from the holotype, except that the pale posterior occipital spots are absent.

DISCUSSION

Oligoclada teretidentis belongs to "group II" of BORROR (1931) based on the structure of the penis in the paratype male (not illustrated), although the phylogenetic validity of these groups has never been analyzed. The new species is distinguished from most other members of the genus by the large, ventral yellow patch on the mesepisternum of both sexes. Mature males of no other known *Oligoclada* species have large mesepisternal patches (*O. monosticha* Borrer and *O. sylvia* Kirby have obscure grayish mesepisternal bands, but differ greatly in morphology of hamules and cerci). Based on DE MARMELS' (1989) description of *O. hypophane* and BORROR's (1931) discussion of *O. walkeri* Geijskes, females of those species also have large pale antehumeral patches. Female *O. teretidentis* are distinguished from *O. hypophane* by vulvar lamina morphology (DE MARMELS, 1989, fig 202), and are distinguished from *O. walkeri* by vulvar lamina and occiput morphology (GEIJSKES, 1984, figs 18 & 19).

The structure of the male cerci in *O. teretidentis* is diagnostic, and while slightly similar to *O. monosticha*, the ventral margin of the cercus in that species is less arched basally, and the ventral tooth is more distad and more acute. The form of the female occiput is diagnostic in *O. teretidentis* as far as is known, but females of several species remain undescribed, and descriptions of several others do not discuss this structure.

Oligoclada teretidentis is known only from the Amazon Basin of eastern Ecuador. All three specimens in the type series were collected along the forested shore of an oxbow lagoon in mostly sunny conditions at mid-day. The males were observed perching on dead logs within several inches of the water. The female was captured as she attempted to oviposit along the water's edge near the base of shoreline vegetation. Common species flying at the same location included *Micrathyria occipita* Westfall, *Perithemis electra* Ris, *Erythemis haematogastra* (Burmeister), *Acanthagrion apicale* Selys and *Protoneura paucinervis* Selys.

Published records of *Oligoclada* in Ecuador are scarce, but the genus is well-represented there. A single female *O. pachystigma* Karsch was collected along with the new species described in this paper. The following additional *Oligoclada* species have been collected in Ecuador by Dennis R. Paulson and others: *O. crocogaster* Borrer, *O. monosticha*, *O. stenoptera* Borrer, *O. umbricola* Borrer and *O. walkeri* (D. Paulson, pers. comm.).

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