

SHORT COMMUNICATIONS

**PROGOMPHUS TENNESSENI SPEC. NOV.
FROM THE DOMINICAN REPUBLIC, WEST INDIES
(ANISOPTERA: GOMPHIDAE)**

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The new sp. (holotype ♂: Dominican Republic, La Vega Province, Salto Guasara; 9-V-1995; deposited at USNM, Washington, D.C., USA), is described and compared with its closest relative, *P. serenus* Needham. The ♀ and larva are unknown.

INTRODUCTION

Recently, Dr Oliver S. Flint sent me a series of *Progomphus* adults which he collected in the Dominican Republic. All but two of the specimens were *P. serenus* Hagen. One male *P. zephyrus* Needham was present, only the seventh specimen recorded (DAIGLE, 1994). The remaining male was larger and darker than either *P. serenus* or *P. zephyrus*, and a critical examination of the appendages revealed substantial structural differences. Dr Flint has kindly allowed me to describe it as new, and I compare it with its nearest relative, *P. serenus*, which was described by NEEDHAM (1941). BELLE (1994) described four new species from Brazil, thus bringing the known number of *Progomphus* species to 66. The addition of this new species raises the current total to 67. The holotype male is deposited in the National Museum of Natural History in Washington, D.C., USA.

PROGOMPHUSTENNESSENI SP. NOV.

Figures 1-2

M a t e r i a l . — Holotype ♂: Dominican Republic, La Vega prov., Arroyo Guasara just below Salto Guasara, a southside tributary of the Rio Yaqui del Norte, at 9.5 km, W of Jarabacoa, on road to Manaboa, 19°04.4'N, 70°42.1'W, alt. 680 m, 9-V-1995, O.S. Flint, Jr leg. (USNM).

E t y m o l o g y. — The new species is named for Dr Kenneth J. Tennessee, for his many contributions to North American odonatology.

MALE (holotype). — **H e a d.** — Eye color in life not known; antennae black. Labrum brown, edged with white; anteclypeus yellow, postclypeus brown, facial lobes grayish white. Antefrons black, postfrons grayish white with frontal furrow brown basally. Vertex blackish brown; occiput yellow margined with brown. Occipital ridge black; rear of head black with yellow spot below occipital ridge.

T h o r a x. — Prothorax brown with lateral yellow area. Pterothorax blackish brown marked with yellowish green; middorsal carina black, antealar crest blackish brown. First pale antehumeral stripe nearly complete, almost connected to pale mesothoracic collar; second pale antehumeral stripe missing, reduced to tiny basal triangle and small apical spot. Anterior pale lateral stripe wide and complete. Wide middle pale lateral stripe interrupted dorsally, posterior pale lateral stripe wide and complete; sternum light brown with obscure yellowish streaks.

Legs. — Femora brown with pale flexor area, femur and tibia joint black. Tibiae blackish brown; tarsi and claws black.

Wings. — Hyaline, a basal brown spot at first antenodal cell of each wing; costa black. Forewings with 15-16 antenodal crossveins, 9 postnodals; hindwing with 10-11 antenodals, 9-10 postnodals. Basal subcostal crossvein present. Triangle 3-celled, subtriangle 2-celled in all wings. Brown pterostigma surmounting 6-7 cells.

A b d o m e n. — Mostly black; each segment with thin white basal ring reaching midventral line. Segment 1 brown with lateral orange spot, dull yellow ventrally with a finger-like ventral projection. Segment 2 brown with yellow dorsal stripe; auricle yellow, posterior lateral spot obscure orange and yellow, genital fold dull yellow. Posterior hamules brown, setose, and stout with 5-6 black basoventral tubercles; paler apically with hook blunt; hood of penis dark brown, cupped anteriorly to receive penis flagellae. Segment 3 black with small white basal triangle laterally. Segments 4-6 black with thin white basal rings. Segment 7 black with white basal ring widening laterally and pale mid-lateroventral spot. Segment 8 black with obscure brown and yellowish mid-lateroventral spots. Segment 9 black with obscure brownish lateral areas. Segment 10 black with tinge of brown lateroventrally.

Appendages. — Cerci black, lateral carina serrated basally with a flanged lateral tooth at base; tip sharply pointed (Fig. 1). Apical extensions of paraproct covered with long black stout setae (Fig. 2). In ventral view, epiproct curved inward with slender supero-external tooth visible. Viewed laterally, supero-external tooth with weak basally directed apical hook. Beyond the supero-external tooth (Fig. 1), serrated inner margin of epiproct with 3 hooked teeth decreasing in size apically.

Measurements (mm). — Total length, including cerci 46, abdomen 34, hind wing 27.

FEMALE UNKNOWN.

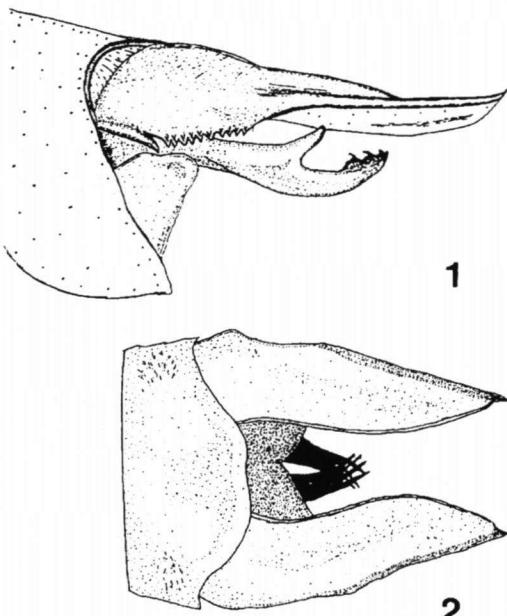
FIELD NOTES. — In the field, the darker and larger male *P. tennesseeni* can be separated from the paler and smaller *P. serenus* by its brown face, narrower pale

thoracic stripes, the serrated epiproct with its middle supero-external tooth, and black setose paraproct. The paraproct in *P. tennesseei* is elongated into an extension tipped with long black setae whereas the paraproct in *P. serenus* is truncated and tipped with short pale setae. This extension is missing in *P. zephyrus*. Segment 9 is black and brown in *P. tennesseei* but mostly yellow in *P. serenus*. In *P. tennesseei*, segment 1 and the genital fold are mostly brownish yellow, not bright lemon yellow as in *P. serenus*. *P. integer* has a white spotted thoracic pattern instead of the pale striped pattern found in *P. serenus*, *P. tennesseei*, and *P. zephyrus*.

According to Dr. O.S. Flint (pers. comm.), "We walked in through pastures for about a kilometer from the road before going down the steep sides of the gorge to the stream at the base of the falls and plunge basin. We collected the only *Progomphus* resting on a boulder in the stream below the falls. The stream is ca 3 m wide by 6-8 inches deep, clear, fast-flowing over boulders, gravel, and sand, tumbling between the boulders and into riffles and pools. There was some emergent marginal plants in slower spots, and the sides of the slopes were groves of coffee (and I think citrus) and overgrown pasture. When we went back 2 weeks later to the mouth of the stream at the road, there had been a big rain in the mountains behind the stream, which was now in flood: a foot or so higher and very muddy."

Companion odonates were *Aeshna psilus* Calv. (one male), *Diceratobasis melanogaster* Garr. (one male flying under a small tree near the stream), *Macrothemis celeno* Sel., *Scapanea frontalis* Burm., and *Telebasis vulnerata* Hag.

REMARKS. — *P. tennesseei* sp.n. and *P. zephyrus* appear to be restricted to Hispaniola, encompassing the Dominican Republic and possibly Haiti. *P. serenus* is known from both of these countries. It is amazing that three species of *Progomphus* have evolved on the relatively small island of Hispaniola. A closely related species, *P. integer* Hagen, is known only from Cuba and Jamaica.



Figs 1-2. *Progomphus tennesseei* sp.n., holotype male: (1) cerci and epiproct, lateral view; — (2) cerci (shown pale) and paraproct, dorsal view.

P. tennesseeni may be restricted to higher elevations (680 m), while *P. serenus* is a common lowland species (100 m). Additional collecting in the mountains of the Dominican Republic and Haiti should reveal more specimens of this rare Caribbean gomphid.

ACKNOWLEDGEMENTS

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