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Perigomphus angularis spec. nov. from central Ecuador (Odonata: Gomphidae)

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Perigomphus Belle, 1972, was described as a subgenus of Diaphlebia Selys, 1854, based on a single species, P. pallidistylus Belle (1972) from Costa Rica. Belle (1972) listed a combination of features as the basis for his subgenus: pterostigma of hind wing 1/7 hind wing length, anal triangle of male hind wing 2-celled, triangles without a crossvein, top of head round and without a row of setae, and branches of epiproct widely divaricate. In the species description he stated that the longest spines on the hind femora of the male were nearly the diameter of the femur. The status of Perigomphus and a related taxon, Desmogomphus Williamson, 1920, which was also included as a subgenus of Diaphlebia, remained poorly known for nearly two decades. Belle (1988), based on information from Dr. Minter J. Westfall, Jr., recognized Perigomphus and Desmogomphus as genera distinct from Diaphlebia. Westfall (1989) described the larvae of Perigomphus pallidistylus and Desmogomphus paucinervis and the adult female of P. pallidistylus. He had reared these species in 1979 and came to the conclusion that both subgenera deserved to be elevated to generic rank. Later, Belle (1996) placed Perigomphus in the subfamily Octogomphinae, whereas Desmogomphus and Diaphlebia were placed in the Gomphoidinae. Perigomphus pallidistylus is a rarely seen Neotropical species that ranges from northern Costa Rica to southern Panama (Garrison et al. 2006). Belle (1996) speculated that the genus "possibly occurs" in Colombia and Ecuador. I discovered a second species of Perigomphus in the Amazon headwaters of central Ecuador, partly verifying Belle's prediction; the new species fits the generic characters for Perigomphus given in the key to Gomphidae in Garrison et al. (2006).

Material and methods

Illustrations were made with aid of camera lucida on a stereomicroscope. Measurements were made with a ruler and a stereomicroscope with an ocular micrometer. Total length includes the cerci. Wing nomenclature follows Riek & Kukalovà-Peck (1984). Pterostigma length was measured along the costa and includes the widths of the enclosing proximal and apical crossveins. The right anterior hamule was removed from the genital fossa and glued to a separate cellophane strip so it could be examined and illustrated under high magnification.

Abbreviations:

- L length W width AL abdomen length Fw fore wing Hw hind wing Hf hind femur Pt pterostigma
- TL total length
- S abdominal segment
- FSCA Florida State Collection of Arthropods, Gainesville, Florida, USA