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THE *APICALE* SPECIES GROUP OF *ACANTHAGRION*, WITH DESCRIPTION OF FOUR NEW SPECIES AND A HOOK-MOVING APPARATUS (ZYGOPTERA: COENAGRIONIDAE)

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The 8 spp. of the group are studied and keyed. The lectotype of *A. apicale* is designated, redescribed and illustrated. From Brazil, *A. chicomendesi*, sp. n. (holotype ♂: Mato Grosso), *A. flaviae*, sp. n. (holotype ♂: Amazonas), *A. kaori* sp. n. (holotype ♂: Amazonas) and *A. triangulare* sp. n. (holotype ♂: Acre) are described. *A. apicale descendens* Fraser, 1946 is revalidated as species. A study of the penis lobes was performed, demonstrating that the median lobe is inflatable and mainly responsible for the lateral movement of the sclerotized hook, whose importance in copulation is discussed.

INTRODUCTION

LEONARD (1977) defined nine groups for the genus *Acanthagrion* based mainly on the structure of penis, appendages, and abdominal segment 10. The species of the *ablutum* group, however, have been transferred to *Oxyagrion* (VON ELLENRIEDER & LOZANO, 2008). Out of the remaining eight groups, the most well-defined is *apicale*. The species of this group can be readily identified by a pair of horns on the apex of male abdominal segment 10, penis with a main lateral lobe and middorsal carina separating mesepisternal fossae in female forming a broad-capped tubercle. In most species the ground color is orange and the penis has a pair of heavily sclerotized hooks at its distolateral part. A preliminary study of the penis of species of this group in my collection revealed that the number of species was greater than the three species known for the group. These results showed the importance of studying the lectotype (here designated) of *A. apicale* Selys, 1876 before describing new species in the group. Thanks to the kind help