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Revision of *Digonocryptus* Viereck (Hymenoptera: Ichneumonidae: Cryptinae), with twenty six new taxa and cladistic interpretation of two species complexes

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Abstract

Digonocryptus Viereck, a large genus of Neotropical Cryptini, is diagnosed, described, and fully revised. Two species complexes are proposed, and cladistically resolved. A total of 45 valid species are recognized, of which 26 are described as new, *D. arcaeus*, *D. archisius*, *D. atrozyrix*, *D. banius*, *D. boraesus*, *D. caceres*, *D. campygeus*, *D. caragatensis*, *D. cennitus*, *D. domius*, *D. elegans*, *D. huntus*, *D. iageus*, *D. meridensis*, *D. mettus*, *D. petrus*, *D. pitchus*, *D. rufozyrix*, *D. sautatus*, *D. silopoeus*, *D. sipius*, *D. siraeus*, *D. teleborus*, *D. variabilis*, *D. yacamus*, and *D. yunnus*. Other valid species are *D. annularis* (Cameron), *D. chiriquensis* (Cameron), *D. coloratus* (Szépligeti), *D. crassipes* (Brullé), *D. denticulatus* (Taschenberg), *D. diversicolor* (Viereck), *D. grossipes* (Brullé), *D. inermis* (Szépligeti), *D. inflatus* (Brullé), *D. narratorius* (Fabricius), *D. niger* (Szépligeti), *D. propodeator* Kasparyan et Ruíz, *D. pulchripes* (Cameron), *D. rufigaster* (Szépligeti), *D. sutor* (Fabricius), *D. tarsatus* (Cresson), *D. thoracicus* Kasparyan et Ruíz, *D. variegatus* (Szépligeti), and *D. varipes* (Brullé). Four new synonymies are proposed: *D. insularis* (Ashmead) and *D. grenadensis* (Ashmead) as junior synonyms for *D. narratorius* (Fabricius); *D. rufithorax* (Taschenberg) as junior synonym for *D. inflatus* (Brullé); and *D. femorator* Kasparyan et Ruíz as junior synonym for *D. variegatus* (Szépligeti). A total of 44 new distribution records are registered for all valid species except *D. propodeator* and *D. tarsatus*. A taxonomic key for species based on females, habitus and propodeum illustrations, along with photographic illustrations of diagnostic features, are provided for all valid species.

Key words: Cladistics, parasitoid, Phygadeuontinae, wasp

Introduction

Digonocryptus Viereck is part of Gabuniina, an apparently monophyletic taxon of Cryptini (Aguiar 2005b, Laurence *et al.* 2006) recognized essentially by having the fore tibia of female distinctly swollen, tip of lower valve of ovipositor with a dorsally projecting lobe which partly encloses the tip of the upper valve, and the spiracle of the first tergite placed at, or close to, the mid-length, not behind the apical 0.4 of the tergite. Aguiar (2005b) provides further detail and a key to the Neotropical genera of this subtribe. The group is apparently specialized in parasitizing wood borer insect larvae, showing an ovipositor adapted for drilling into wood (Townes 1970). Known hosts are Coleoptera and Lepidoptera borers in branches, twigs or vines (Townes 1970). Eight genera are currently valid for the Neotropical region, but only two appear to be common, namely *Digonocryptus* Viereck and *Agonocryptus* Cushman. *Agonocryptus* was revised by Gupta (1982), who recognized 30 species, with a Mexican species later described by Kasparyan and Ruíz (2005). *Digonocryptus*, however, remained unstudied, perhaps because of the large size of the taxon and its high intraspecific variability.

Autónoma de Tamaulipas, Mexico) provided a copy of the his book on Mexican Cryptini. Helen A. Ferreira (MZSP) ably helped with many important curatorial tasks. Celso O. Azevedo, Marcelo T. Tavares (UFES) and one anonymous reviewer contributed with important suggestions to the manuscript. This project benefited from funding provided by several Brazilian institutions: FAPESP (Processes 00/05704-6 and 03/08585-6), FAPES (Processes 36263290/07 and 45440611/09), and FACITEC (Process 027/2007) to APA, and a M.Sc. scholarship from CAPES to ACBR.

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