



Phylogenetic analysis of *Rhabdepyris* (Hymenoptera: Bethyridae) and redefinition of generic limits based on morphological characters

CECILIA WAICHERT¹ & CELSO O. AZEVEDO²

¹Utah State University, Department of Biology, Logan, Utah, 84322, USA. E-mail: cwaichert@gmail.com

²Universidade Federal do Espírito Santo, Departamento de Biologia, Av. Marechal Campos, 1468, 29.040-090, Vitória, ES, Brazil. E-mail: bethyridae@gmail.com

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Abstract

Rhabdepyris (Epyrinae) is a cosmopolitan genus comprised of 132 species. No morphological synapomorphies are known for the genus and the genus is characterized by a combination of characters common to most Epyrini. Herein, we performed a cladistic analysis based on morphological characters to test the monophyly of *Rhabdepyris*. The three known subgenera of *Rhabdepyris* (*Chlorepyris*, *Rhabdepyris s. str.*, and *Trichotepyrus*) and other Epyrini (*Anisepyris*, *Bakeriella*, *Calyozina*, *Epyris*, *Laelius*, *Trachepyrus*) were included in the ingroup. The cladistic analysis of 48 taxa (46 ingroup species and two outgroup species) and 81 structural characters yielded 72 cladograms under equal weights, and one under successive weighting. *Rhabdepyris* was found to be polyphyletic; the subgenus *Trichotepyrus* was closely related to *Anisepyris* whereas *Rhabdepyris s. str.* was closely related to *Laelius*. The subgenus *Chlorepyris* is paraphyletic. Morphological characters are discussed in the light of the new phylogeny; novel characters are proposed and illustrated, and a new classification of *Rhabdepyris* and Epyrini is proposed. The following nomenclatural changes are proposed: *Trichotepyrus* is synonymized under *Anisepyris* (**syn. n.**); *Chlorepyris* is recognized as a separated genus (**stat. rev.**); all 12 American species of the subgenus *Rhabdepyris* are transferred to *Laelius*; 22 species of *Trichotepyrus* are transferred to *Anisepyris*; 58 species are transferred to *Chlorepyris*. A remaining total of 40 species are now recognized in *Rhabdepyris*. The holotype of *Rhabdepyris*, *R. myrmecophilus* Kieffer, the type species of *Rhabdepyris*, is redescribed.

Key words: Epyrinae, Epyrini, classification, *Anisepyris*, *Chlorepyris*, *Laelius*, *Trichotepyrus*