



Taxonomic revision of *Myrmeciza* (Aves: Passeriformes: Thamnophilidae) into 12 genera based on phylogenetic, morphological, behavioral, and ecological data

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Abstract

A comprehensive molecular phylogeny of the family Thamnophilidae indicated that the genus *Myrmeciza* (Gray) is not monophyletic. Species currently assigned to the genus are found in three of the five tribes comprising the subfamily Thamnophilinae. Morphological, behavioral, and ecological character states of species within these tribes and their closest relatives were compared to establish generic limits. As a result of this analysis, species currently placed in *Myrmeciza* are assigned to *Myrmeciza* and eleven other genera, four of which (*Myrmelastes* Sclater, *Myrmoderus* Ridgway, *Myrmophylax* Todd, and *Sipia* Hellmayr) are resurrected, and seven of which (*Ammonastes*, *Ampelornis*, *Aprositornis*, *Hafferia*, *Inundicola*, *Poliocrania*, and *Sciaphylax*) are newly described.

Key words: antbirds, *Myrmeciza*, phylogeny, systematics, Thamnophilidae

Introduction

Historically, the 22 species currently (American Ornithologists' Union 1998, Zimmer & Isler 2003, Remsen *et al.* 2013) comprising the genus *Myrmeciza* (Gray) have been placed in a multiplicity of genera accompanied by uncertainty and controversy. Notable attempts at generic classification were made by Hellmayr in Cory and Hellmayr (1924), who consolidated the species into two genera; by Todd (1927), who placed the species in five genera, two newly described; by Zimmer (1932), who considered Todd's five genera "unsatisfactory" and recommended calling all the species *Myrmeciza*; by Peters (1951), who placed them into three of Todd's genera; and finally by Meyer de Schauensee (1970), who apparently followed Zimmer's recommendation and placed all the species into *Myrmeciza*. The decision to consolidate has since been followed by various authors (e.g. Sibley & Monroe 1990, Ridgely & Tudor 1994, Zimmer & Isler 2003) who, however, indirectly or directly expressed doubt that *Myrmeciza* represented a monophyletic group. Subsequently, polyphyly was confirmed by genetic studies (Irestedt *et al.* 2004, Brumfield *et al.* 2007, Moyle *et al.* 2009, Belmonte-Lopes *et al.* 2012), but monophyly has never been formally tested using complete taxon (species level) sampling. Therefore, our objective has been to test the monophyly of *Myrmeciza* and provide a genus-level taxonomic classification for species currently placed in this genus.

An inherent dilemma in making generic recommendations for a large number of taxa, such as currently placed in *Myrmeciza*, is whether to place species that are phenotypically very different in large genera solely on the basis of monophyly (a "broad monophyly" option) or to revive, and if needed describe, smaller morphologically, ecologically, and behaviorally distinct genera by combining phylogenetic information with other lines of information (a "focused monophyly" option). Both options have limitations with regard to their information content. Large inclusive genera (the current *Myrmeciza* is an example) may provide no insights into the relationship among species within morphologically and behaviorally distinct clades. On the other hand, basing genera on smaller clades may lead to a multitude of genera, some of which will be monotypic and therefore also provide little insight into relationships.