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## Synonyms for some species of Mexican anoles (Squamata: Dactyloidae)

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### Abstract

We studied type material and freshly collected topotypical specimens to assess the taxonomic status of five names associated with species of Mexican *Anolis*. We find *A. schmidti* to be a junior synonym of *A. nebulosus*, *A. breedlovei* to be a junior synonym of *A. cuprinus*, *A. polyrhachis* to be a junior synonym of *A. rubiginosus*, *A. simmonsii* to be a junior synonym of *A. nebuloides*, and *A. adleri* to be a junior synonym of *A. liogaster*.

**Key words:** *Anolis*, Mexico, synonyms, taxonomy

### Introduction

Despite decades of progress by Hobart Smith, Jonathan Campbell, Henry Fitch, Carl Lieb and others, the anole fauna of Mexico remains poorly known and muddled by taxonomic confusion. Lieb's (1981, 2001) important work summarized the states of knowledge at those times and directed attention to many outstanding problems. Some of these problems have been addressed (e.g., Nieto-Montes de Oca, 1994, 2001; on *schiedii* group *Anolis*), but many others remain unresolved.

In this paper we address five taxonomic issues in Mexican anoles. All of these issues have been discussed by previous workers who proposed or suggested appropriate taxonomic changes. Fitch (1978) reviewed the taxonomic status of *A. simmonsii* and suggested that it may represent a synonym of *A. nebuloides*. Lieb (1981) performed the only systematic study available of the anole species groups in western Mexico. Therein, he synonymized *Anolis adleri* with *A. liogaster* and suggested that *A. schmidti* might be a synonym of *A. nebulosus*. He did not provide further clarification on the taxonomic status of *A. simmonsii*, and 20 years later he continued to include both *A. schmidti* and *A. simmonsii* in the Mexican anole fauna (Lieb, 2001). Similarly, Nieto-Montes de Oca (1994) synonymized *A. breedlovei* with *A. cuprinus* and *A. polyrhachis* with *A. rubiginosus*.

All of these proposed or suggested changes have remained in need of corroboration and formal publication. Our recent fieldwork has allowed the collection of several forms at their type localities. We also have had the opportunity to examine several type specimens of the aforementioned taxa. This work forms the basis for the taxonomic changes that we propose below.

### Methods

We adopt the evolutionary species concept (Simpson, 1961; Wiley, 1978), and apply this concept by identifying species based on consistent differences between populations. That is, we hypothesize that populations that are