



A new species of *Phyllodactylus* (Reptilia, Squamata, Gekkonoidea, Phyllodactylidae) from Isla de Guanaja in the Honduran Bay Islands

JAMES R. MCCRANIE^{1,3} & S. BLAIR HEDGES²

¹10770 SW 164th Street, Miami, Florida 33157-2933, USA. E-mail: jmccrani@bellsouth.net

²Department of Biology, 208 Mueller Laboratory, Pennsylvania State University, University Park, Pennsylvania 16802-5301, USA.
E-mail: sbh1@psu.edu

³Corresponding author

Abstract

Morphological and molecular analyses of the *Phyllodactylus* populations on the Honduran Bay Islands of Guanaja, Roatán, and Utila demonstrate that the Guanaja population is best treated as a species distinct from the two other island populations. Thus, *P. palmeus* is restricted in distribution to Roatán and Utila islands and the Cayos Cochinos and a new species name is provided for the Guanaja Island population of the *P. palmeus* species group.

Key words: Guanaja Island, Honduras, *Phyllodactylus palmeus*, *Phyllodactylus paralepis* sp. nov., morphology, mtDNA, 16S rRNA

Introduction

Dixon (1968) described the gecko species *Phyllodactylus palmeus* from a group of 14 specimens collected on Roatán Island and eight others collected on Guanaja Island in the Honduran Bay Islands. Dixon (1968) chose a Roatán specimen as the name bearing holotype of the new species. During 2011, JRM started collecting tissues from various reptile species occurring on the Honduran Bay Islands. Roatán and Guanaja islands are uplifted islands separated from each other and from the Honduran mainland by deep seawater trenches. Thus, Roatán and Guanaja have apparently been separated from each other and from the mainland since at least the late Pliocene and early Pleistocene (discussed in Villa & McCranie 1995). We recently (2011) began work on a series of projects combining morphological and molecular data to understand the relationships between various species groups of lizards occurring on the Honduran Bay Islands. Three studies have already been completed (McCranie & Hedges, 2012, 2013a, 2013b), and herein we report the results of a fourth study, the third involving geckos.

Methods

The description of the holotype of the new species generally follows the format for the description of *Phyllodactylus palmeus* in Dixon (1968). We use longitude for the long axis of the body and transverse for across the short axis. Color codes and names used herein follow those of Smithe (1975–1981) and museum acronyms follow those of Leviton *et al.* (1985). We use the WGS84 geodetic datum system herein.

The new molecular data set comprised six sequences of the 16S rRNA mitochondrial gene from six individuals of *Phyllodactylus* collected on Islas de Guanaja, Roatán, and Utila and two individuals of *P. tuberculosis* Wiegmann from southern Honduras (see new species description and Appendix I). These new sequences were aligned (816 base pairs after excluding positions of ambiguous alignment) with sequences from Genbank of three species of *Phyllodactylus* from the West Indies (AY763275–83, AY763285–86; Weiss & Hedges 2007) and rooted with the phyllodactylid species *Gymnodactylus amarali* Barbour (JN935544; Gamble *et al.* 2012). Methods used