



<http://dx.doi.org/10.11646/zootaxa.3722.3.1>

<http://zoobank.org/urn:lsid:zoobank.org:pub:4E9BA052-EEA9-4262-8DDA-E1145B9FA996>

A review of the *Cnemidophorus lemniscatus* group in Central America (Squamata: Teiidae), with comments on other species in the group

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Abstract

We provide the results of a morphological and molecular study on the Honduran Bay Island and mainland populations of the *Cnemidophorus lemniscatus* complex for which we resurrect *C. ruatanus* **comb. nov.** as a full species. Morphological comparison of the Honduran populations to *Cnemidophorus* populations from Panama led to the conclusion that the Panamanian population represents an undescribed species named herein. In light of these new results, and considering past morphological studies of several South American populations of the *C. lemniscatus* group, we suggest that three other nominal forms of the group are best treated as valid species: *C. espeuti* (described as a full species, but subsequently treated as a synonym of *C. lemniscatus* or a subspecies of *C. lemniscatus* until this publication), *C. gaigei* **comb. nov.**, and *C. splendidus* **comb. nov.**

Key words: *Cnemidophorus lemniscatus* species group, *Cnemidophorus ruatanus* **comb. nov.**, *Cnemidophorus duellmani* **sp. nov.**, morphology, mtDNA, 12s, cytochrome b, Honduras, Guatemala, Nicaragua, Panama, Colombia

Introduction

Burt (1931) provided a revision of the genus *Cnemidophorus* in which he recognized *C. lemniscatus* (Linnaeus) as a wide-ranging species that occurred from “Guatemala south to Colombia and northern Brazil, often insular” (p. 29). Burt (1931: 29) recognized the subspecies *C. l. nigricolor* Peters as occurring on the “Islands north of Venezuela from the Aves east to Blanquilla, also southward on Margarita Island.” That concept of the geographical distribution of *C. lemniscatus* has existed in the literature to very recently.

McCrystal & Dixon (1979) were the first to divide populations previously consumed under *Cnemidophorus l. lemniscatus* when they described *C. gramivagus* for the *C. lemniscatus* complex populations from the llanos of Venezuela and Colombia. Cole & Dessauer (1993) noted that *C. lemniscatus* actually represented a complex of species and described two new species (*C. cryptus* and *C. pseudolemniscatus*; both unisexual) previously masquerading as *C. lemniscatus* from southeastern Venezuela, Amazonian Brazil, Suriname, and French Guiana. Vanzolini (1970) had first reported the discovery of unisexual populations of *C. lemniscatus* along the eastern portion of the Amazon River in northeastern Brazil. Markezich *et al.* (1997) described the new species (*C. arenivagus*) of the *C. lemniscatus* complex from the Paraguana Peninsula of Venezuela and described the new subspecies *C. l. splendidus* from other populations of the same complex from the same peninsula. Specimens from near the Gulf of Maracaibo, Colombia, were also assigned to *C. arenivagus*. Markezich *et al.* (1997) assigned specimens from Guyana, Suriname, and Bolivar, Venezuela, to *C. l. lemniscatus*, with specimens they examined from other areas of Venezuela and Colombia left unassigned to a subspecies. One of the characters used by Markezich *et al.* (1997) to distinguish *C. l. splendidus* from *C. l. lemniscatus* was that the vertebral stripe was split in the later, whereas that stripe was single or absent in *C. l. splendidus*. Cole & Dessauer (1993) included photographs of a specimen they erroneously designated as the lectotype of *C. lemniscatus* and other specimens of *C. lemniscatus* from Suriname and Guyana that clearly show the split nature of the vertebral stripe. Markezich *et*