

## ***Hypolestes hatuey* sp. nov.: a new species of the enigmatic genus *Hypolestes* (Odonata, Hypolestidae) from Hispaniola**

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### **Abstract**

Both sexes of *Hypolestes hatuey* Torres-Cambas, sp. nov. (Odonata: Zygoptera: Hypolestidae) from Hispaniola are described and illustrated here. This newly described species differs from *H. trinitatis* and *H. clara*, the other two species within the genus, by the morphology of the genital ligula and male cerci. Females of *H. hatuey* sp. nov. differ from *H. clara* by the shape of the female antehumeral stripe and wing venation. Morphological distinctiveness in males is supported by genetic differences in the 16S mitochondrial gene. Following the categories and criteria of the IUCN Red List of Threatened Species, we suggest this species should be listed as Data Deficient (DD), given that available data on its distribution are too limited to assess its risk of extinction.

**Key words:** Zygoptera, damselfly, endemic, Antilles, West Indies, Neotropic, phylogeny, mitochondrial DNA, geometric morphometrics

### **Introduction**

*Hypolestes* is a small damselfly genus endemic to the islands of Cuba, Jamaica and Hispaniola (island shared by Haiti and Dominican Republic) in the Greater Antilles. This is a phylogenetically isolated taxon with a controversial family classification that has shifted from Lestidae (Calvert 1901–1908), Pseudolestidae (Fraser 1957), and Megapodagrionidae (Allen *et al.* 1984) to the monogenic Hypolestidae (Westfall 1987). Megapodagrionidae has been the most largely accepted classification; but recent phylogenetic analysis have shown that this family is polyphyletic (Bybee *et al.* 2008, Dumont *et al.* 2010, Dijkstra *et al.* 2014), and that it should be split into seven families, including the monogenic family Hypolestidae (Dijkstra *et al.* 2014).

The infragenetic taxonomy is also controversial. The genus *Hypolestes* has currently two described species with similar size and color pattern: *H. trinitatis* and *H. clara*, which can be distinguished by the morphology of the male genital ligula (Kennedy 1920). Both species are of special conservation concern, with *H. trinitatis* and *H. clara* included under the IUCN categories of Vulnerable (VU) and Endangered (EN), respectively (Paulson 2009; Paulson & von Ellenrieder 2006; Torres-Cambas *et al.* 2015). *Hypolestes trinitatis* is the type species of the genus, described from Trinidad, Cuba (Gundlach 1888). *Hypolestes clara* was described from Kingston, Jamaica, as *Ortholestes clara* by Calvert (1891) and changed to the genus *Hypolestes* by Calvert (1919). Another species, *Ortholestes abbotti*, was described from Haiti and later synonymized with *H. trinitatis* (Calvert 1919). This synonymy was confirmed by Dunkle (1991), who also examined the genital ligula of specimens from the three