

FEATURE ARTICLES

**SPECIES DIFFERENCES IN THE SONGS OF THE CRITICALLY ENDANGERED NICEFORO'S WREN AND THE RELATED RUFIOUS-AND-WHITE WREN**

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*Abstract.* Niceforo's Wrens (*Thryothorus nicefori*) and Rufous-and-white Wrens (*Thryothorus rufalbus*) are closely related Neotropical birds. Niceforo's Wrens, critically endangered endemic Colombian songbirds, are generally considered a sister species to Rufous-and-white Wrens, although some have suggested that they may represent a well-marked race. A careful comparison of the two taxa has never been conducted. Here we present a thorough study of the songs of male Niceforo's and Rufous-and-white Wrens based on recordings collected throughout both species' geographic ranges. Both species sing low-pitched songs composed of varied pure tone whistles. Niceforo's Wren songs are shorter and simpler with fewer syllables and syllable types; they have higher frequency trills and terminal syllables; and they have distinctive terminal syllables with a broader bandwidth, higher frequency of maximum amplitude, and a larger number of frequency modulations. Discriminant analysis based on fine structural details of songs differentiates the two species. In a subspecies-level discriminant analysis, all five subspecies of Rufous-and-white Wren cluster together and are distinct from Niceforo's Wren. Comparisons of morphometric measurements and plumage features reveal parallel differences in body size (Niceforo's Wrens are larger for most measurements) and plumage color (Niceforo's Wrens are more gray than Rufous-and-white Wrens). This study is the first to compare Rufous-and-white versus Niceforo's Wrens with a quantitative approach and supports the idea that these taxa are best understood as distinct species.

*Key words:* endangered species, Niceforo's Wren, Rufous-and-white Wren, *Thryothorus wrens*, vocal communication.