



Species limits in Antbirds (Aves: Passeriformes: Thamnophilidae): an evaluation of Plumbeous Antvireo (*Dysithamnus plumbeus*) based on vocalizations

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Abstract

Through most of the 20th Century, *Dysithamnus plumbeus* was considered to comprise three geographically remote subspecies based on plumage: *D. p. plumbeus* of the lowlands of southeastern Brazil; *D. p. leucostictus* of the east slope of the Andes from central Colombia to extreme northern Peru; and *D. p. tucuyensis* endemic to the mountains of northern Venezuela. Some recent authors have elevated these taxa to species status without providing additional evidence. We analyzed vocal differences among these taxa and compared the extent of diagnostic differences to a benchmark for species status under the Biological Species Concept (BSC). Vocalizations of *D. plumbeus* differed sufficiently from the others for *D. plumbeus* to be considered specifically distinct. Although both calls and loudsongs of the two remaining taxa differed from each other in some aspects, the differences did not meet our benchmark for species separation. We therefore recommend that they be designated as *D. leucostictus leucostictus* and *D. leucostictus tucuyensis* pending the acquisition of additional vocal recordings or other contrary evidence.

Key words. speciation, Neotropics, *Dysithamnus*, systematics, vocalizations, Thamnophilidae

Introduction

The Plumbeous Antvireo (*Dysithamnus plumbeus*) consists of three allopatric taxa originally described as distinct species and later reduced to subspecies by Hellmayr and Seilern (1912), who did not provide a rationale for their decision. One can only assume that this was on the basis of similarities in male plumage, as they describe the female plumage of *D. plumbeus* as “totally different” (translated from the German) from the other two taxa. Two of the taxa occur (Fig. 1) at mid-montane elevations (500–2000 m): *D. p. tucuyensis* (Hartert 1894) in the coastal cordillera of Venezuela and *D. p. leucostictus* (Sclater 1858) on the eastern slope of the Andes from central Colombia to extreme northern Peru. Recent data from Colombia indicate that this distribution is continuous (Salaman et al. 2002). *Dysithamnus p. plumbeus* (Wied-Neuwied 1831) is restricted to the Atlantic Forest of southeastern Brazil, primarily at elevations below 600 m. Although Chapman (1926) recognized the two northern populations as specifically distinct from the nominate form, Cory and Hellmayr (1924), Peters (1951), and Meyer de Schauensee (1966, 1970) maintained the three taxa as subspecies of *D. plumbeus*. The large range disjunction, striking differences in female plumage, and vocal and habitat differences between the montane and coastal Brazilian forms led Ridgely and Tudor (1994) to consider the montane northern populations as a species (*D. leucostictus*) distinct from the lowland Brazilian form (*D. plumbeus*), and this treatment was followed by Zimmer and Isler (2003). Ridgely and Tudor (1994) also indicated that the two montane taxa may ultimately be found worthy of species rank based on a suggestion by BMW. Hilty