

# Splits, lumps and shuffles

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1 (Southern) Giant Hummingbird *Patagona (gigas) gigas*, Quincanque Bajo, San Antonio, Valparaíso, Chile, October 2023 (Tomas Vásquez Opazo: @tvasquezopazo). A split in Giant Hummingbird!

This series focuses on recent taxonomic proposals—descriptions of new taxa, splits, lumps or reorganisations—that are likely to be of greatest interest to birders. This latest instalment focuses on splits, each of which also is associated with the description of a new species, in: Giant Hummingbird; Wilson’s and Elliot’s Storm-Petrels; Silvery-cheeked Antshrike; and Black-goggled Tanager.

## A spate of newly described species

Splits and lumps are, of course, the bread and butter of this column; but every once in a while, things are shaken up a bit with the description of a new species. There are several ways for previously unknown species to be ‘discovered’. The traditional approach happens during fieldwork, when one or more ornithologists (or intrepid, and highly knowledgeable, birders) encounters something totally unexpected: think of, say, the discoveries of Blue-throated Hillstar *Oreotrochilus cyanoaemus* (for a reminder, check out *Neotropical Birding* 25: 63–71) or of Araripe Manakin *Antilophia bokermanni*. Less frequently, an astute researcher discovers a specimen of an unknown species lurking, unidentified or misidentified, and unappreciated, in a museum. The most celebrated example of this is the case of the Congo Peacock *Afropavo congensis*, but, in the Neotropical context, this also is the origin story of several species, including Rufous Twistwing *Cnipodectes superrufus* (a misidentified 1990 specimen of which was discovered by Dan Lane in a Lima museum in 2002: see Lane *et al.* 2007).

Finally, new species also are revealed in the course of what otherwise would be a run-of-the-mill split, when one or more populations that have been proposed to belong to a different species turn out not to have a name at all; therefore, the split cannot be implemented until a new species is described. A species also may need a name if, following the rules of scientific nomenclature, an existing name turns out to be invalid (although these rules are so arcane that it is not necessarily straightforward to determine when such a course is justified). Undescribed species revealed in the course of a split now make up a significant proportion of new species descriptions of Neotropical birds. No fewer than six new species were described when the ‘Rufous Antpitta’ *Grallaria rufula*/Chestnut Antpitta *G. blakei* complex was revised, for example (as I discussed in *Neotropical Birding* 28: 60–68), and new species also were described in the course of proposing splits in Brown-winged Schiffornis *Schiffornis turdina* and Slaty-backed Nightingale-Thrush *Catharus fuscater*, both of which were described in *Neotropical Birding* 35: 50–58. Below I discuss four new cases, each of which involves some combination of a split and a new-species description.



juveniles have been found in elevations above the city of Santiago”, hence the English name ‘Andean’. The species name *barrosi* is a nod to “Rafael Barros Valenzuela (1890–1972) a Chilean ornithologist who... was one of the most prolific ornithologists in Chile during the 20th century”; and, of course, is the Barros I mentioned earlier, who puzzled over the migration of Southern Giant Hummingbird.

An important caveat to the genetic analysis by Norambuena *et al.* is that it is based entirely on mitochondrial DNA (mtDNA). I’ve mentioned many times before that mtDNA sometimes can produce spurious results. But the primary issue here isn’t with mtDNA *per se*, rather the reliance on a single gene. Our goal is to uncover the phylogeny of a set of species, that is, the evolutionary patterns of their divergence; and genes are the tools at hand to unravel that phylogeny. But over the years, evolutionary biologists have learned that different genes can yield somewhat different interpretations of a phylogeny; different genes evolve at different rates, and, through a process known as ‘incomplete lineage sorting’, the phylogeny generated by any single gene may not match that of another gene—even if both are approximately correct with respect to the phylogeny of the species under study. With a phylogeny that is as different from the prevailing classification as is the case with

these storm-petrels, then, it’s natural to look for confirmation from the analysis of one or more additional genes. On the other hand, the mtDNA phylogeny from Norambuena *et al.* is so different from expectations that it’s hard to believe that it isn’t telling us that everything we thought we knew about these birds may be off base, whether or not the new phylogeny is correct in every detail.

Another big ‘problem’ with this study is that it throws into doubt much of what we know about the field identification and distribution of these birds. Norambuena *et al.* in particular have little to say about the at-sea distribution of Andean Storm-Petrel, although they throw out the intriguing suggestion that: “Most likely, the specimens previously identified as *chilensis* and observed in the Humboldt Current will be found to be the new taxon *barrosi* sp. nov.”