

Splits, lumps and shuffles

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This series focuses on recent taxonomic proposals—be they entirely new species, splits, lumps or reorganisations—that are likely to be of greatest interest to birders. This latest instalment summarises papers relating to several antbirds, aracaris, a hummingbird, more tapaculos, seedeaters, and others. Get your lists out!

Molecular validation for aracari splits

Swati Patel and her colleagues¹⁶ from institutions in the USA and Brazil used aracaris of the genus *Pteroglossus* to test hypotheses concerning avian diversification in lowlands of the Neotropics. The phylogenetic trees used to make inferences concerning the pattern and timing of diversification within the group also provided information regarding subspecific relationships at the tips of this evolutionary tree. Reciprocal monophyly and relatively high divergences, in addition to diagnostic morphological features, suggested that taxa such as *Pteroglossus azara flavirostris* (Ivory-billed Aracari) and *P. a. mariae* (Brown-mandibled Aracari) are best considered valid species under lineage-based species concepts (as already recognised by some authorities). They were also able to infer that all members of the Collared Aracari *P. torquatus* superspecies are better treated as separate evolutionary (or even biological) species, a treatment already followed for Fiery-billed Aracari *P. frantzii*, but also applicable for Stripe-billed Aracari *P. sanguineus* and Pale-mandibled Aracari *P. erythropygius*.

Just one *Topaza*?

There are currently two recognised members of the spectacular hummingbird genus *Topaza*—Crimson Topaz *T. pella* and Fiery Topaz *T. pyra*. The former comprises three subspecies: *T. p. pella*, *T. p. smaragdula* and *T. p. microrhyncha*, and the latter two subspecies *T. p. pyra* and *T. p. amaruni*, plus an undetermined subspecies suggested by Hu *et al.*⁸. Angela Schmitz-Orn  s and Karl Schuchmann¹⁷ investigated the taxonomy of *Topaza* using colour spectral data to determine geographical variation in plumage coloration, using principal component and discriminant function analyses. Their phylogenetic reconstruction indicated low

differentiation between the four main branches identified and indicated no real basis for species-level separation of *T. pella* and *T. pyra*, given the continuous variation in the complex. They suggest that *Topaza* should be considered monotypic with four subspecies: *T. p. pella*, *T. pella microrhyncha*, *T. pella amaruni* and *T. pella pyra*.

One less antwren...?

Serra Antwren *Formicivora serrana* was described in 1929 from the Brazilian state of Minas Gerais, with the subspecies *F. s. interposita* and *F. s. littoralis* subsequently described (in the late 1980s) from specimens taken in Minas Gerais / Rio de Janeiro, and Rio de Janeiro, respectively. Just two years later, in 1990, the restricted-range *F. s. littoralis* was elevated to species status by Collar *et al.*⁶ under the vernacular name Restinga Antwren. Under this treatment, *F. s. interposita* was retained as a subspecies of *serrana*. In an effort to resolve doubts regarding the taxonomy of the superspecies, Daniel Firme and Marcos Raposo⁷ reviewed the taxonomy of *F. serrana* (including *F. s. interposita*) and tested the validity of *F. littoralis*. Their morphometric, vocal and plumage analyses indicated that both *F. s. interposita* and *F. littoralis* lack diagnostic characters to differentiate them from *F. serrana*, and that both are best treated as subspecies of the latter.

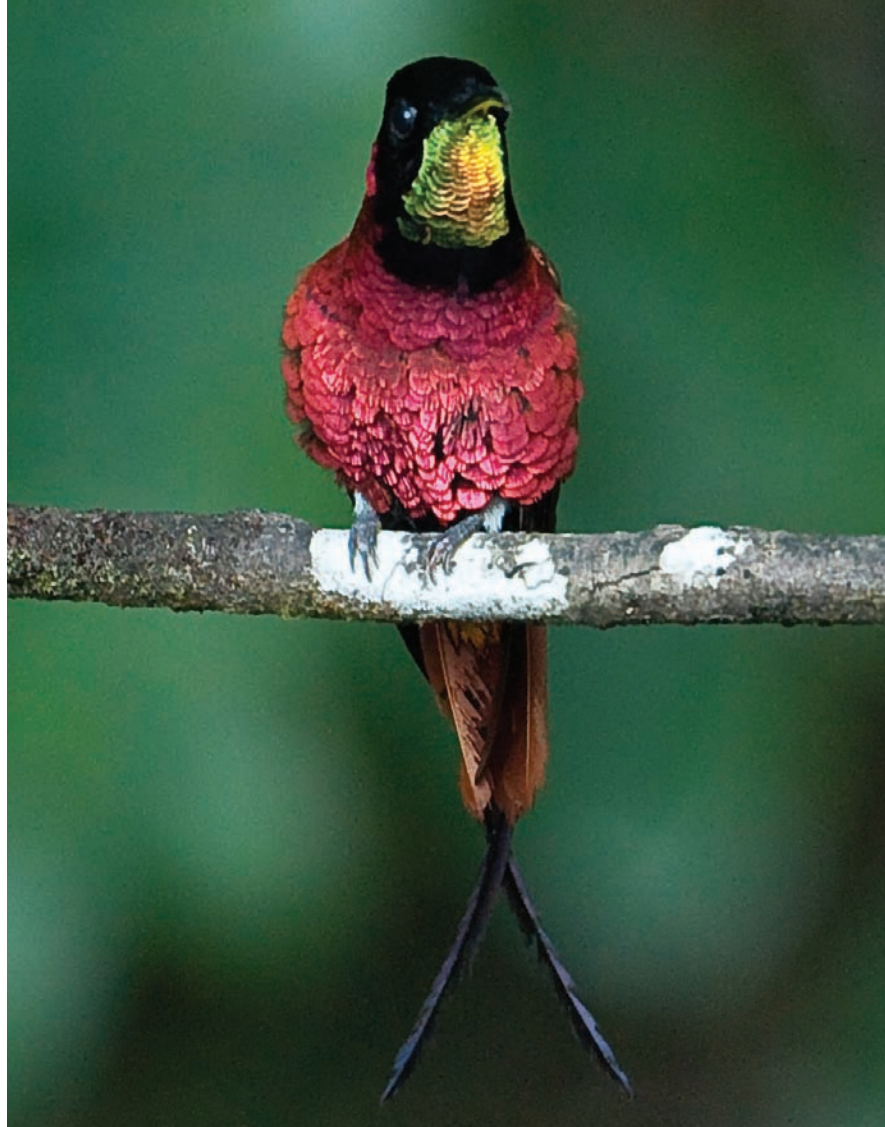
... but one new antbird— Magdalena Antbird

The legacy of Mort Isler's *et al.*¹⁰ criteria for drawing species limits in antbirds based on the degree of vocal differentiation between closely related and coexisting species will likely last long into the 21st century, as additional species-level taxa are described or upgraded from subspecies. Based on variation in 14 acoustic traits of loudsongs and a mitochondrial gene tree, Juan

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Genetic evidence has now provided robust evidence for splitting the Brown-mandibled Aracari *Pteroglossus azara mariae* as a separate species (right), confirmed the long-recognised distinctiveness of the Fiery-billed Aracari *P. frantzii* (below left), and suggested that Pale-mandibled Aracari *P. erythropygius* (below right), along with other diagnosable members of the Collared Aracari *P. torquatus* complex, be treated specifically. Right: Yarimaguas Road, San Martín, Peru, October 2008; below left: south-west Costa Rica, December 2006; and below right: San Miguel de los Bancos, Ecuador, December 2007 (all *Hadoram Shirihai / Photographic handbook to birds of the world*)





Left: Although the genus *Topaza* is generally considered to comprise two species, a recent study recommends that it henceforth be treated as monospecific, but comprising four subspecies; here Crimson Topaz *T. pella pella*, Arrowpoint Nature Resort, northern Guyana, October 2009 (Hadoram Shirihai / *Photographic handbook to birds of the world*)

Below: Interpreting the latest evidence, two Brazilian ornithologists have recommended that Serra Antwren *Formicivora serrana* (left) and Restinga Antwren *F. littoralis* (right), the latter a Critically Endangered species, should be treated as conspecific, as they originally were at the time of the latter's description in the 1980s. Left: male Serra Antwren, RPPN Caraça, Minas Gerais, Brazil, November 2006; and right: male Restinga Antwren, near Praia Seca, Rio de Janeiro, Brazil, November 2006 (Hadoram Shirihai / *Photographic handbook to birds of the world*)



Chaves *et al.*⁵ researched species limits in the trans-Andean *Myrmeciza* subgroup that includes Dull-mantled Antbird *M. laemosticta*, Esmeraldas Antbird *M. nigricauda* and Stub-tailed Antbird *M. berlepschi*, which all occur in the forested lowlands and foothills of north-west South America and southern Central America. They found that diagnostic differences in three vocal traits separate the two subspecies of Dull-mantled Antbird—*M. l. laemosticta* and *M. l. palliata*—and that these should be treated specifically. The vocal results were consistent with the molecular ‘story’, which told of a long history of isolation between *M. l. laemosticta* and *M. l. palliata*, and congruent with species-level divergences observed between other *Myrmeciza* antbirds. The study’s results also implied that the presence of only two diagnostic loudsong characters may be sufficient to split (to species level) two populations in this complex, as observed between some other sympatric antbirds, e.g. Guianan Streaked Antwren *Myrmotherula surinamensis* and Cherrie’s Antwren *M. cherriei*¹⁰. The authors propose the English name Magdalena Antbird *M. palliata* for the new species, thereby recognising four species in the *M. laemosticta* complex.

And another new antbird...

Scale-backed Antbird *Willisornis poecilinotus* is a widespread Amazonian species for which seven subspecies are currently recognised, and these are most readily distinguished by plumage, principally in females. Scale-backed Antbirds are primarily ant-following species, but were formerly placed in the genus *Hylophylax* (which does not include other obligate ant-followers). Willis²⁰ noted that Scale-backed Antbirds neither look nor behave like other *Hylophylax* but it was only following an examination of the molecular data³ that they were removed to their own genus. Mort Isler and Bret Whitney⁹ recently analysed over 350 recordings from across the species’ range, but found that vocal differences were insufficient to recommend elevating any named population to species level (despite widespread parapatry), with the exception of the subspecies *W. p. nigrigula* and *W. p. vidua* of south-east Amazonia, which exhibited diagnostic differences in vocalisations, and the authors propose to split these two as Xingu Scale-backed Antbird *Willisornis vidua*, with two subspecies, *W. v. nigrigula* and *W. v. vidua*. The English name is taken from the river that flows through much of the new species’ range. Bates *et al.*² had earlier investigated divergence in gene-flow between subspecies *griseiventris* of ‘Common’ Scale-backed

Antbird and the subspecies *nigrigula* of Xingu Scale-backed Antbird, which amounted to 6.8% divergence in two mitochondrial genes across the rio Teles Pires near its confluence with the rio Cristalino at Alta Floresta. Birders who have previously visited Alta Floresta will have to check their notes to see on which bank of the Teles Pires they saw their *Willisornis*—the new Brazilian endemic is only found on the Cristalino Jungle Lodge (east) side!

Further *Scytalopus* taxonomic ‘inflation’

The use of vocal and molecular characters in defining species in those avian ‘mice’, the *Scytalopus* tapaculos, has led to a quadrupling in the number of species-level taxa. The latest subject for a taxonomic overhaul, by Niels Krabbe and Daniel Cadena¹¹ is the Paramo Tapaculo *Scytalopus canus*, a common inhabitant of treeline scrub in the Andes of Colombia, Ecuador and northern Peru. Differences in vocalisations between the nominate subspecies (which is restricted to high elevations in the Western Andes of Colombia) and *S. c. opacus* of the Central Andes of Colombia were found to be as great as or greater than the differences between other forms in the *S. magellanicus* complex. To maintain the taxonomic *status quo*, the authors suggest splitting them as separate biological species: Paramillo Tapaculo *S. canus* and Paramo Tapaculo *S. opacus*. They also found variation within *opacus*, with birds from south-west Ecuador and northern Peru singing like northern *opacus* but calling differently; coupled with minor plumage differences they describe this population as a new subspecies *S. o. androstictus*. The new subspecies is named after the white spot on the primary-coverts found in most males.

Brown Creeper is probably multiple species

Following the pioneering work of Dieter Tietze’s doctorate (e.g. Tietze *et al.*¹⁹), which revealed cryptic diversity in Old World *Certhia* treecreepers, the New World populations of Brown Creeper *C. americana* became a likely place to look for cryptic splits. Joseph D. Manthey *et al.*¹⁴ used mtDNA to investigate cryptic diversity and patterns of diversification in Brown Creepers. Their phylogenetic analyses identified six, well-supported, geographically structured clades, with the basal divergence separating a northern and a southern lineage—north and south of the Sonoran / Chihuahuan desert. The southern (Neotropical)

lineage comprises clades from southern Arizona and northern Mexico (*albescens* and *alticola*), an endemic Mexican clade from Chiapas (*pernigra*) and one from Honduras (*extima*). While the authors do not directly suggest splitting these clades as separate species, the 4.1–5.1% DNA divergence is considerably more than between many currently widely accepted species, and certainly merits follow-up vocal and ecological studies. David Sibley¹⁸ presented some material on field identification on his website, highlighting that the Mexican clade is the most distinctive, and differs from the others in its overall darker appearance—blackish brown above narrowly streaked white, with a dark chestnut rump, darker sooty grey underparts and a relatively short bill.

Bahama Warbler—an overlooked Caribbean endemic

Originally described as a valid species, the endemic Bahama subspecies of Yellow-throated Warbler *Dendroica dominica flavescens* was reclassified along with a great many island forms at subspecies level. This despite the fact that it has been widely reported as diagnostic in plumage and distinctive in ecology, perhaps because its song doesn't differ dramatically from continental populations. Bailey McKay and his colleagues¹⁵ set out to investigate its taxonomic position by examining morphological, vocal and genetic data. Morphometrically, they found statistically significant differences in wing-chord, bill, tarsus and tail lengths between Bahaman and continental populations, unambiguously separable using discriminant function analysis. They also found the ascending song of *flavescens* to be diagnosable from the descending song of continental *dominica*. The story was 'sealed' with the molecular data, which revealed a 1.0% divergence between *flavescens* and continental *dominica*, and that *flavescens* forms a monophyletic group—a peripatric speciation event (continental *dominica* is paraphyletic with respect to *flavescens*). The authors conclude that *flavescens* meets the criteria for consideration as a species under any concept, and recommend the English name Bahama Warbler *Dendroica flavescens*. Note, however, that this should now be *Setophaga flavescens* following the sweeping changes to parulid taxonomy suggested by Lovette *et al.*¹².

A taxonomic overhaul of Capped Seedeater *Sporophila bouvreuil*

Along with *Scytalopus* tapaculos, *Sporophila* seedeaters are one of the most regular groups to be featured in this section of *Neotropical Birding*. Capped Seedeater *Sporophila bouvreuil* comprises four subspecies: *S. b. bouvreuil*, *S. b. pileata*, *S. b. saturata* and *S. b. crypta*. Plumage variation is basically confined to the males (identification of non-adult male seedeaters can be a thankless task even to species level). Érika Machado and Luís Fábio Silveira¹³ analysed plumage characters in 209 specimens to examine the validity of these subspecies. Plumage patterns supported recognition of two taxonomic units: the reddish-brown *S. b. bouvreuil* and the pale-plumaged *S. b. pileata*. They found no support for the assertion that intermediates exist between those two subspecies, and given the lack of intermediate forms between *S. b. pileata* and the remainder of the *S. bouvreuil* complex, local sympatry and unambiguous diagnostic characters, they propose recognition of *S. pileata* as a distinct biological and phylogenetic species. *S. pileata* occurs in the Brazilian states of Rio Grande do Sul, Paraná, São Paulo, Minas Gerais and Mato Grosso do Sul, as well as adjacent Argentina and Paraguay. The authors found that the remaining subspecies of *S. bouvreuil*, found in Surinam, French Guiana, from northern and north-east to central-western and south-eastern Brazil, and north-east Argentina are invalid and form part of the natural variation within the nominate form.

Another seedeater mystery resolved

Whilst undertaking field work in Entre Ríos, Argentina, Nacho Areta was made aware by local bird trappers of a seedeater identical to the Entre Ríos Seedeater '*S. zelichi*', but with a black rather than white collar. The collector of *S. zelichi* (M. Zelich) had taken two males that were loaned to S. Narosky (along with the types of '*S. zelichi*', but these specimens apparently disappeared and were not mentioned again). Areta *et al.*¹ sought to unravel the mystery of the bird they refer to as '*caraguata*' after its preferred habitat. They set out trying to falsify four hypotheses, that '*caraguata*' is either (1) a valid species, (2) a hybrid Dark-throated Seedeater *S. ruficollis* × Chestnut Seedeater *S. cinnamomea*, (3) a colour morph of *S. cinnamomea*, or (4) a colour morph

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Recent research by Mort Isler and Bret Whitney has recommended that Scale-backed Antbird *Willisornis poecilinotus* be split into two species, with Xingu Scale-backed Antbird *W. vidua* confined to east Amazonian Brazil; however, as these photographs demonstrate, there is substantial plumage variation in females of different taxa retained within *W. poecilinotus*. Clockwise from top left: *W. p. lepidonota*, Shiripuno Lodge, Ecuador, November 2007; *W. p. poecilinotus*, Surama, Iwokrama reserve, Guyana, October 2009; *W. p. griseiventris*, Borba, Amazonas, Brazil, September 2009 (all *Hadoram Shirihi* / *Photographic handbook to birds of the world*); and male Xingu Scale-backed Antbird *W. vidua nigrigula*, Cristalino Jungle Lodge, Mato Grosso (Alexander C. Lees)



A recent taxonomic assessment has recommended that Capped Seedeater *Sporophila bouvreuil* be henceforth regarded as two species, based principally on plumage patterns (above, left to right); male *S. b. pileata*, Serra da Canastra National Park, Minas Gerais, November 2009, and male, *S. b. bouvreuil*, Mucugê, Chapada Diamantina, Bahia, February 2011 (*Hadoram Shirihi* / *Photographic handbook to birds of the world*)

Male and female Yellow-hooded Blackbird *Chrysomus icterocephalus*, Muyuna Lodge, dpto. Loreto, Peru, September 2008; genetic data demonstrate that there are no splits in this widespread lowland species (*Hadoram Shirihi* / *Photographic handbook to birds of the world*)

of *S. ruficollis*. They found 'caraguata' to be vocally and ecologically indistinguishable from *S. ruficollis*, suggesting it is a colour morph of the latter, although a hybrid origin could not be eliminated. Their results reinforce the notion that *Sporophila ruficollis* must be a distinct species given differences in preferred habitat, plumage and vocalisations. The authors conclude that the reason for the convoluted taxonomy of the *ruficollis* group may be due to an ongoing evolutionary radiation that is progressing with little accompanying genetic divergence, only simple changes in male plumage colour (and next to none in females) and few morphological changes, but significant vocal divergence and different habitat preferences.

Yellow-hooded Blackbird is Yellow-hooded Blackbird, wherever you are...

Regular followers of avian taxonomy in the Neotropical lowlands will be well aware that many birds exhibit significant genetic structure (i.e. restricted migration between populations), but most such studies have sampled species of the humid forest interior (principally suboscine passerines). To redress this imbalance, Daniel Cadena and his colleagues⁴ studied a widespread species of open environments, Yellow-hooded Blackbird *Chrysomus icterocephalus*, which inhabits riparian areas from the inter-Andean valleys and northern lowlands of Colombia, the Colombian Andes, Venezuela and the Guianas, Trinidad, and along the Amazon from Peru to its mouth in north-east Brazil. The species exhibits little geographic variation, with the exception of an isolated subspecies, *C. i. bogotensis*, in wetlands of the Altiplano Cundiboyacense of the Colombian Andes. This form occurs at 2,550–3,100 m and differs from lowland populations (rarely found above 600 m) in its larger size and darker female plumage. The team found no detectable genetic structure across the species' range, including *bogotensis*, and found evidence for an increase in its effective population size, suggesting a range expansion. These results concur with many previous studies that have found species occurring in open dynamic habitats to possess higher dispersal rates than those in closed and more stable environments.

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