## Splits, lumps and shuffles Alexander C. Lees

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 includes a new *Scytalopus* tapaculo and a new subspecies of Three-striped Warbler, reviews of species limits in Grey-necked Wood Rails and Pearly Parakeets and comprehensive molecular studies of Buff-throated Woodcreepers, Sierra Finches, Red-crowned Ant Tanagers and Siskins. Get your lists out!

## Splits proposed for Greynecked Wood Rails

The Grey-necked Wood Rail Aramides cajaneus is both the most widespread (occurring from Mexico to Argentina) and the only polytypic member of its genus. Although all populations are 'diagnosable' in having an entirely grey neck and contrasting chestnut chest, there is much variation in the colours of the nape, lower chest and mantle, differences amongst which have led to the recognition of nine subspecies. Marcondes and Silveira (2015) recently explored the taxonomy of Grey-necked Wood Rails based on morphological and vocal characteristics using a sample of 800 specimens in institutions across the world. They found that much of the geographical variation (e.g. in chest colour) was not structured, with as much local as regional variation. They did however find three taxonomically informative traits: 1) mantle colour; 2) the presence of white feathers in the lower chest, separating the chestnut upper chest from the black belly; and 3) the presence and intensity of a brown nuchal spotin addition to some structured vocal variation. They designate three phylogenetic species (with my own English names suggested in brackets): the very morphologically variable but vocally distinct (giving nine notes instead of two) A. albiventris occurring from southern Mexico to north-eastern Costa Rica (Variable Wood Rail?); A. cajaneus from south-western Costa Rica to Argentina (Grev-necked Wood Rail?), and A. avicenniae restricted to a small section of the coast of south-eastern Brazil (São Paulo Wood Rail?). These three taxa are all parapatrically distributed (non-overlapping ranges) with each other and with respect to Slaty-breasted Wood Rail A. saracura.

#### Pearly Parakeet is two species

The three subspecies of Pearly Parakeet Pyrrhura lepida form a species complex with Crimsonbellied Parakeet P. perlata and replace each other geographically across a broad swathe of southern Amazonia east of the Madeira river all the way to the Atlantic Ocean. Understanding the nature of this taxonomic variation is an important task, as collectively their range sits astride much of the Amazonian 'Arc of Deforestation' and the broadly-defined Brazilian endemic Pearly Parakeet is already considered to be globally Vulnerable. Somenzari and Silveira (2015) recently investigated the taxonomy of the three lepida subspecies (the nominate P. l. lepida, P. l. coerulescens and P. l. anerythra) and P. perlata using a morphological and morphometric analysis. They did not find any evidence for morphometric variation but found consistent plumage variation (among 174 specimens) that they partitioned into what they considered to be three valid taxa, which they prefer to treat as full species: the red-bellied P. perlata, P. anerythra (distinguished from the others in having bluish-green underwing coverts and a green belly) and P. coerulescens (which differs from P. perlata in having whitish ear coverts, green upper cheeks and a brownish-red upper tail and from P. anerythra in having red underwing coverts). They did not find support for the nominate subspecies *lepida* which they consider to be a junior synonym of P. coerulescens. P. anerythra occurs in the states of Pará and Mato Grosso east to the Tocantins river whilst P. coerulescens occurs east of the Tocantins River in the states of Tocantins, Maranhão and Pará and on the Marajó Island. The authors identified a small hybrid zone between the latter two former races of Pearly Parakeet around the Tocantins River and recognised a







**1** (Western) Pearly Parakeet *Pyrrhura (lepida) coerulescens*, Paragominas, Pará, October 2010 (Alexander Lees)

2 (Eastern) Pearly Parakeet *Pyrrhura (lepida)* anerythra, Caxiuanã, Pará, Brazil, November 2005 (Arthur Grosset / www.arthurgrosset.com)

**3** Turquoise-winged Parrotlet *Forpus (xanthopterygius) spengeli*, northern Colombia, January 2015 (Trevor Ellery)

**4** Magnificent Hummingbird *Eugenes (fulgens) viridiceps*, San Cristóbal de Las Casas, Chiapas, Mexico, May 2009 (Francesca Albini)

**5** "Admirable" (Magnificent) Hummingbird *Eugenes* (*fulgens*) spectabilis, Hotel Savegre, San Gerado de Dota, Costa Rica, February 2014 (Phil Yates / www. pjayphotos.com)

**6** Lafresnaye's Woodcreeper *Xiphorhynchus guttatoides eytoni*, Serra de Baturite, Ceará, June 2015 (Ciro Albano). The population occupying the 'Sky Islands' of Ceará was originally designated a distinct subspecies *X. g. gracilirostris* but this form is poorly differentiated from *X. g. eytoni* and although the latest molecular study did not have specimens from Ceará they did have a sample from Teresina, Piaui, ca. 300 km from Baturité which was molecularly indistinguishable from *eytoni*, hence the synonymisation of *gracilirostris*.

7 Lafresnaye's Woodcreeper Xiphorhynchus guttatoides vicinalis, Borba, Amazonas, Brazil, August 2004 (Arthur Grosset / www.arthurgrosset.com)





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potential connection with a previously-recognised geological shift in the course of the the river. A taxonomic review of Blue-winged Parrotlet The Blue-winged Parrotlet Forpus xanthopterygius is a polytypic species with a wide distribution in South America. Five subspecies are recognised: F. x. crassirostris of south-east Colombia, eastern Ecuador, north-east Peru and western Brazil; F. x. spengeli of northern Colombia; F. x. flavescens of south-east Peru and east-central Bolivia; F. x. flavissimus of north-east Brazil; and F. x. xanthopterygius of south-east Bolivia, east and south-east Brazil, Paraguay and north-east Argentina, although there has been considerable historical debate about these arrangements. Enter Bocalini and Silveira (2015), who have revised the taxonomy of the Forpus xanthopterygius complex based on morphological and morphometric characters extracted from 518 specimens across its entire geographical distribution. They conclude that there are only two valid taxa, which they suggest be treated as full species: Blue-winged Parrotlet F. xanthopterygius and Turquoise-winged Parrotlet Forpus spengeli. The latter has recently been split by del Hoyo et al. (2014) and the authors note that its unique pattern of bicoloured under-wing coverts suggests that it may not even be that closely related to *F. xanthopterygius* or Mexican Parrotlet F. cyanopygius as previously suggested. The authors explain away variation in F. xanthopterygius and justification for the synonymisation of subspecies as clinal changes, with the plumage brighter and yellowish in drier habitats and duller and darker in humid ones.

## The magnificent three?

Hummingbirds seem to feature less frequently in Splits, Lumps and Shuffles than one might expect given the high diversity at the subspecies level, perhaps because of a bias towards phylogenetic studies in Amazonia where hummingbird diversity is low. Zamudio-Beltrán and Hernández-Baños (2015) have taken another step towards redressing this bias in recently assessing the phylogenetic relationships and taxonomic status of the Magnificent Hummingbird Eugenes fulgens. This species comprises three subspecies: E. f. fulgens ranging from the south-eastern USA to the Nicaraguan highlands, E. f. viridiceps of the highlands of Chiapas to Nicaragua, and E. f. spectabilis of the highlands of Costa Rica and Panama; and the authors used a combination of nuclear and mitochondrial markers to assess genetic differences between the three. They found strong genetic differences between the three

groups, suggesting the existence of two cryptic phylogenetic species (*E. fulgens* and *E. viridiceps*) in addition to the phenotypically differentiated species *E. spectabilis* which has already been strongly mooted as a distinct species (Navarro-Sigüenza & Peterson 2004, Tovilla-Sierra 2012) based on plumage and morphometric differences. So with that weight of evidence the split of *spectabilis*—which already has an English name in use, 'Admirable Hummingbird'—looks like a done deal, with a question mark for those that don't like phylogenetic species hanging over *viridiceps*.

#### Species limits in Buff-throated Woodcreepers

You don't need to be particularly observant to notice that woodcreepers feature with some frequency in taxonomic studies and consequently in Splits, Lumps and Shuffles, and the possibilities for future splits are far from exhausted. The latest species in line is the amply-distributed Buff-throated Woodcreeper Xiphorhynchus guttatus. Eight subspecies occur throughout most of the Amazon Basin, with a disjunct allopatric population in the Atlantic Forest. Two members of this polytypic species have been previously considered separate species—*X. eytoni* and *X.* guttatoides— and there remains the question of the relationships between Buff-throated Woodcreeper and the Cocoa Woodcreeper X. susurrans of Central America and north-western South America, which was also previously treated as a subspecies of X. guttatus. Rocha et al. (2015) explored the patterns of historical diversification and phylogenetic relationships in the X. guttatus/ susurrans complex using both mitochondrial and nuclear genes. They found five main clades with high statistical support but which were not totally concordant with traditional delimitation of all X. guttatus subspecies. For example, X. g. polystictus, X. g. guttatus and X. g. connectens were not supported as distinct clades and are together more closely related to Cocoa Woodcreepers than they are to the other southern and western Amazonian subspecies of X. guttatus, which constitutes a paraphyletic species. Based on the genetic data the authors propose a three-species treatment. First there is Lafresnaye's Woodcreeper Xiphorhynchus guttatoides comprising the subspecies X. g. guttatoides found west of the Negro River in Brazil through southern Venezuela, south-eastern Colombia, eastern Ecuador and Peru, northern Bolivia, and eastward to the Madeira River in Brazil; X. g. vicinalis occurring between the Xingu and Madeira rivers in Brazil,

with an unknown southward limit; and X. g. eytoni occurring from Piauí and Maranhão in northeastern Brazil westward to the Xingu River, but again with an unknown southern limit. Second, we have Buff-throated Woodcreeper Xiphorhynchus guttatus including X. g. guttatus which is endemic to the coastal Atlantic Forest of eastern Brazil; *X. g. connectens* found in the eastern part of the Guiana shield in the Brazilian states of Pará and Amapá (and presumably French Guiana); and X. g. polystictus of the western part of the Guiana shield in the Brazilian states of Amazonas and Roraima, and south-eastern Venezuela, Guyana and Suriname. Finally, this leaves a genetically validated Cocoa Woodcreeper Xiphorhynchus susurrans including all trans-Andean populations/ taxa of the guttatus/susurrans complex, but as yet leaving the question as to the taxonomic level of the South American populations of the "susurrans" group (after Marantz et al. 2003)-which may yield future splits.

## A new species of tapaculo!

Well, maybe sarcasm doesn't befit this serious round-up, but there is no break from the Andean Scytalopus onslaught. The latest new species, Perijá Tapaculo Scytalopus perijanus, bears the name of its restricted-range home the Serranía de Perijá of Colombia and Venezuela (Avendaño et al. 2015). Specimens of this new taxon had evidently been languishing unidentified in museum draws since at least 1941, but it was not until recently that field ornithologists realised that they did not pertain to specimens of Brown-rumped Tapaculo S. latebricola or Northern White-crowned Tapaculo S. atratus as labelled. The new species is endemic to humid montane and elfin forests (1,600-3,225 m) and differs subtly in morphology, vocal and genetic characters from all other Scytalopus. Perijá Tapaculo has yet to be found in sympatry with any other Scytalopus and a combination of remotesensing analysis and ecological niche modelling indicate that it is threatened by habitat loss and degradation, particularly in the Colombian part of its range. The authors argue that it would qualify for globally Endangered status under IUCN Red List criteria, a sage reminder that most newlydescribed species are typically going, if not already gone (see also Lees & Pimm 2015).

## An investigation of Central Andean *Phrygilus* sierra finches

The *Phrygilus* sierra finches are a genus of eleven mainly Andean seed-eating tanagers.

Álvarez-Varas et al. (2015) recently explored genetic variation of six co-distributed Phrygilus from the Central Andes using mitochondrial and nuclear markers in conjunction with morphological data. They found different phylogeographic patterns between species, even among those belonging to the same phylogenetic clade and uncovered some results that have potential taxonomic implications. For instance they did not find support for the two subspecies of the Mourning Sierra Finch—the highland P. fruticeti coracinus and the lowland P. f. fruticetiand therefore advocate single subspecies treatment. The authors also identified a deep divergence between Peruvian populations (except Puno) and Chilean and Argentinian populations of Plumbeous Sierra Finch P. unicolor suggesting that populations on both sides of Lake Titicaca could be different species. Make sure you pay careful attention on your Andean birding trips!

## Intraspecific diversity in the Red-crowned Ant Tanager

Red-crowned Ant Tanagers Habia rubica are widespread, if often inconspicuous inhabitants of tropical forests, with 17 (!) subspecies found from Mexico south to Paraguay and northern Argentina. Lavinia et al. (2015) recently explored patterns of intraspecific diversity throughout this species' continent-wide distribution, with their genetic analyses complemented by an assessment of colouration and behavioural differences. They found four deeply divergent groups consisting of two South American lineages and two Mexican and Middle American lineages and propose a three-species treatment. The first of these would keep the name *H. rubica*, and become an endemic of the Atlantic Forest, including the subspecies rubica and bahiae. All remaining South American subspecies would be included within *H. rubra*, occurring across much of Amazonian and adjacent biomes and including the subspecies *rubra*, peruviana, rhodinolaema, hesterna, perijana, *coccinea*, *crissalis* and *mesopotamia*. Finally, they suggest considering the Mexican and Middle American lineage a single species, for now named *H. rubicoides*, although they suggest that this treatment belies more complex variation that may warrant further splits.

#### A new subspecies of Threestriped Warbler from Colombia

A new population of Three-striped Warbler *Basileuterus tristriatus* was discovered in the





8 Buff-throated Woodcreeper *Xiphorhynchus guttatus guttatus*, Porto Seguro, Bahia, Brazil, November 2008 (Arthur Grosset / www.arthurgrosset.com)

9 Cocoa Woodcreeper *Xiphorhynchus susurrans*, Sueno Azul Hotel, Sarapiquí, Costa Rica, February 2014 (Phil Yates / www.pjayphotos.com)

**10** Perijá Tapaculo Scytalopus perijanus. photographed at the type locality, vereda El Cinco, 2450 m, Manaure, Cesar, Colombia, June 2008 (Andres Cuervo via Jorge Enrique Avendaño)



11 Red-crowned Ant Tanager Habia (rubica) rubricoides, El Ocote, Chiapas, Mexico, May 2011 (Francesca Albini)
12 Red-crowned Ant Tanager Habia rubica bahiae, Serra Bonita Reserve, Camacan, Bahia, Brazil, November 2008 (Ciro Albano / NE Brazil Birding)

**13** Three-striped Warbler *Basileuterus tristriatus sanlucasensis*, Santa Cecilia, Serranía de San Lucas, Bolívar, Colombia, January 2010 (Blanca Huertas & Thomas Donegan / Proyecto EBA Colombia)

14 Hooded Siskin Carduelis (magellanicus) alleni, Yavi Chico, Jujuy, Argentina, March 2015 (Michael Webster / www.websterswildshots.com)



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Serranía de San Lucas, Bolívar department of northern Colombia in 2001 (Salaman et al. 2002) which the discoverers immediately recognised as pertaining to a new taxon. The new subspecies has yellower underparts and fore crown-stripe than adjacent populations of *B. tristriatus* and has already been shown to be distinct at a vocal (Donegan 2014) and molecular level (Gutiérrez-Pinto et al. 2012) from other populations. Salaman (2015) named the taxon sanlucasensis after the Serranía de San Lucas to which it is endemic and stressed that the subspecies' distribution does not overlap with any protected areas. Salaman chose to describe the taxon at the subspecies level, given that it would receive a score of 3-5 under the Tobias et al. (2010) criteria, fewer than the 'magic seven' points required for species status.

# South American siskins under the genetic spotlight

Beckman & Witt (2015) recently undertook a molecular study of the South American siskins and their relatives (including all of the New World goldfinches and siskins plus the Eurasian Siskin Spinus spinus). Their principal finding was of higher diversification rates and higher outward dispersal rates in Andean than non-Andean siskin lineages. Of more direct interest to birders was the discovery of two divergent lineages of Hooded Siskins S. magellanicus-one located in the Peruvian and central Bolivian Andes and the other, which they ascribe tentatively to S. m. alleni, from the lowlands of eastern Bolivia and northern Argentina but that which might also pertain to S. m. icterius or S. m. bolivianus. The authors do not go the extra mile to propose species status for this population and called for an assessment of genomic, morphological and vocal characters for lowland populations of Hooded Siskins east of the Andes.

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