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Slender–billed Schiffornis *Schiffornis stenorhyncha*, a newly split near–endemic species for Colombia proposed in a paper in this issue. Photograph taken at Santa Cecilia, Bolivar on 7th January 2010. Photo by Blanca Huertas and Thomas Donegan.

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Revision of the status of bird species occurring or reported in Colombia 2011

Revisión del estatus de las especies de aves que existen o han sido reportadas en Colombia 2011

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Abstract

The following species are added to Colombia's bird checklist: Rufous-breasted Wood-Quail *Odontophorus speciosus* (based on archived, published sound recordings), Cory's Shearwater *Calonectris diomedea* (based on a published specimen record), White-bellied Parrot *Pionites leucogaster* and Masked Water-Tyrant *Fluvicola nengeta* (both based on photographic records) and Blue-and-gold Tanager *Bangsia arcaei*, Pirre Bush-tanager *Chlorospingus inornatus* and Black-and-yellow Tanager *Chrysothlypis chrysomelas* (all based on reported specimens from Cerro Tacarcuna). Two other claimed 'new species' are discussed, each of which is regarded as a junior synonym of another species. The supposed new taxon "*Thalurania nigricapilla*" requires further research in order to demonstrate it is not an immature plumage of *T. colombica*. "*Forpus flavicollis*" appears to be based on individuals of *F. conspicillatus* whose feathers have been dyed. To the extent that the name is available, it is considered a junior synonym of nominate *F. conspicillatus* at both species and subspecies level, following a review of the original descriptions and type localities. Spix's Woodcreeper *Xiphorhynchus spixii* was previously included based on old taxonomy and is removed. Masked Cardinal *Paraoria nigrogenis*, Magdalena Antbird *Myrmeciza palliata* and Eastern Immaculate Antbird *M. zeledoni* are treated as newly accepted splits. Species limits in *Schiffornis turdina* are reconsidered based on the greater vocal sample available today since previous studies were published. We conclude that Brown Schiffornis *S. veraepacis*, Slender-billed Schiffornis *S. stenorhyncha*, Olivaceous Schiffornis *S. olivacea* and Foothill Schiffornis *S. aenea* should each be treated as species separate from Thrush-like Schiffornis *S. turdina*, with *veraepacis*, *stenorhyncha* and *turdina* all occurring in Colombia. Several new escaped species are added, namely Peacock *Pavo cristatus*, Helmeted Guineafowl *Numida meleagris*, Cockatiel *Nymphicus hollandicus*, Yellow-faced Siskin *Sporaga yarrellii* and Chestnut Munia *Lonchura atricapilla*. Yellow-bellied Sapsucker *Sphyrapicus varius* and Sooty-faced Finch *Arremon crassirostris* both move to the confirmed list from other categories. Several amendments to genus and species names, English names and linear order are made, following recent publications. As a result of these changes, the Colombian checklist again increases in size, now to 1,889 species, of which 1,814 are documented by 'confirmed' records on the mainland.

Resumen

Las siguientes especies se agregan al listado de aves de Colombia: *Odontophorus speciosus* (basado en grabaciones archivadas y publicadas), *Calonectris diomedea* (basado en un registro publicado), *Pionites leucogaster* y *Fluvicola nengeta* (ambos basados en registros fotográficos) y *Bangsia arcaei*, *Chlorospingus inornatus* y *Chrysothlypis chrysomelas* (basados en especímenes reportados en el Cerro Tacarcuna). Se discuten dos supuestas "nuevas especies", cada una de las cuales se consideran sinónimos de otras especies. El estado taxonómico de la supuesta nueva especie "*Thalurania nigricapilla*" requiere de más investigación para demostrar que no representa un plumaje inmaduro de *T. colombica*. "*Forpus flavicollis*" parece estar basado en individuos de *F. conspicillatus* a los cuales se les tiñeron sus plumas. Tras una revisión de las descripciones originales y las localidades tipo, se considera que si el nombre está disponible, es un sinónimo de *F. conspicillatus* a nivel de especie y subespecie. *Xiphorhynchus spixii* se había incluido previamente basado en una taxonomía vieja, y se retira del listado. *Paraoria nigrogenis* y *Myrmeciza palliata* son tratadas como nuevas separaciones aceptadas. Se reconsideran los límites entre especies de *Schiffornis turdina*, con base en el número elevado de grabaciones disponibles en comparación con estudios anteriores. Se tratan *S. veraepacis*, *S. stenorhyncha*, *S. olivacea* y *S. aenea* como especies separadas de *S. turdina*; con *veraepacis*, *stenorhyncha* y *turdina* presentes en Colombia. Varias especies exóticas que han escapado se añaden: *Pavo cristatus*, *Numida meleagris*, *Nymphicus hollandicus*, *Sporaga yarrellii* y *Lonchura atricapilla*. *Sphyrapicus varius* y *Arremon crassirostris* se mueven al listado "confirmado" desde otras categorías. Se realizaron varias modificaciones a los nombres de géneros y especies, nombres en inglés y el orden del listado. A raíz de estos cambios, el nuevo listado Colombiano aumentó a 1,889 especies, de las cuales 1,814 han sido documentadas con registros en el continente.

Introduction

Over the past three years the authors and others have published records of species new for Colombia, discussions of records, splits and lumps with a view to putting the Colombian bird checklist on a stronger footing (Salaman *et al.* 2008, Donegan *et al.* 2009, 2010). This paper sets out details of changes being made in the Spanish version of the

Field Guide to the Birds of Colombia (McMullan *et al.* 2011) since publication of the 2010 version of the Colombian bird checklist (Salaman *et al.* 2010) and related English language field guide (McMullan *et al.* 2010).

Species added

Rufous-breasted Wood-Quail *Odontophorus speciosus*

An archived sound recording, of which a sonogram is illustrated, is presented by Olaciregui & Guzman (2011) in this edition from the east slope in southern Nariño near the Ecuadorian border. We agree with their identification and admit this species to the Colombian list. Its confirmation in the country is overdue.

Cory's Shearwater *Calonectris diomedea*

A specimen was recovered of an individual found in mangroves off the Caribbean coast in Córdoba (Ruíz-Guerra & Cifuentes-Sarmiento 2010). As discussed by the authors, this is a plausible and now confirmed vagrant or rare migrant to Colombian waters. The subspecies involved, *borealis*, is considered part of species group *diomedea* when this species is split, as has recently been proposed to the AOU-SACC (Renssen *et al.* 2011: Proposal 483).

American Avocet *Recurvirostra americana*

On 30 May 2011, a birding tour led by Pablo Flórez of Multicolor Birding with participants Filip Collet, Regis Nossent, and Filip Beeldens from Belgium visited the salt-marshes and mangroves of Via Parque Isla Salamanca on the Caribbean coast of Colombia and located a first summer American Avocet. Details of this sighting were published online at Surfbirds and BirdForum by Filip Collet (<http://www.surfbirds.com/forum/showthread.php?p=32696> and <http://www.birdforum.net/showthread.php?p=2180973>). This distinctive species is confirmed from Ecuador, Trinidad & Tobago and Bonaire as well as across Central America (Renssen *et al.* 2011), with sightings in Venezuela (Restall *et al.* 2006). Whilst this is a distinctive species whose identification is straightforward, and it is long overdue for a record in Colombia, no photograph was taken of the individual. For now, this record can only be added as an unconfirmed record. We strongly recommend that for any species not represented in the *Field Guide to the Birds of Colombia* (McMullan *et al.* 2010) or which is to date known only from observations (as set out in Salaman *et al.* 2010), that photographic or other evidence (sound recordings, *etc.*) be taken, so that the record can be 'confirmed' for Colombia. We look forward to further details of this observation being published but provisionally include the record and this species as occurring in Colombia on the basis of this grey literature, somewhat in advance of our usual approach, largely in light of the Spanish field guide's publication date.

White-bellied Parrot *Pionites leucogaster*

The first confirmed records for Colombia are presented in this edition by Luna & Cuao-Carranza (2011), with three

sightings of flocks from flooded *várzea* forest on Isla Ronda and northern bank of the Río Amazon in March 2008, June 2010 and June 2011. We agree with their identification and admit this species to the Colombian list.

Masked Water-Tyrant *Fluvicola nengeta*

Recent photographic records of this long-overdue species for Colombia have been published by Luna (2011).

Blue-and-gold Tanager *Bangsia arcaei*

Pirre Bush-Tanager *Chlorospingus inornatus*

Black-and-yellow Tanager *Chrysothlypis chrysomelas*

Specimens of these three birds are reportedly collected from Mount Tacarcuna by Tamaris-Turizo *et al.* (2010) and are all species which must occur in Colombia, known from just over the border in Panama. The same authors also report specimens of *Chlorospingus tacarcunae*, as being novel, although this species was already included in our checklist and is generally listed as occurring in Colombia (e.g. Hilty & Brown 1986, Isler & Isler 1999, Restall *et al.* 2006). We look forward to seeing the full details of the results of this expedition and these specimens. In the meantime, we provisionally include the species as new for Colombia to ensure that they are included in the Spanish field guide.

Subspecies added

Pale-legged Hornero *Furnarius leucopus tricolor*

There is a recent photograph and specimen record (ICN 34313) from Isla Ronda, Leticia, Amazonas (Renssen 2008). Various groups occurring in Colombia are sometimes split (e.g. Risgely & Tudor 2009).

Fuscous Flycatcher *Cnemotriccus fuscatus duidae*

Swainson's Flycatcher *Myiarchus swainsoni phaeonotus*

These two flycatcher subspecies are both recently reported from the region of Mitú, Vaupés, in a trip report by Athanas (2011). Various sound recordings have been archived: XC80978 of Fuscous Flycatcher by A. Spencer; and XC81406 and XC81408 of Swainson's Flycatcher by A. Spencer; with a further recording of the latter species archived in the Internet Bird Collection by N. Athanas (<http://ibc.lynxeds.com/species/swainsons-flycatcher-myiarchus-swainsoni>). We provisionally accept these records of new subspecies for Colombia and look forward to seeing further published details of these and other recent records from this interesting region in the future by the observers.

Species not recognised

The Parrotlet "*Forpus flavicollis*"

A recent description of a new nominal species of parrotlet (Bertagnolio & Racheli 2010) was based on a photograph of some caged birds. It raises various issues. In summary, the birds depicted in the description seem very likely to have been individuals of Spectacled Parrotlet *Forpus*

conspicillatus with certain of their feathers dyed yellow or orange. Moreover, the description lacks the scientific rigour associated with most modern avian descriptions and raises a host of novel nomenclatural issues due to the language used in the type specimen designation section. The issue of whether the name *flavicollis* is available (as a matter of nomenclature) has generated considerable debate among ornithologists and nomenclature experts. Notton (2011) has recently considered the name to be available for purposes of nomenclature and suggested various steps that could be taken by taxonomists to deal with the issues raised by the description.

The description of *F. flavicollis* is based upon a grained photograph taken by an unnamed photographer, and at one time posted on the internet, of 32 parrotlets in a cage. Most of the individuals depicted show yellowish feathers in the neck and some of them also show yellow or orange plumage on the forehead. One of the birds in the cage was considered to be *F. conspicillatus* as it lacked such colorations. A number of surprising claims are made in the description. First, the photograph was supposedly taken by workers at the *Centro de Atención y Valoración de Fauna Silvestre* in Ibagué, Tolima, Colombia, but the authors were not able to contact the centre (or, apparently, other ornithologists working in Colombia) for further information about birds occurring in the region. Secondly, it was considered that the new species had been overlooked due to it having a small range or being restricted to an inaccessible area. However, Tolima department was subject to collecting efforts historically and has a number of active birdwatching groups and a regularly visited ProAves nature reserve. Finally, the paper makes a number of questionable statements about the use of type specimens based on photography.

The feather-dying of parrots, and *Forpus conspicillatus* in particular, is a frequent practice in Colombia which has in the past "confused even expert observers, who in some cases have thought that they were of a new species" (translation of Rodríguez-Mahecha & Hernández-Camacho 2002). Sick (1993) discussed similar feather-dying practices used in Brazil, including notes on some of the chemicals that may be used. Specimens of two *Forpus conspicillatus*, an *Aratinga* and a Siskin sp. all with their feathers dyed various shades of yellow, orange and red are to be found in the ICN collection in Bogotá (F. G. Stiles *in litt.* 2011). The authors of *F. flavicollis* did not discuss the possibility that the birds they photographed were not feather-dyed individuals nor did they apparently inspect *Forpus* specimens in the latter ornithological collection or other museum collections in Colombia or elsewhere. Whilst it is of course impossible to rule out the hypothesis that there is a yellow-naped population of *Forpus* parrotlets occurring somewhere in Colombia, that possibility seems highly unlikely. Bertagnolio & Racheli (2010) did not adequately demonstrate that the birds in their photograph do not relate to feather-dyed birds or to *F. conspicillatus*.

The reported range of the nominate subspecies of *F. conspicillatus* includes various known localities in the Magdalena Valley in Cundinamarca, Tolima, Caldas and Huila departments, this region including the locality where "*F. flavicollis*" is considered likely to have been captured (Hilty & Brown 1986, Rodríguez-Macheca & Hernández-Camacho 2002). Several *F. conspicillatus* specimens in the www.biomap.net database were collected at localities in those departments. *F. conspicillatus* is probably the second most common and widespread parrot in this part of Colombia (after *Brotogeris jugularis*), occupying modified habitats such as parks and towns, sometimes in colonies or groups involving various individuals.

The type specimens of nominate *F. conspicillatus* Lafresnaye, 1848 are "Bogotá" specimens. The types are no longer in the Paris museum (Viosin & Viosin 2008) but now reside in the Museum of Comparative Zoology, Harvard (Bangs 1930). Chapman (1917) restricted the type locality of the name *Forpus conspicillatus* to Honda, which is a town lying immediately below Bogotá, also in the Magdalena valley. It is a plausible collecting locality for "Bogotá" specimens of lower elevation birds. Bangs (1930) agreed with this designation. Honda is c.100 km from the *F. flavicollis* type locality (of Ibagué) and both towns occur in the same contiguous biogeographic region. Publications have previously drawn attention to minor geographical variation in the Magdalena valley population of *F. conspicillatus* but this is as between birds found in the far north versus south of the region and may be clinal (Chapman 1917, Rodríguez-Macheca & Hernández-Camacho 2002). There has been no geographical variation noted in this species as between specimens collected in the Honda versus Ibagué regions. As a result, these two names may be treated as subjective synonyms without any further action at both species and subspecies level.

There are also questions over whether the name *flavicollis* is available as a matter of nomenclature because, unlike some other recent descriptions without full specimens, no holotype was designated in this instance. Instead, the authors sought to designate a number of individuals in the same photograph as syntypes. Notton (2011) criticised this aspect of the description, but considered the name *flavicollis* to be available nonetheless.

As an alternative to treatment as a junior synonym, the name *flavicollis* could instead potentially be ignored by ornithologists, birdwatchers and other users of bird names on the basis that the types are so poorly illustrated as to be unrecognisable. However, the image in the description clearly depicts green *Forpus* parrotlets with a yellow neck patch and forecrown, yellowish bill and bright blue wing markings and the specimens have a specified (captive) locality. This does not compare to the detail afforded in other recent descriptions based on photography or samples, but it is not self-evident that one could or should ignore the

description on the basis that it is imprecise: any determination or opinion that the name *flavicollis* is a *nomen dubium* would be entirely subjective.

For the reasons set out above, even to the extent that the name *F. flavicollis* Bertagnolio & Racheli 2010 is available and not a *nomen dubium*, we would treat it as a junior synonym, at both species and subspecies level, of the name *F. conspicillatus* Lafresnaye, 1848. It is therefore not included on the Colombian check-list.

“Black-capped Woodnymph *Thalurania nigricapilla*”

Valdés-Velásquez & Schuchmann (2009) described a supposed new species based on specimens collected in the Western Cordillera in Valle department based on its darker, less iridescent crown. *T. fannyi* (of the Central to East Andes) and *T. colombica* (of the East Andes) were historically split largely on the basis of the coloration of male crowns (Escalante–Pliego & Peterson 1992). However, F.G. Stiles in Remsen *et al.* (2011) considered the main diagnosing character to be a feature of immature male *T. colombica* / *fannyi*, based on similar specimens identified as of that species group from a close locality, housed in the ICN–UN museum collection. Moreover, the *T. colombica* / *fannyi* group requires revision given that individuals with a green crown holding a few purple feathers (similar to Central American *fannyi* and intermediate between green-crowned *hypochlora* of the West Andes – and purple-crowned *colombica* of the East Andes) are found in Serranía de San Lucas and Anorí in the northern Central Andes (Donegan, submitted). The taxa may be better treated as conspecific, with crown coloration perhaps not the best feature for delimiting species. We would not so immediately exclude the possibility that *T. nigricapilla* is not an undescribed subspecies of the *colombica/fannyi* group without further investigation into the type localities and variation in this group more generally, but provisionally do not recognise it at any taxonomic level for now. Further fieldwork in the region of the type locality should not be difficult or time consuming for a common bird like *Thalurania* and would confirm matters one way or another.

Species removed

Spix’s Woodcreeper *Xiphorhynchus spixii*

Previously included in the checklist based on old taxonomy (e.g. Hilty & Brown 1986) and not previously removed. This species does not occur in Colombia: with the species present in the Amazon region being Elegant Woodcreeper *X. elegans* (Haffer 1997, Aleixo 2002).

Splits and lumps

Snowy Plover *Charadrius nivosus*

We recognise the split of this species from the old world’s Kentish Plover *C. alexandrinus*. The molecular data supporting this split and different plumages of these birds

are well-known and widely commented upon in published works and two AOU proposals. AOU–NACC and AOU–SACC committee members have however raised various issues with the lack of vocal support for splitting these birds in Funk *et al.* (2007) and Küpper *et al.* (2009). Those authors presented one sonogram of each of their two proposed species and asserted that the calls were different. However, they did not cite other sound recordings or discuss what the differences are. Moreover, the sonograms presented include mostly blank space with little definition in the frequencies used by these birds. We reviewed sonograms of available recordings on www.xeno-canto.org (hereafter, XC), the Macualay library (hereafter, ML) and those in Küpper *et al.* (2009) in order to consider the name of this species to be used in the Colombia checklist. Sonograms of all recordings cited or illustrated below were produced and compared subjectively.

There were only three additional recordings available online from Eurasia and Africa (*alexandrinus* group) and one of them included only single-note calls. We compared the two recordings of more complex vocalisations with *nivosus* recordings. The two *alexandrinus* group recordings are from different continents but are very similar to one another and to the Küpper *et al.* (2009) sonogram in structure. The larger sample of available *nivosus* vocalisations itself includes both North and South American recordings.

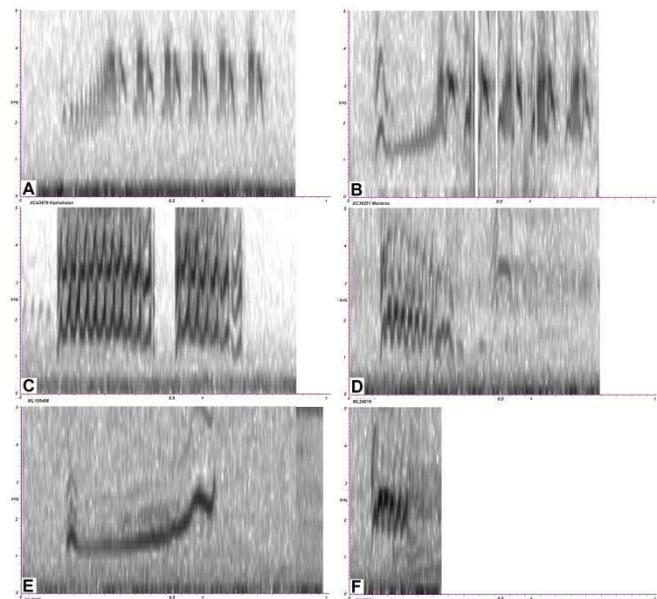


Figure 1. Top row: Vocalisations of Kentish Plover *C. alexandrinus* group. A. XC 43679 (R. van Beusekom: Kyzylkol Lake, Kazakhstan). B. XC 36251 (S. Bot: Oued Gharifa, Morocco). Middle to bottom rows: Vocalisations of Snowy Plover *C. nivosus* group. C. ML 105498 (G. A. Keller: Coos Bay, Oregon, USA). D. ML 24016 (T. A. Parker: Paracas Bay, Ica, Peru). E. ML 2975 (R. S. Little: Bear River Marsh, Utah, USA). F. ML 29391 (as ML

24016). All figures use the same scales on both axes, with 0–5 kHz on the *y*-axis and a maximum of 1 second of time shown on the *x*-axis.

No *nivosus* vocalizations closely resembled the *alexandrinus* vocalizations. In both *alexandrinus* vocalizations, there was a fast rising warble–trill, followed by a series of shorter, sharper trills each of which ends in a longer note (Figs. 1A–B). The closest recording we found among the sample for *nivosus* (Figure 1E) involved a single fast rising warble, continuous with a down–upstroke at the end but no trilling is visible on the sonogram or audible. Although some warbles on the recording were later followed by short trills (similar to those illustrated in Figure 1F), there is no repeated, immediate trilling after the warble, as in the two *nivosus* recordings, because the gaps between warbles and trills in the *alexandrinus* recording are much greater (>1s gap) and they are delivered in a somewhat random order, suggestive of alternate delivery of two different calls. The Küpper *et al.* (2009) recording of *nivosus* is more similar to *alexandrinus* in its structure, but the initial whistle falls, and does not rise, in acoustic frequency and again does not trill as in *nivosus*.

There are examples of flatter trills in most of the other available recordings of *nivosus* (Figs. 1C, D, F). These trills vaguely recall the second part of the *alexandrinus* song, but they are slower and more regular in song speed as well as lower pitched.

The sample size of recordings inspected is still small, but these differences in song structure when taken together with the molecular data and range disjunctions discussed in Funk *et al.* (2007) and Küpper *et al.* (2009) make us more inclined to accept this split.

Other recordings inspected (in addition to those listed in Figure 1 and shown in Küpper *et al.* 2009): *C. nivosus* group: ML 2976 (G.B. Reynard: Puerto Rico), ML 24005 (as ML 24016), ML 146536, XC 17817 (N. Pieplow: USA), XC 66122 (R. Ahlman: Ecuador). *C. alexandrinus* group: XC 78207 (M. Nelson: France).

Chestnut–mandibled Toucan *Ramphastos swainsonii*

We previously discussed the rationale for splitting or lumping this species with Black–mandibled Toucan *R. ambiguus* (Donegan *et al.* 2010). Remsen *et al.* (2011) decided to lump them based on that publication (Proposal 440) and this approach has now also been adopted by the AOU–NACC (Proposal 2010–B–13). We follow suit here.

Magdalena Antbird *Myrmeciza palliata*

Chaves *et al.* (2010) have reviewed the taxonomy of this group, demonstrating that *palliata* should not be treated as part of the same species as the Dull–mantled Antbird *M. laemosticta*. Those authors did not convincingly determine whether *palliata* and allopatric Esmeraldas Antbird *M. nigricauda* (of the West Andes foothills) – which is vocally

more similar but more different in its plumage and more or less equally differentiated genetically – may be conspecific. Participants in a discussion on the AOU–SACC website on the latter issue (Remsen *et al.* 2011) concluded that *palliata* is nonetheless better treated as a species separate from Esmeraldas Antbird based on unpublished further analysis carried out by the Islers. We therefore accept this split, in part for the reasons set out in Chaves *et al.* (2010) and in part based on the discussion on Remsen *et al.* (2011).

Immaculate Antbird *Myrmeciza immaculata*

We split this species into Western Immaculate Antbird *M. zeledoni* (found in the Chocó north to Central America) and Eastern Immaculate Antbird *M. immaculata* (of the Central and East Andes foothills), based on their vocal and plumage differences (Donegan, Accepted). As for some of the new national records discussed above, the authors recognise that this step may be regarded as premature by some. The change is made to ensure that the new *Field Guide* is as up to date as possible and retains its currency.

Thrush–like Manakin *Schiffornis turdina*

It has been known for a long time that this “species” is in fact many. Hilty & Brown (1986), Ridgely & Tudor (1994), Ridgely & Gwynne (1989), Boesman (1999), Ridgely & Greenfield (2001), Krabbe & Nilsson (2003), Restall *et al.* (2006), Schulenberg *et al.* (2007) and other authors have drawn attention to the different songs of various populations. However, no–one had attempted to deal with the complex as a whole, as opposed to for particular countries, until Nyári (2007) studied mtDNA variation and voice in *Schiffornis*, proposing that *turdina* be split into five species. That proposal was rejected by Remsen *et al.* (2011), who raised questions over the proposed inclusion of disjunct Chocó, Central American and Guyanan shield populations in a single polyphyletic species of strange distribution. Moreover, *per* C.D. Cadena in Remsen *et al.* (2011): “the only Colombian recording in the vocal analyses is from east of the Andes (i.e. there is no representative from the Magdalena Valley, the Cauca Valley, the northern lowlands, the Chocó, etc.)”. Few recordings from Colombia were available in sound archives or published recording compilations when Nyári (2007) conducted his study, but this is no longer the case .

For purposes of this paper, we examined the tens of new recordings of *Schiffornis* now available on XC and other published resources cited below. ML recordings were not studied for this species, given that these were used for Nyári (2007)’s sonograms and recommendations, and we wished to test his proposals independently. Recordings of this group involve songs of broadly similar, generally overlapping song length and acoustic frequency, so we considered only the number of notes and the note shape of different notes within songs, to study vocal differences between species.

Among the sample studied are three recordings of proposed species *S. stenorhyncha* from the interior of Colombia, two of these from Boyacá in the Magdalena valley at the base of the East Andes (Figure 3N; Alvarez *et al.* 2007) and the other from Serranía de San Lucas, between the Cauca and Magdalena rivers (Figure 3M). Boesman (1999) published two further recordings of this group from Venezuela, one from near the Colombian border in Táchira state of the Mérida Andes (Figure 3O) and another from the coastal mountains north of the Mérida Andes in Falcón state (Figure 3L). All these recordings are identical in song structure and note shape to recordings from Panamá and Venezuela of which sonograms were presented by Nyári (2007: Group E). The song comprises a downslurred whistle, followed by two shorter upslurred whistles, the last of which is higher. These recordings confirm the consistency of songs across almost the entirety of the range of proposed species *S. stenorhyncha*. In the río Cauca drainage, the species is known to occur in the region of the San Lucas sound recording locality mentioned above, but there are no records from within the valley.

Subspecies *amazonum* of Eastern Colombia was until recently universally referred to as “*amazona*”, but the former is the correct name (David & Gosselin 2011). An apparent distributional gap exists on the east slope of the East Andes bordering the llanos in Colombia. Although many authors show the ranges of *stenorhyncha* and *amazonum* respectively to be contiguous (e.g. Ridgely & Tudor 1994, 2009, Snow 2004, McMullan *et al.* 2010), this appears to be an over-statement of the East Andes population’s distribution based on existing available data. Hilty & Brown (1986) mapped it as occurring only in Amazonia and with a “dot” showing records on the East slope in Norte de Santander, and a dotted line suggesting that it may occur between those localities, Salaman *et al.* (2002), who studied many localities across the entire range of the East Andean slope, only report *S. turdina* from the southern part of the range in Nariño department, where records presumably refer to *amazonum* (or, perhaps, *aenea*). There are various specimens in the Biomap database from the Amazonian East slope of Colombia and adjacent lowlands north to Meta department (FMNH 249008) all of which also refer to *amazonum*. Specimens of *stenorhyncha* from the East slope come only from Norte de Santander department near the Venezuelan border (close to the Boesman 1999 sound recording locality) and Cubará in neighbouring northernmost Boyacá department (FMNH series) (where Hilty & Brown 1986 mapped the species). There are no specimens, published records or sound recordings from the east slope in Cundinamarca or southern Boyacá departments. Whilst *stenorhyncha* is likely to occur further south than Cubará, there are no materials or published records to our knowledge that would support its distribution being contiguous with that of *amazonum*.

The name *stenorhyncha* is senior to that of vocally indistinguishable “*panamensis*”. The type locality of *stenorhyncha* is from San Estebán, Venezuela, close to Boesman (1999)’s Falcón sound recording locality.

As illustrated in Nyári (2007), both *stenorhyncha* and Amazonian birds give three notes in their song (Figs. 3K–Q, T–Y). We also found various Amazonian and other eastern populations sometimes gave 4 or 5 noted songs (Figs. 3Z–CC) and single-note flat calls. In *stenorhyncha* songs, all three notes are generally shorter. The second note of the *stenorhyncha* song is particularly short by comparison and rises sharply in acoustic frequency, whilst in *amazonum* and also in other eastern populations, the second note is consistently longer and flatter. The third note is also longer and flatter or downward-intonating at the start on most eastern recordings, although on some recordings, the longer notes appear split on sonograms (perhaps in some instances due to being quieter in the middle section and distance of the recordist), producing a shorter apparent final note (e.g. XC 23040: I. Aragon). Although *stenorhyncha* and eastern populations form a monophyletic group when taken together, Nyári (2007) considered the eastern populations to be 5.1–5.4% distinct in mtDNA from *stenorhyncha* and found them mutually monophyletic (based on “*panamensis*” samples). Plumage differences are well addressed by previous authors (e.g. Hellmayr 1929) and have been illustrated (Restall *et al.* 2006, Ridgely & Gwynne 1989, Ridgely & Greenfield 2001, Schulenberg *et al.* 2007). Photographs of live individuals in Figure 2 illustrate the strong differences in plumage between the three groups occurring in Colombia.

The *stenorhyncha* and *amazonum* groups both also differ vocally from western and northern populations. The *rosenbergi* group of the Chocó to Tumbes region and vocally similar populations in Central America assigned to subspecies *veraepacis* and *dumicola* have a typical song which comprises a very long note followed by a very short note or notes (Nyári 2007; Figs. 3A–C, E–F). Chocó birds at least also have a different, second song, consisting of a series of several flattish notes of progressively higher frequency (not illustrated or discussed by Nyári 2007, but see Figs. 3G–H). These western groups taken together are considered to differ by 8.2% in their mtDNA from “*panamensis*”.

Remarkably, subspecies *stenorhyncha* and *dumicola* (the latter, of the *veraepacis* group) appear to be sympatric in Colón province of central Panama. Ridgely & Gwynne (1989) discussed the occurrence of two “subspecies” of *S. turdina* in Central Panama, noting that the two appear to replace one another by elevation. One recording of *dumicola* (Figure 3C: 79°39’W, 09°08’N) was made *c.* 10 km *east* of a recording locality of *stenorhyncha* (Figure 3K: 79°46’W, 09°10’N). The *stenorhyncha* recording is identical in every respect to recordings of the two groups from elsewhere. The

dumicola recording is similar to others, but has two short chip notes at the end, rather than one. Various recordings of related *rosenbergi* have two notes at the end and related *aenea* also varies in this aspect of its song, so this would appear to be a feature of individual variation rather than indicative of hybridisation. There are other recordings of *dumicola* from within 60 km of this locality (cited below) which are all typical. According to recordist notes by K. Allaire on a Panamanian recording, *stenorhyncha* does not respond to songs of *dumicola*.

S. veraepacis/dumicola and *S. stenorhyncha* should be split in light of their vocal differences and apparent sympatry in central Panama. The Colombian populations are not, however, known to be sympatric. As a result, the best way to assess the significance of vocal differences under a biological species concept is to compare the differences to those found between related sympatric species (e.g. Helbig *et al.* 2002). The *stenorhyncha / dumicola* comparison is a helpful benchmark. Also, Greenish Schiffornis *S. virescens* is sympatric with *S. turdina* populations in the Atlantic forest of Brazil and was considered more closely related to the *turdina* group than Varzea Schiffornis *S. major*, so it provides a good comparator. *S. virescens* gives songs which consist of a series of whistles in the 2–4 kHz range, but it differs from *turdina* in the note shapes of individual notes, which are generally shorter and more up–down–stroke–like in shape. Like some populations in the *turdina* group, *virescens* shows variation in the number of notes delivered in its songs (from 2 to 5) but otherwise is diagnosable in its voice from *turdina* through differences in note shapes, the same feature by which *turdina* populations can be distinguished. Comparative vocal considerations support treatment of three Colombian populations as separate species, consistent with Nyári (2007)’s conclusions.

Whilst it is relatively straightforward to conclude that three species in this group occur in Colombia, more difficult questions are raised by other, mostly extra–limital, populations, on which Nyári (2007) made various controversial proposals and on which Remsen *et al.* (2011) failed to reach a consensus. The treatment of some of these other taxa impacts upon the names for Colombian birds. It is therefore necessary to take various views on the taxonomy of the rest of the group in order to establish species names for the Colombian taxa.

There are three main extralimital issues: Firstly, the vocally similar Guyanan, Central American and Ecuadorian populations (Nyári 2007’s vocal group “A”) are not closely related according to molecular analyses. Secondly, the Amazonian and Atlantic forest populations have disjunct distributions, but are vocally fairly similar, with moderate to low molecular variation between them, making any splitting of this group (as proposed by Nyári 2007) controversial. Finally, the population on the East slope of Ecuador and

northern Peru is more closely related to Chocó birds than it is to other Amazonian populations (Nyári 2007).

The Central American and Chocó populations can first be dealt with relatively simply. Molecular analyses show them to be closely related: monophyletic when taken together, low (0.8%) mtDNA distance and only moderate statistical support for division into two sub–clades. Nyári (2007) doubted if his data were sufficient to treat them even as phylogenetic species. Nyári (2007) presented only one song type for these birds, consisting of a flat, then rising whistle, followed by a short note (Figs. 3A–B, E–F). There are only minor differences in note shape in homologous recordings. Populations referred to the *turdina* group in the Chocó also give a different secondary song, consisting of a rising sequence of notes (Figure 3G–H). A second song–type recorded in Panamá in the region of sympatry between *dumicola* and *stenorhyncha* may be homologous to these secondary songs and was identified by the recordist to *dumicola* (*veraepacis* group) (Figure 3D). The differences in the typical call do not approach the more fundamental differences in note shape between sympatric *Schiffornis* species. It would therefore be difficult to conclude that these two populations should be regarded as separate biological species, despite their distributions being bisected by the range of *S. stenorhyncha*. The alternate songs of the two populations differ more greatly, but a larger sample of such songs, especially from Central America, is required to consider the significance of any differences.

We would concur with Nyári (2007) in provisionally treating these two western and northern populations (comprising Central American subspecies *veraepacis* Sclater & Salvin, 1860 and *dumicola* Bangs, 1903 with Chocó–Tumbes subspecies *acrolophites* Wetmore, 1972, *rosenbergi* Hartert, 1898 and, if recognised, subspecies “*buckleyi*”) as a single biological species. Subspecies *rosenbergi* is present in at least the southern to middle part of the Colombian Chocó region north to 5°N near Nóvita (AMNH 112410), with *stenorhyncha / panamensis* cutting across the top of the West Andes to Panama including in the Baudó mountains from at least 07°30’N in northern Chocó department (various AMNH, USNM, ANSP specimens). An apparently similar distribution pattern is shown by *Myrmeciza palliata / nigricauda* (Chaves *et al.* 2010) although in both cases, there are collecting and sound–recording gaps at low to mid–elevations in the northern west Andes of Antioquia department and mid–Chocó department that would be worth studying. Here, there is a greater gap in available sound recordings from the Chocó of Colombia north of Nariño (Figure 3H) which may give pause for thought, but the specimen record casts light on the range of these taxa, the vocal differences between these and *stenorhyncha* are strong and sympatry in Panama means that they must be split.

A more difficult issue is whether either of the two western populations should be lumped with the vocally similar

Guyan shield population *olivacea* Ridgway, 1906. The Guyanan population is basal to all other *turdina* subspecies in Nyári (2007)'s phylogeny, differing over 9% in its mtDNA. The convergence in song between populations may be a shared ancestral character or could just be coincidental (Remsen *et al.* 2011). There is a small vocal difference between the two populations, with the note shape of the first note of *olivacea* increasing more in frequency at the end than in other populations, in most recordings. Subjectively, this difference does not approach that shown between sympatric *Schiffornis*. However, especially in light of the discussion on Remsen *et al.* (2011), we would prefer not to perpetuate polyphyly in this instance as a result of any revision. If one concludes that *stenorhyncha*, *veraepacis* and Amazonian populations require splitting, then it would also be rational to treat subspecies *olivacea* separately.

Subspecies *wallacii* Sclater & Salvin, 1867 is senior to *olivacea* but was listed by Nyári (2007) as perhaps being referable to his proposed Clade 6 (SE Amazon and Atlantic Forest) or Clade 7 (Guyanan shield). Nyári (2007) suggested using the name *olivacea* for the Guyanan group and we agree, although with some additional reasons. Nyári (2007) could not elucidate any greater precision as to *wallacii*'s type locality of "Pará", a state of Brazil which includes localities where two different vocal types are present, one being *olivacea*-like and the other being *amazonum*-like. The original description by Sclater & Salvin (1867) was based on birds collected in Pará, Brazil and according to that paper "all specimens were collected within 10 miles of the city". Although the city in question is not specified, it presumably refers to Belém, which at least formerly was often referred to as Belém do Pará. That city is south of the Amazon, as are other major settlements in Pará state. We would therefore assume, as did Nyári (2007), that the type locality of *wallacii* is on the South side of the Amazon, and therefore presumptively in Nyári (2007)'s Clade 6. As noted by Nyári (2007), all recordings of his Group A are from north of the Amazon. (For example, the recording illustrated in Figure 3U was recorded *c.* 130 km directly south from Manaus (a city on the Amazon river) and is of the *amazonum* group, whilst the recording illustrated in Figure 3S was made at an almost identical latitude but *c.* 120 km north of Manaus, and is of the *olivacea* group. It is only further west in the Amazonian region that Group C birds also occur north of the river e.g. in Colombia, western Venezuela and far western Brazil.) More pertinently, recordings from Paragominas, Pará (XC 84032 & 85848: A. Lees) were recorded *c.* 250 km south of Belém and are referable to the *amazonum* group. Other recordings from further South in Pará are also of this group (see list below).

More difficult issues, mentioned by D. Stotz in his comments in Remsen *et al.* (2011), are raised with the Amazonian and Atlantic forest populations. These populations are monophyletic when taken together but apparently cluster into two sub-clades (Nyári 2007). The

collecting localities of specimens in those clades are interesting, with some Atlantic forest samples being closer to some Amazonian samples than are other Amazonian samples. Nyári (2007) concluded that these clades represented northern and southern Amazonian populations, but there can be high heterogeneity in mtDNA in Amazonian lowland birds (cf. *Glyphorhynchus spirurus*: Marks *et al.* 2002). Vocally, Amazonian and Atlantic birds are broadly similar, generally giving three- or four- noted songs including long notes. Those of Atlantic populations (referred to subspecies *turdina* Wied-Neuwied, 1831 and *intermedia* Pinto, 1954) differ in their generally less flat or more U-shaped notes from Amazonian populations (which are usually referred to subspecies *amazonum* Sclater, 1860, *steinbachi* Todd, 1928 and, for the reasons set out above, *wallacii* Sclater & Salvin, 1867). Whilst Nyári (2007)'s vocal type C is prevalent throughout most of Amazonia (see Figs. 3T–Y), variations on the typical song type are found in Bolivia and South Peru (Figs. 3Z–AA), where songs frequently have four or more notes and include sharper downstrokes at the start of certain notes. These Bolivian and South Peruvian songs may be referable to subspecies *steinbachi*. Schulenberg *et al.* (2007) considered that subspecies *steinbachi* may be related to *aenea*. However, the type locality for *steinbachi* is Río Yapacani, Sara, Bolivia and fairly close to Cochabamba recordings referable to the Bolivian and South Peruvian Amazon group. Some southern Brazilian Amazon recordings are also suggestive of the note shape of southern Bolivian and Peruvian recordings (e.g. XC 48961, 83905). Moreover, some songs of these southern populations (Figure 3AA) are more similar in structure to recordings of subspecies *intermedia* of the northern Atlantic forest (e.g. Figure 3CC) than they are the songs of other Amazonian or Atlantic forest birds.

The vocal differences observed between Nyári (2007)'s proposed species "*turdina*" (Atlantic forest and southern Amazonia) and "*amazonum*" (rest of Amazonia) do not compare to those between sympatric *Schiffornis* species, although they do exceed the differentiation shown between *veraepacis* and *olivacea*. Given that these various eastern populations, when taken together, all form a monophyletic group, are vocally more or less cohesive and show various interesting patterns of variation that could helpfully be investigated further by regional experts, we would provisionally lump all subspecies in Nyári (2007)'s proposed *S. turdina* and *S. amazonum* groups (Clades 5 and 6), plus, for the reasons set out above, *wallacii*. Subspecies *amazonum* has been sound recorded from Meta on the East Andes border and near the Colombo–Venezuelan Amazonian border (Nyári 2007), with similar songs recently sound recorded near Leticia (Figure 3T) and in Vaupés (XC 81855) suggesting that birds of the *amazonum* song type, referable to the broader *turdina* group as defined herein, occur broadly throughout the Colombian Amazon. This is a conservative preliminary approach. We recognise that further splitting of this group may be warranted.

Nyári (2007) also proposed splitting species *S. aenea* Zimmer, 1936 of the western Amazonian region in Ecuador and Peru. Ridgely & Greenfield (2001) and Krabbe & Nilsson (2003) had previously noted that vocal differences were indicative of it being a different species. According to the molecular data, *aenea* forms a sister clade to the *veraepacis* group (Nyári 2007), so could potentially be lumped there without disrupting the monophyly of newly defined species. However, it is vocally different and biogeographic considerations also would support splitting this population. All except one recording of *aenea* comprise two long and two very short notes (e.g. Fig 3I). The second note decreases then increases in frequency, a note shape not found in the western populations. In one recording (Fig 3J), presumably an alternate song, the second note is almost continuous with the first, and increases then decreases in frequency (not the other way round). The differences observed in the note shape of songs from *dumicola* are equivalent to those between sympatric species.

Subspecies *aenea* is considered to occur along the East slope of the Andes in northern Peru (Schulenberg *et al.* 2007) and throughout Ecuador (Ridgely & Greenfield 2001) so it may occur at the east base of the East Andes in Colombia. However, there are no known specimens to date reported on Biomap and the sole Putumayo specimen (FMNH 287276: San Antonio, Valle del Guamuéz) is identified as of *amazonum*. Salaman *et al.* (2002)'s record was not identified to subspecies.

The name *aenea* is junior to that of both *veraepacis* and *turdina*, so it does not have any bearing on the names for Colombian birds. If *steinbachi* is a southern form of *aenea* rather than related to the Amazonian populations, this similarly would not affect nomenclature, because *steinbachi* is itself junior to *aenea*.

In summary, it is relatively straightforward to conclude that there are several species in this group, in particular that *veraepacis* and *stenorhyncha* groups should be split both from one another on account of vocal differences and sympatry, and from vocally distinct eastern populations; and that each of *olivacea* and *aenea* versus the eastern populations should also rest in different species. One can therefore conclude that *veraepacis* (with *olivacea* and *aenea*), *stenorhyncha* and *turdina* (with *amazonum*) as a minimum merit treatment as three separate species. A very conservative approach would be to adopt a broad East–West two–way split, but this would result in *stenorhyncha* of northern Colombia to Central Panama being lumped with eastern *turdina*; and *aenea* of the western Amazon with western *veraepacis*, producing two species with strange distributions. Moreover, either of these more conservative approaches would result in polyphyletic species, due to the basal position of *olivacea*. Hardcore traditional–method taxonomists might query if the gene tree is a species tree and lump *olivacea* with *veraepacis* but we prefer also to split

olivacea, in light of the molecular data and small vocal differences from *veraepacis*.

There are then various questions concerning allospecies with varying degrees of differentiation. A compelling candidate for species rank is *aenea* of western Amazonia, which best should be split from the *veraepacis* group of the Chocó–Tumbes and Central America, given its vocal differences and range. A more vexed issue is whether to split up the Amazonian and Atlantic forest populations further. Nyári (2007) split *turdina* from *amazonum* but we would, on balance, not go so far without further data. Finally, one could split *veraepacis* (Central America) from *rosenbergi* of the Chocó, based on minor vocal differences in the main song, tentative differences in the apparent secondary song and weak mutual monophyly, but we would not do that either, without further research.

We provisionally recognise the following five species instead of a single species, *S. turdina*. The first three of these occur in Colombia. We have not examined subspecies limits, but below include all recently used names within species groups for ease of reference (see Table 1):

1. Thrush–like Schiffornis *S. turdina* (provisionally including *steinbachi*, *amazonum*, *wallacii* and *intermedia*) of the Amazon region and Atlantic forest, including the Amazonian region of Colombia.
2. Slender–billed Schiffornis *S. stenorhyncha* (including *panamensis*) of the Tacarcuna region of Panama and Colombia, Magdalena valley and East Andes of Colombia and north–western Venezuela.
3. Brown Schiffornis *S. veraepacis* (including *dumicola*, *rosenbergi*, “*buckleyi*” and *acrophites*) of the Tumbes and Chocó from northernmost Peru through Ecuador to Colombia and Central America from western Panamá northwards.
4. Foothill Schiffornis *S. aenea* of the western Amazon–Andes foothills of Ecuador and Peru.
5. Olivaceous Schiffornis *S. olivacea* of the Guyanan shield.

Recordings illustrated in Figure 3: *veraepacis* group typical song: A. XC 1534 (D. Jones: Bajo Trail, Chan Chich, Belize). B. XC 6967 (K. Allaire: Altos del Maria, Panama). C. XC 6422 (K. Allaire: Canopy Tower, Panama). Alternate song in Central America: D. XC 75592 (W. Adsett: Cerro Vistamares, Chagres NP, Panama). *rosenbergi* group typical song: E. XC 9646 (F. Angulo: Parque Nacional Cerros de Amotape – Tumbes, Peru). F. XC 17392 (A. Spencer: Trail to the Rio Mira 4 km west of Alto Tambo, Esmeraldas, Ecuador). *rosenbergi* group alternate song: G. XC 7017 (N. Athanas: 7km NE of Pedro Vicente Maldonado, Pichincha, Ecuador). H. Track 5.52(a) in Alvarez *et al.* (2007) (O.

Laverde: RNA El Pangan, Nariño, Colombia). *aenea* typical song: I. XC 18850 (S. Olmstead: Cabanas Yankuam, Zamora-Chinchi, Ecuador). *aenea* alternate song: J. XC 7016 (N. Athanas: Loreto Road, Napo, Ecuador). *stenorhyncha* song: K. XC 7018 (N. Athanas: Pipeline Road, Colon, Panama). L. Track 111–2 in Boesman (1999) (La Misión Limestone Hills, Falcón, Venezuela). M. XC 81205 (T. Donegan: Santa Cecilia, Bolivar, Colombia). N. XC 75369 (F. Schmitt: RNA El Paujil, Serranía de las Quinchas, Boyacá, Colombia). O. Track 111–3 in Boesman (1999) (San Juan de Colón, Táchira, Venezuela). *olivacea* songs: P. Track 111–4 in Boesman (1999) (El Palmar area, Bolivar, Venezuela). Q. XC 7019 (N. Athanas: Reserva Biologica da Campina, north of Manaus, Brazil). R. XC 7620 (O. Ottema: Bakhuy's mountains, Suriname). S. XC 67133 (M. Melo: Presidente Figueiredo, Amazonas, Brazil). *amazonum* group songs: T. XC 58418 (G. Navarrete Forero: Ome Ecological Station, Purite River, 70 Km N of Leticia, Amazonas, Colombia). U. XC 38722 (A. Renaudier: Borba, Amazonas, Brazil). V. Track 111–1 in Boesman (1999) (Junglaven area, Amazonas, Venezuela). W. Track 192–7 in Krabbe & Nilsson (2003) (km 37 on “Maxus” road, S of Río Napo, Napo, Ecuador). X. XC 27841 (D. Edwards: Sabalillo, Loreto, Peru). *Bolivian / S Peruvian Amazon songs*: Y. XC 30500 (J. Hornbuckle: Beni Biological Station, Bolivia). Z. XC 3049 (A.B. Hennessey: Serranía Pilón, Pilón Lajas Biosphere Reserve, Beni, Bolivia). AA. XC 2408 (S. Mayer: Km 6 on road to Warnes, Riberalta, Beni, Bolivia). BB. XC 64171 (J. Tobias & N. Seddon: Noel Kempff Mercado National Park, Huanchaca Dos, Bolivia). *intermedia* song: CC. XC 7325 (G. A. Pereira: Estação Ecológica de Murici, Alagoas, Brazil). *turdina* group songs: DD. XC 69448 (F. Lambert: Fausto's Fazenda, W of Colonia, near Una, Brazil). EE. XC 72748 (M. Melo: Reserva Natural da Vale – Linhares, Espirito Santo, Brazil). FF. XC 14003 (L. Pimentel: Reserva Ecologica de Guapiassu, Rio de Janeiro, Brazil). All figures use the same scales on both axes, with 0–5 kHz on the y-axis.

Recordings inspected:

veraepcis group: XC 1534 (for details see caption to Figure 3). XC 6422 (Figure 3). XC 6423 (K. Allaire: Cerro Gaital, Anton, Cocle, Panama). XC 6967 (Figure 3). XC 11080 (T. Will: La Lupe, Nicaragua). XC 28299, 28308, 28482, 28483 (D. Lane: Rio Bravo Research Area, Orange Walk District, Belize). XC 59411 (J. King: Cockscomb Basin Jaguar Preserve, Dangriga Province, Belize). XC 71902 (A. Spencer: Las Heliconias Lodge, Volcan Tenorio, Alajuela, Costa Rica). XC 74513 (W. Adsett: Fortuna Forest Reserve, Chiriquí, Panama). XC 74514 (W. Adsett: El Chorogo, Puerto Armuelles, Chiriquí, Panama). XC 78762 (W. Adsett: Cerro Vistamares, Chagres NP, Panama). XC 84348, 84349 (J. Poelstra: Laguna Lachuá National Park, Alta Verapaz, Guatemala).

rosenbergi group: XC 7017 (Figure 3). XC 8005 (N. Athanas, Rio Silanche, Pedro Vicente Maldonado, Pichincha, Ecuador). XC 9646 (Figure 3). XC 17392 (Figure 3). XC 54659 (N. Athanas: Reserva Mangaloma, Pichincha, Ecuador). XC 64172 (J. Tobias & N. Seddon: Bilsa Research Station, Ecuador). XC 71138 (D. Lane: 17km NW Pedro Vicente Maldonado, Pichincha, Ecuador). XC 72651, 72652 (D. Lane: 2.7km E Alto Tambo, Esmeraldas, Ecuador). Alvarez *et al.* (2007) (Figure 3). Krabbe & Nilsson (2003), tracks 192.1 (J. Nilsson: Jatin Sacha Biological Station, Mache–Chindul Hills, Esmeraldas, Ecuador), 192–2 (N. Krabbe: Rio Santiago, c. 6 km E of Playa de Oro, Esmeraldas, Ecuador), 192–3 (N. Krabbe: 9 km W of Piñasm El Oro, Ecuador). Jahn *et al.* (2002), track 41.1 (P. Mena Valenzuela: Corriente Grande, Salto del Bravo, Río Bravo, Ecuador), 41.2 (O. Jahn: Playa de Oro, foothill zone, c. 7 km E of village, Rio Santiago, Ecuador).

aenea: XC 7016 (Figure 3). XC 7069, 7070 (T. Mark: Cascada, Cord. Vaquero, San Martin, Peru). XC 18850 (Figure 3). XC 32522 (G. Boano: Quebrada Mishquiyacu, Moyobamba, San Martin, Peru). Krabbe & Nilsson (2003) tracks 192–10 (N. Krabbe: km 13 on Narupa–Loreto road, Napo, Ecuador), 192–11 to 192–15 (all, N. Krabbe or J. Nilsson: Cutucú W, Morona Santiago, Ecuador).

stenorhyncha group: XC 7018 (Figure 3). XC 46783, 47005 (M. Nelson: La Marea, Darien, Panama). XC 60785 (K. Allaire: Cerro Pirre trail, Darien Province, Panama). XC 75369 (Figure 3). XC 81205 (Figure 3). Alvarez *et al.* (2007), track 5.52(b) (A.M. Cuervo: Otanche, Serranía de las Quinchas, Boyacá). Boesman (1999) tracks 111–2, 111–3 (both, Figure 3).

olivacea: XC 6169 (C. Parrish: Rio Grande, Sierra de Imataca, Bolivar, Venezuela). XC 7019 (Figure 3). XC 7619 (as XC 7620). XC 7620 (Figure 3). XC 10126 (R. A. de By: Reserva Biologica da Campina, north of Manaus, Brazil). XC 67133 (Figure 3). Boesman (1999) track 111–4 (Figure 3).

amazonum group: XC 714 (W.–P. Vellinga: Paucarillo, rio Orosa, Loreto, Peru). XC 18981, 19089 (S. Olmstead: Cristalino Jungle Lodge, MT, Brazil). XC 27217 (S. Dantas: Serra dos Carajás, Pará, Brazil). XC 27841 (Figure 3). XC 34369 (D. Geale: Sabalillo, Loreto, Peru). XC 30500 (Figure 3). XC 36956 (G.R.R. Brito: Right bank of Rio Teles Pires, Jacareacanga, Pará). XC 38722 (Figure 3). XC 38723 (as XC 38722). XC 58418 (Figure 3). XC 58419 (as 58418). XC 64170 (J. Tobias & N. Seddon: Noel Kempff Mercado National Park, Huanchaca Dos, Bolivia). XC 81855 (A. Spencer: Mitu, Vaupés, Colombia). XC 84032, 85848 (A. Lees: Paragominas, Pará, Brazil, Bacia 549, Brazil). Boesman (1999) track 111–1 (Figure 3). Krabbe & Nilsson (2003), tracks 192–4 to 9 (all, N. Krabbe: km 37 on “Maxus” road, S of Río Napo, Napo, Ecuador). *Others*: XC 48961 (S. Dantas: Querência, Mato Grosso, Brazil). XC

83905 (Quitás-Filho: Ribeirão Cascalheira, Mato Grosso, Brazil). Note latter two are similar in some aspects of note shape to Bolivian recordings. *Calls*: XC 42945 (J. Klaiber: Caura – Las Trincheras, Venezuela). XC 86048 (D. Geale: Allpahuayo–Mishana reserve, Loreto, Peru).

Bolivian / S. Peruvian / S. Brazilian Amazonian recordings: XC 2408 (Figure 3). XC 2886 (A.B. Hennessey: Serranía Pilón, Pilón Lajas Biosphere Reserve, Beni, Bolivia). XC 3119 (A.B. Hennessey: Serranías Beu & Chepete, Pilón Lajas Biosphere Reserve, La Paz). XC 3049 (Figure 3). XC 3556, 3595, 3596 (S.K. Herzog: Old rd Cochabamba – V. Tunari, Camp 4, Carrasco NP, Cochabamba, Bolivia). XC 23040 (I. Aragon: Sudadero, N of Puerto Maldonado, Madre de Dios, Peru). XC 64171 (Figure 3). XC 76029 (A. Spencer: Explorer's Inn, Tambopata, Peru). XC 82821 (D. Geale, Pampa Juliaca, Pampas del Heath, Madre de Dios, Peru). XC 82821 (D. Geale: Pampa Juliaca, Pampas del Heath, Madre de Dios, Peru). *Calls*: XC 74163 (J. Tobias & N. Seddon: Los Indios, Pando, Bolivia).

intermedia: XC 7325 (Figure 3). XC 80467 (J. Minns: Reserva Biológica de Sooretama, Espírito Santo, Brazil).

turdina group: XC 14003 (Figure 3). XC 69448 (Figure 3). XC 72748 (Figure 3). *Calls*: XC 69447 (F. Lambert: Santa Catarina, Serra do Javi, Brazil). XC 82398 (J. Minns, Reserva Natural da Vale – Linhares, Espírito Santo, Brazil).

Masked Cardinal *Paroaria nigrogenis*

Dávalos & Porzecanski (2009) have shown Masked Cardinal *P. nigrogenis* of the llanos to be well distinguished morphologically and genetically from other members of the *P. gularis* group. Subspecies *gularis* occurs throughout the Colombian Amazon. Restall *et al.* (2006) considered the two to be sympatric or parapatric in eastern Colombia and south–western Venezuela. We accept this split and do not need to consider the other splits of extralimital taxa proposed in that paper.

Sound recordings of the introduced population in Valle del Cauca (e.g. XC 46484: J. P. López–Ordoñez) recall available recordings of *gularis* from Brazil and field observations also suggest it is *gularis* (S. Hansson *in litt.* 2011).

Changes of Category

Yellow–bellied Sapsucker *Sphyrapicus varius*

Two photographic records are presented by Luna *et al.* (2011) in this edition. The status of this species is changed from “SA” to as part of the confirmed list for the Colombian

mainland. It should previously have been listed as hypothetical for the mainland on account of a record, of which little detail was published, in Mazar Bennett & Kirwan (2001). This species represents a long overdue confirmation for the Colombian mainland and South American list.

Sooty–faced Finch *Arremon crassirostris*

A specimen of this species was reportedly collected from Mount Tacarcuna by Tamaris–Turizo *et al.* (2010). It is previously reported in Colombia (Rodríguez 1982) but no confirmed records are known. We look forward to seeing the full details of this expedition, but provisionally change this species' status from hypothetical to confirmed in the meantime.

Notes on status of other species

Black–headed Gull *Chroicocephalus ridibundus*

There is a published sight record of this species for Colombia (Naranjo & Franke 1995), which is the basis for other reports of this species in the literature discussed in Donegan *et al.* (2010).

Scissor–tailed Flycatcher *Tyrannus forficatus*

The sight record by Rowland & Master (2011) of this species in Colombia is pleasing in light of the lack of previous documented records (discussed in Donegan *et al.* 2009). However, this does not affect the species' previous category of being known only from observations in Colombia.

Escaped and introduced species

Instituto Alexander von Humboldt researchers have recently undertaken a comprehensive review of introduced or invasive species occurring in Colombia, including birds (Baptiste *et al.* 2010). The following species have apparently been recorded as escapees in Colombia and are new to our list, either generally or for the mainland. In the absence of any photographic record or specimen for any of them, they are treated as being both unconfirmed and escaped.

Peacock *Pavo cristatus* Record of an escape cited from Puerto Berrio (Baptiste *et al.* 2010). The species is common in captivity in Colombia, particularly among wealthy private individuals in rural areas.

Helmeted Guineafowl *Numida meleagris* Records of escapees generally in north Andean and Chocó / Magdalena region (Baptiste *et al.* 2010).

Table 1. Allocation of various subspecies and populations to groups and proposed taxonomies.

Population name	Range	Nyári Vocal group	Nyári's molecular group	Nyári's PSC approach	Nyári's BSC approach	Nyári's AOU-SACC proposal	Our BSC approach
<i>veraepacis</i> , <i>dumicola</i>	Central America (S Mexico and Belize to N/W Panama)	A	1	<i>veraepacis</i>	<i>veraepacis</i>	<i>veraepacis</i>	<i>veraepacis</i>
<i>rosenbergi</i> / <i>buckleyi</i> / <i>acrophites</i>	Choco of Colombia and N Ecuador	A	3	<i>rosenbergi</i> [/ <i>veraepacis</i>]	<i>veraepacis</i>	<i>veraepacis</i>	<i>veraepacis</i>
<i>olivacea</i>	Guianan shield of Venezuela to Suriname, N. Brazil	A	7	<i>olivacea</i>	<i>veraepacis</i>	<i>olivacea</i>	<i>olivacea</i>
<i>aenea</i>	West Amazon in Ecuador and Peru	B	4	<i>aenea</i>	<i>aenea</i>	<i>aenea</i>	<i>aenea</i>
<i>stenorhyncha</i> / <i>panamensis</i>	Northern Colombia, Venezuela, S/E Panama	E	2	<i>stenorhyncha</i>	<i>stenorhyncha</i>	<i>stenorhyncha</i>	<i>stenorhyncha</i>
<i>turdina</i> , <i>intermedia</i>	Atlantic forest region of Brazil	D	6	<i>turdina</i>	<i>turdina</i>	<i>turdina</i>	<i>turdina</i>
<i>steinbachi</i>	Southern Amazonia in Peru, Bolivia, Brazil	C	6	<i>amazonum</i>	<i>amazonum</i>	<i>amazonum</i>	<i>turdina</i>
<i>wallacii</i>	Para, Brazil and surrounding region	A/C	6/7	<i>amazona</i> / <i>olivacea</i>	<i>amazonum</i> / <i>veraepacis</i>	<i>amazonum</i> / <i>olivacea</i>	<i>turdina</i>
<i>amazonum</i>	Northern Amazonia in Colombia, Venezuela, Peru, Bolivia, Brazil.	C	5	<i>amazonum</i>	<i>amazonum</i>	<i>amazonum</i> / <i>turdina</i>	<i>turdina</i>



Figure 2. The three species found in Colombia. Left: Brown Schiffornis *S. veraepacis* group (subspecies *buckleyi* / *rosenbergi*). RNA El Pangan, Nariño, Colombia. (J.C. Luna / ProAves: locality of recording in Figure 3H). Middle: Slender-billed Schiffornis *S. stenorhyncha*. Santa Cecilia, Bolivar, Colombia (T. Donegan: locality of recording in Figure 3M). Right: Thrush-like Schiffornis *S. turdina amazonum* Caparu, Amazonas (S. Macuna / ProAves).

Chestnut Munia *Lonchura atricapilla* Records in Valle del Cauca (Baptiste *et al.* 2010).

The authors also mention Eurasian Collared Dove *Streptopelia decaocto* (also referring to this as “*S. risoria decaocto*”). We do not list this species without further data. *Streptopelia* in captivity in Colombia are mostly *risoria* / *roseogrisea*. Wild-type “*roseogrisea*” birds approach *decaocto* in plumage so may confuse. Baptiste *et al.* (2010) also list escapee localities for **Chicken / Red Junglefowl *Gallus gallus***, previously included on our list only for San Andrés, in the mainland of Colombia.

The **Cockatiel *Nymphicus hollandicus*** is referred to in a government environmental resolution (Ministerio de Ambiente, Vivienda y Desarrollo Territorial no. 848 de 2008) as an exotic species introduced irregularly to the country. We are unaware of any scientific publication concerning records of escaped birds and treat this species as hypothetical and escaped on the basis of this rather formal record.

A more controversial case is that of the **Yellow-faced Siskin *Sporaga yarrellii***. A photographic record of this species, the first from Colombia, was recently published based on an individual observed in the wild in Casanare department (Castro-Lima & Ocampo-Peñuela 2010). Restall *et al.* (2006) consider the species to be subject to “heavy bird trade” and attributes records in Venezuela to perhaps being escaped cage-birds captured in its native range in the far north-east of Brazil. Although Castro-Lima & Ocampo-Peñuela (2010) considered that the individual observed may be wild and showed no signs of captive origin (e.g. rings, damaged feathers), other species found in Colombia which are undoubtedly escapes include individuals in a similar state (e.g. *Streptopelia risoria*). We therefore conservatively list this species for now as known only from escapes. If a breeding population is shown to exist in Colombia or if vagrancy or wandering is evidenced through banding studies in Brazil, then this assessment would have to be reconsidered.

Genus names, linear order, spellings, English names

The following additional changes to names and orders, which are either under consideration or have been accepted by Remsen *et al.* (2011) are relevant to Colombia. Proposal numbers and, where appropriate, key references supporting these changes are cited below:

- 438. Change linear sequence of species in *Brotogeris* (Ribas *et al.* 2009) (J.V. Remsen)
- 458. *Forpus modestus* has priority over *Forpus sclateri* (Pacheco & Whitney 2006) (J.F. Pacheco & E. Dickinson)
- 460. Revise generic boundaries in the *Buteo* group (Raposo do Amaral *et al.* 2009) (J.V. Remsen)

- 461. Remove *Busarellus* from buteonine genera in linear sequence of Accipitridae (a) and (b) rearrange linear sequence on non-buteonine genera (Raposo do Amaral *et al.* 2009) (J.V. Remsen)
- 466. Transfer *Caprimulgus rufus* and *Caprimulgus sericocaudatus* to the genus *Antristomus* Bonaparte 1838 (Han *et al.* 2010) (M. Robbins)
- 467. Transfer *Podager nacunda* to the genus *Chordeiles* Swainson 1831 (Han *et al.* 2010) (M. Robbins)
- 480. Place *Sapayoa aenigma* in its own family, Sapayoidae (S. Billerman & T. Chesser).
- 481. Change the linear sequence of the furnarioid families (Moyle *et al.* 2009) (T. Chesser)
- 486. Restore *Xenops milleri* to the genus *Microxenops* (Moyle *et al.* 2009) (R. Brumfield).
- 488. Resurrect *Sporagra* for South American goldfinches and siskins (Nguembock *et al.* 2009) (Remsen).
- 489. Changes in various species names to conform to The Code (David & Gosselin 2011) (R. Banks).
- 491. Change linear sequence of orders for (A) Falconiformes and Psittaciformes (M. Nores) and (B) Cariamiformes (Hackett *et al.* 2008) (J.V. Remsen)
- 492. Revise generic boundaries in the *Buteogallus* group (2) (Raposo do Amaral *et al.* 2009) (J.V. Remsen)

AOU-SACC Proposal 465 was to transfer *Uropsalis*, *Eleothreptus*, *Nyctidromus*, *Macropsalis*, *Nyctiprogne*, *Lurocalis*, and certain *Caprimulgus* spp. (*cayennensis*, *maculicaudus*, *longirostris*, *whitelyi*, *parvulus*, *anthonyi* and *nigrescens*) to the genus *Hydropsalis* Wagler 1832. It did not pass but most committee members were in favour of some changes. We adopt a middle-ground route of provisionally placing members of the following genera occurring in Colombia into *Hydropsalis*: *Uropsalis*, *Nyctidromus* and most *Caprimulgus*. We retain the other genera occurring in Colombia (*Lurocalis* and *Nyctiprogne*) as they were resolved as monophyletic. We retain *carolinensis* in *Caprimulgus* for the time being, pending action by the AOU’s North American committee.

We pend a decision on the following more controversial matters that are subject to continuing AOU-SACC discussions, until next year:

- 437. Reorganize the generic classification of the “core tanagers” (Sedano & Burns 2010) (F.G. Stiles)
- 487. English names for seven new species *Arremon torquatus* group (J.V. Remsen)

We also adopt the following changes to the spelling of Latin names of birds occurring in Colombia, following David & Gosselin (2011) and, for most species names, Remsen *et al.* (2011) proposal 489:

- Aramides cajanea* becomes *A. cajaneus*.
- Porphyrio martinica* becomes *P. martinicus*.
- Megascops choliba crucigerus* becomes *M. c. cruciger*.
- Amazona mercenaria* becomes *A. mercenarius*.
- Schiffornis (turdina) amazona*, becomes *S. amazonum*.

Frederickena unduligera becomes *F. unduliger*.
Premnornis guttuligera becomes *P. guttuliger*.
Thraupis episcopus nesophilus becomes *T. e. nesophila*.

Threat Categories

Updates to the threat status of various Colombian species follows a further review process by BirdLife International that concluded in February 2011:

Noble Snipe *Gallinago nobilis* LR to NT
 Black-backed Thornbill *Ramphomicron dorsale* LR to EN

Santa Marta Foliage-Gleaner *Automolus rufipectus* NR to NT
 Fenwick's Antpitta *Grallaria fenwickorum* NR to CR
 Cundinamarca Antpitta *Grallaria kaestneri* VU to EN
 Paramillo Tapaculo *Scytalopus canus* NR to EN
 Rio Orinoco Spinetail *Synallaxis beverlyae* NR to NT
 Santa Marta Wren *Troglodytes monticola* VU to CR
 Blue-and-gold Tanager *Bangsia arcaei* (newly recorded) NT

Summary of changes and new species totals

The changes made are set out in Table 2 below.

Table 2: Changes to the bird species of Colombia.

Change	Species	Conf.	Bog.	Obs.	Obs.*	SA	SA (Obs)	Int	Int? / Esc	Total
2010 Check-list totals		1,802	4	46	5	12	5	4	[8]	1,879 [1,886]
	Rufous-breasted Wood-Quail <i>Odontophorus speciosus</i>	+1								+1
	Cory's Shearwater <i>Calonectris diomedea</i>	+1								+1
	American Avocet <i>Recurvirostra americana</i>			+1						+1
New species for Colombia	White-bellied Parrot <i>Pionites leucogaster</i>	+1								+1
	Blue-and-gold Tanager <i>Bangsia arcaei</i>	+1								+1
	Pirre Bush-Tanager <i>Chlorospingus inornatus</i>	+1								+1
	Black-and-yellow Tanager <i>Chrysothlypis chrysomelas</i>	+1								+1
	Masked Water-Tyrant <i>Fluvicola nengeta</i>	+1								+1
Species removed	Spix's Woodcreeper <i>Xiphorhynchus spixii</i>	-1								-1
	Magdalena Antbird <i>Myrmeciza palliata</i>	+1								+1
	Western Immaculate Antbird <i>Myrmeciza zeledoni</i>	+1								+1
Splits	Slender-billed Schiffornis <i>Schiffornis stenorhyncha</i>	+1								+1
	Brown Schiffornis <i>Schiffornis veraepacis</i>	+1								+1
	Masked Cardinal <i>Paroaria nigrogularis</i>	+1								+1
Lumps	Black-mandibled Toucan <i>Ramphastos ambiguus</i>	-1								-1
Changes of category	Yellow-bellied Sapsucker <i>Sphyrapicus varius</i>	+1				-1				0
	Sooty-faced Finch <i>Arremon crassirostris</i>	+1		-1						0
New escaped species	Peacock <i>Pavo cristatus</i> , Helmeted Guineafowl <i>Numida meleagris</i> , Cockatiel <i>Nymphicus hollandicus</i> , Chestnut Munia <i>Lonchura atricapilla</i> , Yellow-faced Siskin <i>Sporaga yarrellii</i>								[+5]	[+5]
Totals per category 2011		1,814	4	46	5	11	5	4	[13]	1,902
Change since 2010 Checklist		+12				-1			[+5]	
Less escapes										-13
TOTAL BIRD SPECIES FOR COLOMBIA										1,889

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