An overview of bird records committees in the Neotropics

Juan Freile, Alejandro Solano-Ugalde, Martyn Kenefick, Alexander Lees, Vítor Piacentini, Luis Sandoval, Thomas Valqui, Fernando Angulo-Pratolongo, Jhonathan Miranda, Olivier Claessens and Christopher Sharpe

Neotropical bird records committees have been growing in numbers, remit and prominence in recent years. This feature – by members of those committees – explains how and why committees were established and encourages birders to submit their observations directly to committees as well as sharing through other means.

Inventorying the avifauna of the Neotropics seems a never-ending task. As we reach the last recess of the 'Bird Continent', moving deeper into mountains, valleys and floodplains, and farther out to sea, and the more in-depth we explore bird taxonomy, the total regional species list continues to grow (Balchin 2007). Thousands of scientific papers, monographs, audio recordings, field guides and books cram our libraries (Freile *et al.* 2014). Most countries in the Neotropics now have at least one published field guide, checklist or monograph – and some countries have multiples. Further, some landmark publications have even tried to synthesise knowledge at the 'subcontinental' scale (Meyer de Schauensee 1966, Howell & Webb 1995, Raffaele *et al.* 1998, Ridgely

1 Sooty Shearwater *Ardenna grisea*, Grand Connétable Island, French Guiana, June 2016 (Kévin Pineau). The first record for French Guiana.

2 Black-headed Gull *Chroicocephalus ridibundus*, Kourou, French Guiana, February 2016 (Olivier Tostain). The second record for French Guiana since the creation of the Comité d'Homologation de Guyane.

3 Little Egret *Egretta garzetta*, Kourou, French Guiana, March 2014 (Roland Jantot). A regular visitor to French Guiana.

& Tudor 2009). The rapid growth of citizen science initiatives on the back of the digital revolution is increasing exponentially the amount of available biodiversity data, albeit of varying quality (Lees & Martin 2015, Davies *et al.* 2016). Yet our knowledge of the natural history, distribution, systematics, and conservation of Neotropical birds is still riven by shortfalls as is evidenced by the continued flux of rediscoveries, new country records, range extensions, taxonomic changes and even species new to science found in the field (Balchin 2007, Balchin *et al.* 2006).

Our knowledge of the avifauna of Neotropical countries is not homogenous between regions and nation states. Brazil, Argentina and Mexico lead the list of the better-documented Neotropical countries over the last two decades; and several steps behind come Chile, Colombia, Ecuador, Costa Rica, Peru, Venezuela, Panama, Bolivia and Cuba (Freile *et al.* 2014). The national bird lists of all these countries are considered fairly complete, at least considering contemporary standards of avian taxonomy (Barrowclough *et al.* 2016). National bird lists need periodic revision in order to keep them in line with taxonomic progress, incorporate additions, deletions and substitutions (Obando 2012, Piacentini *et al.* 2015). Reviews and updates are enhanced when peer-reviewed by a team of experts who deliberate about uncertain and remarkable records in the light of new evidence and incoming information (AERC 2016).

Validation committees are necessary in the Neotropics, given the snowballing amount of information archived and 'published' online, along with the steady advancement of formal publication. In particular, there is a need for evidence-based evaluation of first records for a country, which are often extralimital vagrants. The British Ornithologists' Union (BOU) established what is thought to be the oldest records committee (1878) that compiled the first formal list of British birds (BOU, 1883). The BOU has been responsible for curating the official British bird list since then, and the formal British Birds Rarities Committee was established in 1959. Neotropical birders are a more than century behind, but right on time as Neotropical birding and ornithology continue to grow.

Bird record committees have solid, scientific, expertise-based foundations, and their decisions depend on collective agreements by either unanimity or majority voting of their members, whether they deal with distribution and status only, or handle taxonomy as well (Piacentini *et al.* 2015). Differences aside, all committees depend on combined knowledge and agreed decisions.

Neotropical committees

To date, most Neotropical countries lack records committees and the seven that exist were established very recently (all since 1995, most since 2005; Fig. 11). Each committee revises and updates the respective country's bird list in two ways. First, by assessing 'old', undocumented or dubious records in the light of new information and by reaching a decision between members. Second, by studying new records which are submitted directly by observers or discovered by committee members on the Internet or in published material. Of course, with some countries' lists surpassing or approaching the 1,000 species bar revising records of *all* species occurring within national boundaries is an insurmountable task – and is not the committees' desire, anyway.

Committee review tends to focus on nominal 'rarities', a broad category that may encompass extralimital vagrants and scarce migrants, major range extensions, very low density and highly threatened residents, and 'missing' species that have not been observed for an extended period

4 Bonaparte's Gull *Chroicocephalus philadelphia*, Pacoa, Santa Elena, Ecuador, November 2013 (Dušan Brinkhuizen/sapayoa.com). The first record for Ecuador.

5 Reddish Egret *Egretta rufescens*, Pacoa, Santa Elena, Ecuador, November 2013 (Dušan Brinkhuizen/sapayoa.com). The second Ecuadorian record.

of time. Some Neotropical committees handle all these types of records; others leave rare residents or range extensions aside. French Guiana has two parallel committees: one for rarities and the country's checklist and one for validating general bird records. Venezuela has two parallel committees as well: one for the country checklist and another for rarities and states' lists. Meanwhile, the Brazilian committee is the only one that maintains its own taxonomy.

Assessing records

Bird record committees often have to process records of rare species with very different levels of evidence provided by observers. Some records received may be well supported with documentary evidence such as audio recordings, digital images, video or even specimens. Committees face tough decisions about whether to consider records unsupported by such voucher material and some choose not to evaluate records supported by only written notes and field sketches (and even by telemetry or other remote-track protocols; Carlos *et al*. 2010).

A hierarchy of documentary evidence, as suggested by Lees *et al*. (2014) – namely 1) specimens, 2) video footage and 3) photographs and sound recordings – might make committees' work easier. This hierarchical approach may vary between species, audio recordings being more important for some taxa and photographs for others (Lees *et al*. 2014). Still, it is not always possible to safely identify some birds even on the basis of photos, audio or specimens. For such records, additional information in the form of detailed descriptions of the bird(s) seen, sighting conditions (e.g. weather, light, distance, equipment, observers' experience, accompanying birders) is requested, and sometimes advice is sought from external experts. In future, computer algorithms such as the Cornell Lab of Ornithology's Merlin app (http://merlin.allaboutbirds.org) may play a role too.

Committee processes

All records are evaluated and voted on independently by committee members; their votes are submitted to the chairman of the committee, and unresolved cases are recirculated for further assessment and discussion. New country records typically need unanimous voting; other records either unanimous or majority. The number of records received every year by Neotropical committees varies considerably, from less than 15 in some cases to more than 150 in others.

Records are received through each committee's webpage, via social media or by e-mail. Currently, a fair number of interesting records are not submitted to committees despite being uploaded to sites like eBird, WikiAves Brasil, xeno-canto, Internet Bird Collection, Faune-Guyane, or even disseminated on Facebook or Whatsapp chat groups. Some committees monitor such sites in order to keep track of unusual records. After voting, agreement and decision – either via online discussions or actual meetings – annual reports are prepared for publication.

Reports and publications

Reports are not always annual, but most are published in peer-reviewed journals (e.g. Freile *et al*. 2017, Claessens & CHG 2015, CRAP 2016). Data on localities, observers' names, dates and other details of each record are published, along with documentary evidence. These publications become the official record of committee activities, but more importantly, they are reliable sources

6 Northern Wheatear *Oenanthe oenanthe*, road to 'Guatemala', Kourou, French Guiana, November 2012 (Michel Giraud-Audine). The second record for French Guiana and the second documented record for South America.

7 Dwarf Cuckoo *Coccycua pumila*, Las Palmas, Esmeraldas, Ecuador, June 2016 (Roger Ahlman; www.pbase.com/ahlman). The species was first recorded in Ecuador during 2012.

for tracking down the status of rare species in any given country. They are also acknowledged as authoritative sources for records of rare species, including first country, region or continental records (Renaudier *et al.* 2011, Remsen *et al.* 2016). Likewise, the official list of bird species of each country is periodically published, either on committee webpages (e.g. Sandoval & Sánchez 2017, Freile *et al.* 2015–2017) or in peer-reviewed national journals (e.g. Piacentini *et al.* 2015, CRAP 2016). Whether published online or in a journal, the term 'official' emphasises the revised, discussed, and consented process by a team of experienced professionals, but not (for the avoidance of doubt) the official auspices of national governments. Following these official lists is highly recommended for the sake of stability and consolidation of Neotropical ornithology and birding.

Some remarkable findings

Literally thousands of records have been reviewed and published by Neotropical committees (Trinidad and Tobago alone has reviewed 1,350 submissions to date), including some unexpected firsts for the country, region and sub-continent; bewildering rediscoveries; and first documentation for previously hypothetical species. This includes, for example, the first South American records of Common Greenshank *Tringa nebularia* (Claessens & CHG 2015) and Red-throated Pipit *Anthus cervinus* (Freile *et al.* 2013); the first Reddish Egret *Egretta rufescens* in Peru (CRAP 2012); the first Amethyst Woodstar *Calliphlox amethystina* for Trinidad and Tobago (Kenefick 2016); and the first Mangrove Rail *Rallus longirostris* for Costa Rica (Sandoval & Sánchez 2017).

Some intricate cases have been resolved and others are still being debated. As the 2016–17 Audouin's Gull *Ichthyaetus audouinii* in Trinidad and Tobago – the first for the Americas (Lallasingh 2018) – aptly illustrates, pretty much any Atlantic gull or even wader might show up. Meanwhile, austral migrants or tropical residents of mainland South American overshooting into Trinidad or Tobago are headaches for the Trinidad and Tobago Bird Status and Distribution Committee; examples include the ubiquitous genera *Elaenia* and *Myiarchus* (Kenefick 2012).

Some controversial issues

The exponential growth of the eBird initiative requires increasing collaboration between committees, site reviewers and administrators such that interesting records are not lost and are properly evaluated. There are over 4 million images, audio recordings and videos supporting eBird records, but the bulk of hundreds of millions of records are nevertheless undocumented. Likewise, WikiAves (Brazil) hosts a rapidly growing rich media database with nearly 2.3 million photos uploaded by May 2018. It also has fairly consistent internal peer-review and measures in place to prevent permanent loss of voucher images. Interesting records posted to social media and the now seldom-used list-servers may also warrant committee scrutiny and publication; otherwise, there is a higher chance that these data will disappear in the *mare magnum* of the Internet.

Christmas Bird Counts (CBC) pose another big challenge. With several counts in the Neotropics now competing to be the richest in the world, the amount of undocumented records of 'rare' species or unreliable records of others may become an issue. Ideally, and resource permitting, committees need to monitor CBC data as well, in order to ensure that datasets are robust and 'rarities' adequately documented (Dunn *et al.* 2005). A

8 Bar-tailed Godwit *Limosa lapponica*, Kourou, French Guiana, February 2010 (Jean-Pierre Policard). The second record for French Guiana.

9 Vermiculated ('Roraiman') Screech Owl *Megascops guatemalae roraimae*, Montagne de Kaw, Régina, French Guiana, December 2010 (Jean-Luc Sibille). First reported in French Guiana during 2009; now known to be a rare resident.

similar approach works for the recently established Global Big Day and for other big birding initiatives (Seeholzer *et al*. 2015).

Committees are entirely dependent on the voluntary work of members and face considerable time and funding constraints, so prioritising their responsibilities is a must. Sharing experiences and advice between Neotropical committees is desirable, and steps towards this goal were taken in a symposium held during the last Neotropical Ornithology Congress, in Manaus, Brazil, in July 2015. There is yet to be an agreement, though, on the adoption of common rules and procedures, as has taken place in Europe (AERC 2016). Some relevant issues that can be agreed upon between Neotropical committees include the relative importance placed on different types of documentation (specimen, video, photo, audio-recording and telemetry track; e.g. Carlos *et al*. 2010), and how to handle the likelihood of escaped birds (with several dozen exotic species being traded as pets in the region) and ship-assisted arrivals as sources of rarities.

Deciding on common rules about whether to consider first national records without voucher evidence is something committees might want to agree on, but this discussion might persist for years. Likewise, debating which taxonomy to follow might last forever. If committee members have differing criteria, a common taxonomy for all Neotropical committees seems to be an improbable distant daydream (Garnett & Christidis 2017). Stability and meticulousness pushes some to prefer conservative taxonomies, speedier decision needs pushes others to prefer more liberal approaches. For Central American and Caribbean countries, an additional matter is their mixture of Nearctic and Neotropic avifaunas and taxonomists. Brazilians handle taxonomy themselves. Should other committees follow their steps? Should committees stick to one or another taxonomy treaty religiously? Committees might also think about keeping track of abundance/status changes in order to appreciate, to some extent, trends in species populations. Lastly, it is important to have national borders (and territorial seas) well defined – an obvious but usually overlooked task (Straube 2003).

Luckily for readers, we will not get into these discussions any further in the present article! We will briefly plunge into another quarrelsome issue, though…

A note about rejections

Digital photographs and audio-recordings are the most popular method to document bird records, resulting in a high proportion of accepted records (e.g. more than 90% in French Guiana and Trinidad & Tobago). The near-ubiquitous use of high-quality cameras and audio-recording devices makes obtaining documentary evidence for rarities increasingly the norm.

However, providing hard evidence of a record does not guarantee its acceptance. Identification pitfalls are commoner than we realise (Sibley 2002). For example, records committees have discovered that misidentified museum specimens or photographs supported subsequent records (Nilsson *et al*. 2014), and have even come across a few actual frauds. Lack of convincing evidence, insufficient or deficient descriptions and plain identification mistakes result in rejections of some submitted records. Often, observers are invited to provide further details and re-submit their records when a rejection does not necessarily mean an identification error. But this seldom happens. Some observers feel offended by a rejection. Few

observers (few people, in fact) are happy when someone else proves, or even suggests, that they are wrong.

Acknowledging that uncertainties are part of the birding game is crucial. Even accepted records can be re-examined and rejected in the light of new identification tools or a better knowledge of a species. Of course, committees do not seek to offend anyone. Reviewing and validating records is their job, and they should be professional in their decision-making process. Records submitted by committee members are often rejected as well! Such scrutiny can be retrospective. Some committees have invalidated previous published records in their process of revising their country's bird list, and removed species from the official checklist (CRAP 2012, Nilsson *et al.* 2014).

Significant records in your notebooks?

Many observers now upload their observations online (see page 71). However, this unprecedented accumulation of data spread over various websites risks information being lost. As more Neotropical records committees are formed it is time to start digging out your old notebooks, and to share us any unpublished noteworthy observations and associated digital vouchers ('rich media = rich data'; Davies *et al.* 2016) you find. Visit our websites, explore country lists of 'rarities', have a look at reporting forms and contact us. Your data may help to fill gaps in our knowledge of species distributions, migration phenology and diversity patterns in the Neotropics. Of course, records even of common species are significant, worth being communicated to national committees, uploaded to online databases like eBird, or formally published.

If you are a Neotropical resident, encourage the ornithological community in your home country to create a records committee. We all will be happy to share our 'know-how'. If you are fond of publishing data yourself, go ahead. A number of regional and international journals are good repositories of this information, including the Neotropical Bird Club's *Cotinga*, the *Bulletin of the British Ornithologists' Club*, *Revista Brasileira de Ornitologia*, *Check List* and *Ornitología Neotropical*, to name just a few.

COMMITTEE WEBSITES

Brazil cbro.org.br

Costa Rica avesdecostarica.org; uniondeornitologos.com

Ecuador ceroecuador.wordpress.com

French Guiana gepog.pagesperso-orange.fr/CHG

Peru www.corbidi.org/crap.html

Trinidad & Tobago rbc.ttfnc.org/index.shtml

Venezuela uvo.ciens.ucv.ve

10 Hudson's Black Tyrant *Knipolegus hudsoni*, near La Cachuela, Puerto Maldonado, Madre de Dios, Peru, May 2017 (Andy Walker/Birding Ecotours). There have been several previous records of this species in Peru, but this is the first submitted to the national records committee for voting. At the time of writing, no decision has been made, but, if this record is accepted, the species will probably be considered a rare austral migrant to the country.

ACKNOWLEDGEMENTS

Discussions in a symposium about bird record committees during the X Neotropical Ornithology Congress (Manaus, July 2015) triggered this article. Thanks to all participants, particularly to Guy Kirwan and Nacho Areta for their insights. Thanks to fellow members of our countries' committees for discussions, revisions and agreements, and to the institutions that supported the participation of committees' members in the Congress. Committees would not be able to work without the contributions of all birders who share their records. We sincerely thank them all for their confidence. The following kindly allowed their photographs to be used in this article: Roger Ahlman (pbase.com/ahlman), Dušan Brinkhuizen (sapayoa.com), Michel Giraud-Audine, Roland Jantot, Kévin Pineau, Jean-Pierre Policard, Jean-Luc Sibille, Olivier Tostain and Andy Walker (Birding Ecotours).

11 General features of South American bird records committees. All committees listed maintain the country's bird list. All committees except those of Brazil and Venezuela produce annual reports. All except Venezuela produce a peer-reviewed report (and Venezuela expects to do so).

Country	Name	Created	Members	Which species	Voting (U = unanimous; M = majority)
Brazil	CBRO	1999	23	Rarities, new records	U
Costa Rica	Unión de Ornitólogos & AOCR	2010/2002	2-5	New records	U
Ecuador	CERO	2011	8–9	Rarities, new records, range extensions	New country: U; others: M
French Guiana	CHG	2005	6–8	Rarities, new records	New country: U; others: M
Peru	CRAP	2008	9–11	First and second country records, first documented records	M
Trinidad and Tobago	TTBSDC	1995	6	First country records, first documented records, rarities, new island records	New country/island: U others: M
Venezuela	CRAV	2010	5	Country and state level rarities, new records, range extensions	U

REFERENCES

AERC (2016) *Guidelines. Association of European Records and Rarities Committees.* Accessed from www.aerc.eu/guidelines.html on 30 January 2016.

Balchin, C. S. (2007) Back from the dead! A potpourri of recent rediscoveries from the Neotropics. *Neotrop. Birding* 2: 4–11.

Balchin, C. S., Calderón, D., Donegan, T. & Fisher, D. (2006) A potpourri of recently described species from the Neotropics. *Neotrop. Birding* 1: 24–37.

Barrowclough, G. F., Cracraft, J., Klicka, J. & Zink, R. M. (2016) How many kinds of birds are there and why does it matter? *PloS One* 11: p.e0166307.

British Ornithologists Union (1883) *A list of British birds*. London, UK: British Ornithologists Union.

Carlos, C. J., Straube, F. C. & Pacheco, J. F. (2010) Conceitos e definições sobre documentação de registros ornitológicos e critérios para a elaboração de listas de aves para os estados brasileiros. *Rev. Bras. Ornitol.* 18: 355–361.

Claessens, O. & Comité d'Homologation de Guyane (2015) Rare birds in French Guiana in 2008–2010. *Cotinga* 37: 66–78.

Comité de Registros de Aves Peruanas (2012) Reporte del Comité de Registros de Aves Peruanas (CRAP) del periodo 2010–2011. *Bol. Unión de Ornitól. del Perú* 7: 51–62.

Comité de Registros de Aves Peruanas (2016) Reporte del Comité de Registros de Aves Peruanas (CRAP) del periodo 2015. *Bol. Unión Ornitól. del Perú* 11: 71–81.

Davies, I., Sullivan, B. & Barry, J. (2016) Rich media = rich data: a new frontier for ornithology in the Neotropics and beyond. *Neotrop. Birding* 19: 28–32.

Dunn, E. H., Francis, C. M., Blancher, P. J., Drennan, S. R., Howe, M. A., Lepage, D., Robbins, C. S., Rosenberg, K. V., Sauer, J. R. & Smith, K. G. (2005) Enhancing the scientific value of the Christmas Bird Count. *Auk* 122: 338–346.

Freile, J. F., Ahlman, R., Brinkuizen, D. M., Greenfield, P. J., Solano-Ugalde, A., Navarrete, L. & Ridgely, R. S. (2013) Rare birds in Ecuador: first annual report of the Committee of Ecuadorian Records in Ornithology (CERO) *Avances en Ciencias e Ingenierías* 5: B24–B41.

Freile, J. F., Greeney, H. F. & Bonaccorso, E. (2014) Current Neotropical ornithology: research progress 1996–2011. *Condor: Ornithol. Appl.* 116: 84–96.

Freile, J. F., Brinkuizen, D. M., Greenfield, P. J., Lysinger, M., Navarrete, L., Nilsson, J., Ridgely, R. S., Solano-Ugalde, A., Ahlman, R. & Boyla, K. A. (2015–2017). *Lista oficial de las aves del Ecuador*. Comité Ecuatoriano de Registros Ornitológicos. Accessed from www.ceroecuador.wordpress.com on 1 September 2017.

Freile, J. F., Solano-Ugalde, A., Brinkhuizen, D. M., Greenfield, P. J., Lysinger, M., Nilsson, J., Navarrete, L. & Ridgely, R. S. (2017) Rare birds in Ecuador: third report of the Committee for Ecuadorian Records in Ornithology (CERO). *Rev. Ecuatoriana Ornitol.* 1: 8–27.

Garnett, S. T. & Christidis, L. (2017) Taxonomy anarchy hampers conservation. *Nature* 546: 25–27.

Kenefick, M. (2012) Report of the Trinidad and Tobago Rare Birds Committee: rare birds in 2008–10. *Cotinga* 34: 166–171.

Howell, S. N. G. & Webb, S. (1995) *A guide to birds of Mexico and northern Central America*. Oxford: Oxford University Press.

Kenefick, M. (2016) Thirteenth report of the Trinidad and Tobago Birds Status and Distribution Committee – records submitted during 2015. *Living World* 2016: 47–52.

Lallsingh, N. (2018) A vagrant from the Old World: a mysterious gull in Trinidad. *Neotrop. Birding* 22: 54–58.

Lees, A. C. & Martin, R. W. (2015) Exposing hidden endemism in a Neotropical forest raptor using citizen science. *Ibis* 157: 103–114.

Lees, A. C., Naka, L. N., Aleixo, A., Cohn-Haft, M., Piacentini, V. Q., Santos, M. P. D. & Silveira, L. F. (2014) Conducting rigorous avian inventories: Amazonian case studies and a roadmap for improvement. *Rev. Brasil. Ornitol.* 22: 107–120.

Meyer de Schauensee, R. (1966) *The species of birds of South America with their distribution*. Philadelphia, PA: Academy of Natural Sciences of Philadelphia.

Obando-Calderón, G. (2012) Cronología – 152 años construyendo una lista de la avifauna de Costa Rica. *Zeledonia* 16: 48–69.

Nilsson, J., Freile, J. F., Ahlman, R., Brinkhuizen, D. M., Greenfield, P. J. & Solano-Ugalde, A. (2014) Rare birds in Ecuador: second annual report of the Committee for Ecuadorian Records in Ornithology (CERO). *Avances en Ciencias e Ingenierías* 6: B38–B50.

Piacentini, V. Q., Aleixo, A., Agne, C. E., Maurício, G. N., Pacheco, J. F., Bravo, G. A., Brito, G. R., Naka, L. N., Olmos, F., Posso, S., Silveira, L. F., Betini, G. S., Carrano, E., Franz, I., Lees, A. C., Lima, L. M., Pioli, D., Schunck, F., Amaral, F. R., Bencke, G. A., Cohn-Haft, M., Figueiredo, L. F. A., Straube, F. C. & Cesari, E. (2015) Annotated checklist of the birds of Brazil by the Brazilian Ornithological Records Committee / Lista comentada das aves do Brasil pelo Comitê Brasileiro de Registros Ornitológicos. *Rev. Brasil. Ornitol.* 23: 91–298.

Raffaele, H. A., Wiley, J., Garrido, O. H., Keith, A. & Raffaele, J. I. (1998) *Birds of the West Indies*. Princeton, NJ: Princeton University Press.

Remsen, J. V., Areta, J. I., Cadena, C. D., Jaramillo, A., Nores, M., Pacheco, J. F., Robbins, M. B., Schulenberg, T. S., Stiles, F. G., Stotz, D. F. & Zimmer, K. J. (2016). *A classification of the bird species of South America. American Ornithologists' Union*. Accessed from www.museum.lsu.edu/~Remsen/SACCBaseline.html on 13 January 2016.

Renaudier, A., Claessens, O. & Ingels, J. (2011) Eurasian Kestrel *Falco tinnunculus* in South America: an overview. *Alauda* 79: 313–316.

Ridgely, R. S. & Tudor, G. (2009) *Birds of South America. Passerines*. London, UK: Helm Field Guides.

Sandoval, L. & Sánchez, C. (2017) *Lista de aves de Costa Rica: vigésima quinta actualización*. San José: Unión de Ornitólogos de Costa Rica. Accessed from http://uniondeornitologos.com/wp-content/uploads/2017/07/Lista-de-Aves-de-Costa-Rica-XXV.pdf on 1 September 2017.

Seeholzer, G., Harvey, M., Lane, D. & Angulo-Pratolongo, F. (2015) LSU Peru big day 2014. *Neotrop. Birding* 16: 33–42.

Sibley, D. A. (2002) *Birding basics*. New York: Alfred Knopf Inc.

Straube, F.C. (2003) Bases legais para a identificação dos limites territoriais do Brasil na fronteira com o Paraguai e suas implicações para a consideração de registro ornitológicos. *Ararajuba* 11: 131–145.

JUAN F. FREILE & ALEJANDRO SOLANO-UGALDE
Comité Ecuatoriano de Registros Ornitológicos.
E-mail: jfreileo@yahoo.com; cero.ecuador@gmail.com

MARTYN KENEFICK
Trinidad and Tobago Bird Status and Distribution Committee, 36 Newalloville Ave, San Juan, Trinidad.

ALEXANDER LEES
Division of Biology & Conservation Ecology, School of Science & the Environment, Manchester Metropolitan University, UK.

VÍTOR Q. DE PIACENTINI
Comitê Brasileiro de Registros Ornitológicos & Ornithology Department, Academy of Natural Sciences of Drexel University, Philadelphia, USA.

LUIS SANDOVAL
Escuela de Biología, Universidad de Costa Rica, CP-11501-2060, San Pedro, San José, Costa Rica.

THOMAS VALQUI
División de Ornitología, CORBIDI, Santa Rita 105 of 02, Lima, Peru.

FERNANDO ANGULO-PRATOLONGO
División de Ornitología, CORBIDI, Álamos 390, Chiclayo, Peru.

JHONATHAN MIRANDA
Provita, Av. Rómulo Gallegos c/Av. 1 Santa Eduvigis, Edif. Pascal, Torre A, Piso 17, Ofic. 171-A, Caracas, Venezuela.

OLIVIER CLAESSENS
Comité d'Homologation de Guyane - Clos de Bénédicte, 2510 route de Montabo, F-97300 Cayenne, France.

CHRISTOPHER J. SHARPE
Provita & CRAV-UVO, Caracas, Venezuela; and Rocklands, Norfolk, UK.