

>> FEATURE NEW CLASSIFICATION OF SOUTH AMERICAN BIRDS

The South American Classification Committee of the American Ornithologists' Union: a new classification of the birds of South America

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Until recently, the only official list of bird species known for South America was that in Meyer de Schauensee's classic *A Guide to the Birds of South America*⁴. By the 1990s, this list was, naturally, outdated with respect to new research on the relationships of South American birds, the discovery of new species, and distributional records of species new to the continent. The absence of a generally accepted classification impeded communication among ornithologists and birders. Blake's *Manual of Neotropical Birds*² began and ended in 1977 with Vol. 1 (through Laridae). Ridgely and Tudor's *Birds of South America*⁵ series started in 1989 and still has two volumes to go, and by the time Vol. 4 appears, Vol. 1 will require extensive revision. Several worldwide classifications are in print, but they differ substantially among themselves. For the birder living in or visiting the Neotropics, the problem was which bird list to use.

To attempt to produce a standard list and classification for South America, in 1997 I sent a proposal to the American Ornithologists' Union to establish a South American counterpart of its well-known Committee on Classification and Nomenclature, usually just called the "AOU Check-list Committee" which covers the Western Hemisphere from Panama and the Caribbean north. By 1999, the proposal for the new committee was approved, the committee constituted and named the South American Classification Committee (SACC), and by 2000, its first classification was available online. The current URL is <http://www.museum.lsu.edu/~Remsen/SACCBaseline.html>.

SACC's mission is to provide a standard classification of the birds of South America and

to modify that classification as newer research is published on phylogeny and species limits. A "classification" consists of a list of species, organized by the standard units of biological taxonomy, namely order, family, genus, and species, in a linear sequence that reflects phylogenetic relationships (within the constraints of a linear list). We selected a pre-publication version of Dickinson's *The Howard and Moore Complete Checklist of the Birds of the World*³ as the starting point for the classification, and we then developed a formal system of proposals for making changes from this baseline.

A major component of the SACC classification is its "Notes" section, which attempts through citation of technical literature to reconstruct the history of classification of a taxon, to provide the rationale for the current classification, and to refer to alternative treatments. Consequently, the literature cited section of roughly 1,500 references provides what we hope will be a complete bibliography on the classification of South American birds. An advantage of an online version is that relevant literature is incorporated as it appears in print, often within 24 hours. We also plan to incorporate the subspecies level of taxonomy into the classification eventually, as well as provide distribution statements, citations to type descriptions, and habitat statements (thus, similar to the AOU's *Check-list of North American Birds*¹).

In addition to the online version, a print version is also planned, perhaps as early as 2008. Subsequent changes to the list will be updated annually through "Supplements" in *The Auk* (parallel to AOU Checklist supplements).

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A unique feature of the SACC system is that the rationale for all changes to the classification is available online, including votes and comments from each of the 10 SACC members as well as those received from people outside the SACC. In fact, we actively solicit not only opinions but also proposals for changes in classification from the ornithological community in general. A visit to our Proposal Roster web-page (<http://www.museum.lsu.edu/~remsen/SACCproproster.html>) will show that we regularly receive comments and proposals from the Neotropical ornithological community at large. We encourage everyone to participate.

A consequence of our approach is that the process that produces a classification becomes transparent rather than mysterious. Therefore, the frequent question of "I wonder why 'they' did that?" is now answerable in detail to anyone with internet access, complete with votes (two-thirds majority required to make a change to status quo), comments (the reasoning behind the votes), and citations to the published research that prompted the change. Although SACC prides itself on rapid inclusion of recent research into its classification, it must also be conservative by nature to avoid premature or incorrect changes. In addition to requiring that changes be based on published, explicit rationale (versus unpublished data or opinions only), SACC carefully evaluates the published papers that prompted the proposal to see how well any proposed change is supported by the data and analyses. In other words, just because something is published does not mean that it will be accepted.

However, a chronic source of frustration for us is that to adhere to our rule of "no change without published data" means that many changes that we would like to make must be delayed. Our field experience makes it clear that many South American taxa currently treated as subspecies differ so greatly in vocalisations that they should be ranked as separate species to be consistent with species limits in that genus or family. Numerous published analyses by Mort and Phyllis Isler, Bret Whitney, Kevin Zimmer, and others show that many subspecies of birds in South America differ in vocalisations from their relatives to a degree typical of species-level differences. Intensifying the frustration is that many of those subspecies were indeed formerly ranked as separate species but were uncritically "lumped" with other species during the "Peters Check-list era" from the 1930s through the 1960s, when those not familiar with tropical birds in the field generally did not

appreciate that dramatic vocal differences were not mirrored by comparable levels of differences in plumage or morphology. For better or worse, we have decided to maintain these status quo classifications even when certainly "wrong," until appropriate data are published. A positive by-product of that conservative stance is that it encourages and instigates proper analysis and publication of those data.

A dilemma for SACC is that no matter what classification was accepted as its starting point, much of any currently accepted classification of birds is based largely on historical momentum and tradition rather than published research. In other words, the starting point boundaries, particularly for genera and species, have been inherited from two centuries of hand-me-down classifications for which the original rationale is often not published, weakly documented, or incorrectly formulated. Fortunately, interest in the classification of birds revived dramatically in the past two decades by the availability of techniques that assess genetic differences directly (now mainly DNA sequencing) and also by universal recognition of the importance of phylogenetic relationships in studying all aspects of comparative biology. Thus, those older, inherited classifications are being re-evaluated rapidly and thoroughly. Within the next decade, massive projects such as the Early Bird project (which hopes to produce a complete "tree" to describe the branching pattern of the evolution of birds; see http://www.fieldmuseum.org/research_collections/zoology/zoo_sites/early_bird/index.html) will generate DNA sequence data that will allow us to produce a classification of birds grounded entirely in gene-based relationships (rather than assessments of genetic relationships through less direct measures such as morphology and plumage).

At the species level, however, phenotypic characters relevant to gene flow, such as voices and displays, continue to play a critical role. Although genetic data supply our best estimate of which birds are most closely related to each other, they do not, contrary to some published misconceptions, allow us to determine unambiguously whether two populations are separate species. Not only does the degree of genetic difference between reproductively isolated species vary wildly (including virtually no detectable genetic difference in some cases), but also no conceptually defensible or empirically definable degree of genetic difference exists that could be used to assay whether two populations should be considered species. Perhaps the easiest

way to grasp this is to note that genetic differences among human populations differ dramatically, yet we all remain classified as *Homo sapiens*. Reducing a complex topic to a few sentences is unfair, but, nevertheless, a detailed discussion is beyond the scope of this article.

With the recent burst of interest in birding South America, species new to the continent are now found at an accelerating pace. SACC also votes on whether to accept these newly recorded species onto the main list. Our policy is that only those species supported by tangible, independently verifiable evidence, namely images, tape recordings, or specimens, are placed on the main list, with the rest placed on a Hypothetical list. The explosion in use of digital photography and videography means that very few recent records do not meet those standards.

Another mission for SACC is to provide a standardised list of English names. The SACC stance is that unless changes are required by changes in species limits, stability is the goal. Although scientific names are destined to change through time in response to new information on birds' relationships, English names have the potential to remain unchanged, and this stability improves communication among those who use English names. The problem is that many English names currently in use are inaccurate and misleading to varying degrees. Thus, we face a dilemma: repairing these names undermines stability. Here, SACC members differ in their philosophy, with some, such as myself, placing greater importance on stability, whereas others favour accuracy. In general, a proposal for renaming a species based solely on improving the name with a novel name stands virtually no chance of passing, but proposals advocating use of a name already in use in some literature have varying degrees of success. Because of the

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dramatic regional and cultural differences in common names of birds in Spanish, we have no plans to produce a standardized list of Spanish names. We do plan, however, to produce a standardized list of Portuguese and French common names.

SACC membership consists of those whose interest in classification of South American birds was previously obvious from their publication records. Current membership is a mix of academic, research-oriented ornithologists and book authors who also have advanced degrees in biology. It is also a mix of North Americans whose fieldwork centres in South America and resident South Americans. With the boom in talented young researchers from South America, my personal goal is for SACC membership to become completely South American.

We encourage Neotropical birders to visit the SACC web site (<http://www.museum.lsu.edu/~Remsen/SACCBaseline.html>) to see at first-hand the process that produces a classification. The current version has benefited greatly from the input of many people from outside the SACC membership—see the Acknowledgments at the end of the main list. We welcome your input on all aspects of the SACC process.

REFERENCES

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