



LUMPING & SPLITTING

The American Ornithological Society's North American Classification Committee: What it is, how it works, what it does

By Jon L. Dunn and Kimball L. Garrett

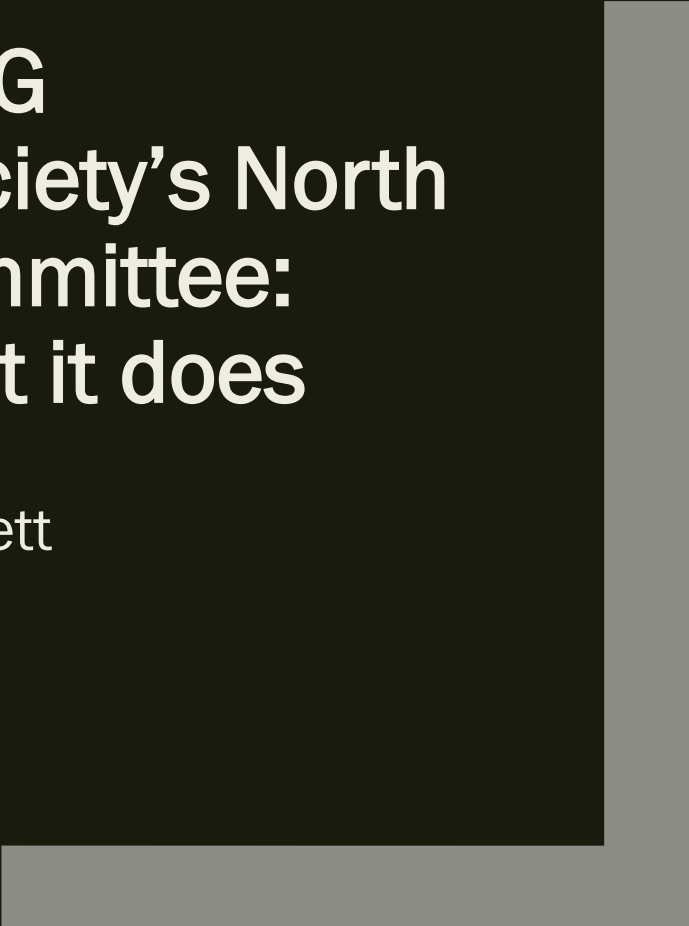
*2020-A-1: Change the English name of Olive Warbler *Peucedramus taeniatus* to *Ocotero**

2020-A-2: Change the generic classification of the Trochilini (part 1)

2020-A-3: Change the generic classification of the Trochilini (part 2)

*2020-A-4: Split Garnet-throated Hummingbird *Lamprolaima rhami**

*2020-A-5: Recognize *Amazilia alfaroana* as a species not of hybrid origin, thus moving it from Appendix 2...*



Preamble

- JLD: Introduction and his history with the NACC
- KLG: Introduction as a constituent/user of NACC's work



Species Lists

- Birders are infatuated with species lists, and lists need taxonomic authorities.
- For North America this has long been the American Ornithologists' Union's (now American Ornithological Society's) Check-list of North American Birds.
- And while stability in lists generated by taxonomic authorities is desirable, birders also know that things change regularly – from species-level taxonomy to higher level groupings, species sequences, and English names.
- And not only do bird names change over time, but so too do the names of organizations, committees, and journals.

Taxonomy & Nomenclature

- Tonight we'll explore here how these changes come about.
- The taxonomy and nomenclature of North American birds has long been determined by a committee of the former American Ornithologists' Union (now the American Ornithological Society or AOS) called the Committee on Classification and Nomenclature
- The committee name is now often abbreviated as the NACC for "North American Classification Committee."

Some Important Themes

- Nomenclatural stability
- Classifications that reflect phylogenetic relationships
- Classification hierarchy: Order, Family, Subfamily, Genus, Species, Subspecies
- Monotypic and Polytypic species
- Binomials and trinomials

The Web Sites

- Loads of information about the committees, current and past proposals, the current Check-lists of North American and South American Birds

- North American Classification Committee:

<https://americanornithology.org/nacc/>

- South American Classification Committee:

<https://www.museum.lsu.edu/~Remsen/SACCBaseline.htm>

NACC Membership

- Historically, a white male committee (no females until 2000; three since then -- Carla Cicero, Pam Rasmussen, and now also Blanca Hernandez-Baños)
- The members are usually professional ornithologists, often from the faculties of universities.
- Jon Dunn was brought in in 2000 to organize distributional information, etc. (also a voting member)
- Co-Chairs: R. Terry Chesser and Carla Cicero
- Members: Shawn M. Billerman, Kevin J. Burns, Jon L. Dunn, Blanca E. Hernández-Baños, Andrew W. Kratter, Irby J. Lovette, Nicholas A. Mason, Pamela C. Rasmussen, J. V. Remsen Jr., Douglas F. Stotz, Kevin Winker

North American Classification Committee - NACC

- The Committee has published seven editions of the Check-list of North American Birds (1886, 1895, 1910, 1931, 1957, 1982, and 1998), along with 61 Supplements.
- The Supplements, appearing in the July issue of *The Auk* (to be renamed in 2021 as, simply, *Ornithology*) were published annually from 1944 to 1956, but then none appeared until 1973.
- Starting around 2000, Supplements have been published regularly (biannual, later annual) in July

The 1973 Supplement

- That year, in addition to the Thayer's Gull being split (now finally treated as a subspecies of Iceland Gull), the Alder Flycatcher (*Empidonax alnorum*) was split from the Traill's Flycatcher complex, the other species being called the Willow Flycatcher (*Empidonax traillii*).

Thayer's Gull

- No Supplements published between 1957 and 1973
- One might surmise that had the annual Supplements continued after 1956, “Thayer’s Gull” would have been considered a subspecies of Iceland Gull (*Larus glaucoides*) after the publication of Macpherson (1961), rather than continuing to be treated as a subspecies of Herring Gull (*Larus argentatus*) until 1973 whereupon it was treated as a separate species after Smith (1966).



Thayer's Gull 22 Dec 2003 Marin Co., CA

The Big Lump

- Other than those two splits of cryptic species, 1973's Supplement will long be known as the "Big Lump," with some dozen species being merged.



Thayer's Gull 17 Feb 2013 Riverside Co., CA

The NACC Voting Process

- The decisions announced in the Supplements are based on motions that are circulated in three or four batches during the year.
- These are assembled by the Chair and circulated. Voting typically takes place from October through March.
- At least two-thirds of the committee must approve any change to the status quo. At present the Committee is composed of twelve members, thus eight affirmative votes are required. The Chair often does not vote, unless the vote is close.

The NACC Voting Process

- The votes of NACC members are shared during the voting process, and sometimes votes change based on the comments from other members. Motions based primarily on published peer-reviewed papers
- Motions from NACC members, but more recently many authored by others
- Batches are circulated from fall through spring (around March)
- 2/3 votes needed to pass – votes can be changed based on comments, which are shared among the members
- Drafting of supplement report starts in April - many drafts before final version is accepted for publication in June for July AOS “Ornithology”
- First 2021 batch circulate sometime in fall 2020

The NACC Voting Process

- Prior to the Supplement the motions are put on-line, batch by batch. After the Supplement is published, the actual comments and votes, but without attribution by name, are also put on-line. If a motion does not pass, the failed motions are briefly listed at the end of the report.
- New published evidence may well result in a reconsideration.

South America

- The AOS also sponsors a South American Classification Committee (SACC) which was established in 1998; there is some overlap in membership of the two committees.
- <https://www.museum.lsu.edu/~Remsen/SACCBaseline.htm>
- The NACC and SACC work closely with each other and agree on treatments, but there can be a time lag. This usually involves the time it takes for the one committee to consider the motion and then after a decision is reached for the other committee to reformulate a new motion to consider.

Distributional Records

- Matters involving new distributional records for North America or the United States are vetted first by state and provincial committees, where they exist, or by Middle American national committees.
- For species new to the ABA area, the NACC waits for review by the American Birding Association's Checklist Committee (ABA-CLC; Peter Pyle, Chair); ABA-CLC usually follows state committee decisions
- In most cases the NACC follows the ABA-CLC on issues of identification and origin, while the ABA-CLC follows the NACC on taxonomy and nomenclature.
- There are only a few instances where ABA and AOS have reached different decisions.
- The NACC is responsible for nomenclature.

English Names

- English names (a list of French names is maintained as well) often provoke the most vigorous debates within the Committee.
- In recent years there has been an explosion of debate about changing all English eponymous names, over 140 in the AOS area, close to 100 in the ABA area. The debate on this continues, but we feel that this is not the place to further elucidate this controversial and ever-changing debate.
- Mostly proposed eponym changes have been put on hold for a while
- e.g. why “Thick-billed Longspur”
- Tanagers – should ours really be called “Tanagers”?



Thick-billed Longspur (*Rhynchophanes mccownii*) 17 June 1992
Pawnee Grasslands, CO

English Names

- The Committee, and, we believe, the birding community as a whole, gives strong deference to nomenclatural stability. The current English names may not be the best names (e.g. Ring-necked Duck, Green Heron, etc.), but they have a long history of usage, and the few English names that have been changed, for one reason or another, are usually not greeted with much support.

Species Concepts, Sequences, etc.

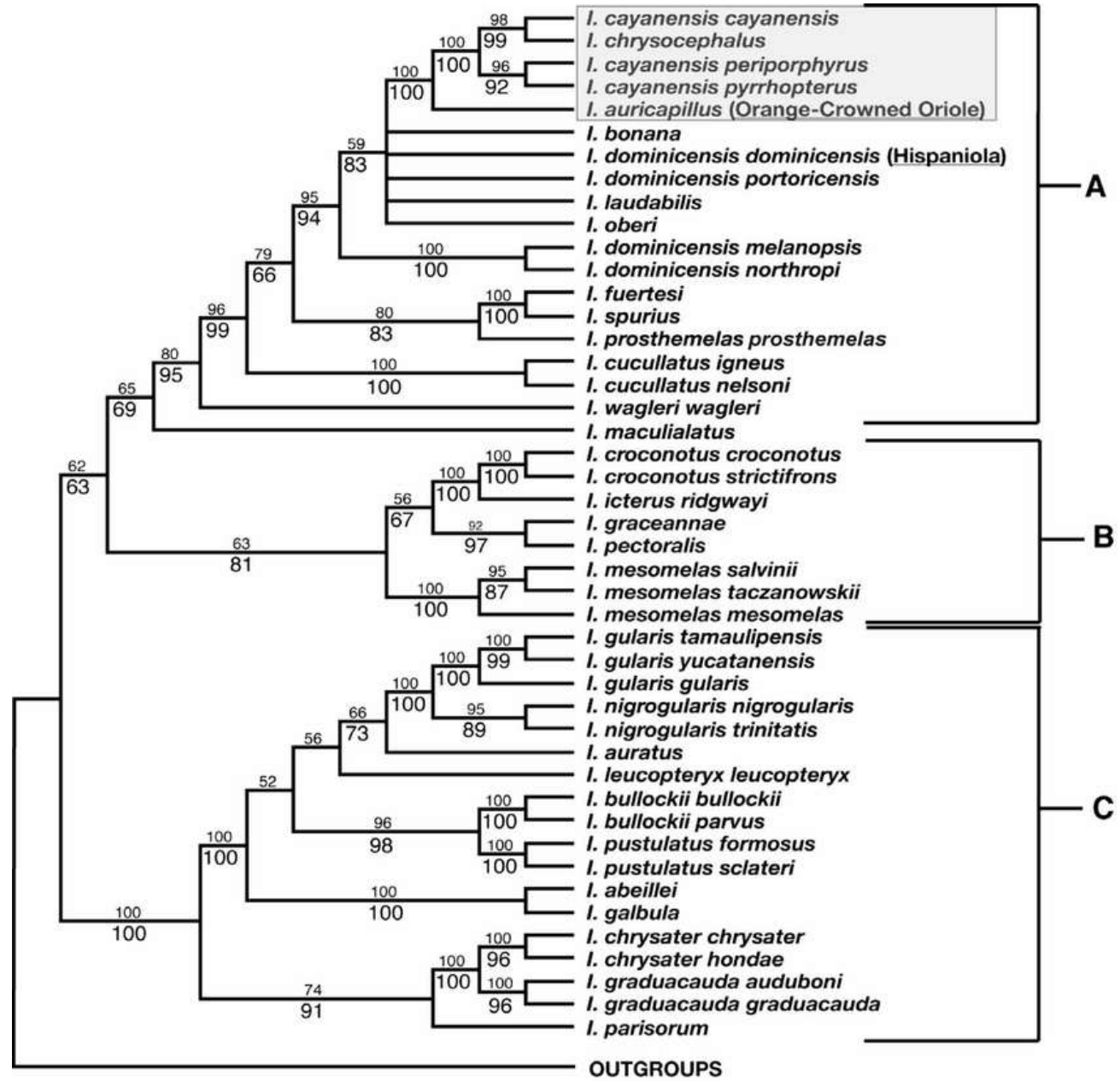
- Maintaining a taxonomic list requires constant review of published studies, but also a coherent philosophy on species concepts, algorithms for determining the linear sequence of taxa, and consistency in defining higher level groups. All of these processes have seen refinement over the last several decades.
- The NACC explicitly adheres to the Biological Species Concept (BSC); a detailed explanation can be found in the introduction to the 7th edition (1998) on pages xiv to xv. In other words, the Committee puts weight on essential reproductive isolation and the shape and extent of zones of hybridization, rather than relying exclusively on diagnosability.

Species Concepts

- Application of the BSC has varied – witness the “Big Lump” supplement of 1973 (remember the “Northern Oriole?”) in which taxa which formed hybrid zones tended to be lumped; this approach has shifted in ensuing decades, particularly as emerging molecular data frequently showed that hybrid zones didn’t even involve sister species.
- By the 7th edition in 1998 many of these “lumps” were reversed. Since tests of reproductive isolation are not possible with allopatric (geographically non-overlapping) populations, decisions on species status of allopatric taxa have become more methodical, incorporating vocal and other behavioral information in addition to standard morphological differences.

Molecular Systematics

- The NACC is increasingly charged with interpreting an explosion of molecular studies – nearly every North American avian taxon has by now been subjected to multiple molecular analyses, with a forest of phylogenetic trees published annually.
- Early molecular studies such as protein electrophoresis and DNA-DNA hybridization, groundbreaking at the time but primitive in light of current technologies, began to shed light on phylogenetic relationships in the 1970s and 1980s.
- The field has since expanded to the point where entire genomes are being sequenced and molecular systematists can pinpoint portions of the genome that are maximally informative at varying scales from the early divergence of major avian groups right down to the species and population levels.



Molecular Systematics

- Making species lists from phylogenetic trees is not simple. Lots of conventions, and good to have strong bootstrap support at nodes in the tree.
- The trick, of course, is how to statistically massage and interpret the reams of molecular data we can now generate, and how to incorporate those data into a “total evidence” taxonomic decision-making strategy that also includes datasets on morphology, vocalizations, behavior, ecological niches, and the fossil record.

Subspecies

- Adhering to the BSC means that the NACC is a proponent of the subspecies concept.
- “The last edition of the Check-list to include subspecies was published in 1957 (5th edition). The 4th edition, 1931, actually included English names for the subspecies. For reasons of expediency, the Committee reluctantly excluded treatment of subspecies in both the 6th and 7th editions, although it continues to endorse the biological reality and practical utility of subspecies as a taxonomic rank. Subspecies that reflect biological diversity play an important role in flagging the attention of evolutionary, behavioral, ecological, and conservation biologists.”
- “Although a complete revision of North American avian subspecies has not been done, we refer readers to Avibase, Clements, and other checklists, as well as to [Birds of North America](#), for more up-to-date treatments of subspecies. The Birds of North America project is systematically revising subspecies accounts for North American birds.”
- NACC sometimes asked by USFWS to weigh in on subspecies validity.

Case Histories

- As one example, we note that the lumping of Baltimore (*Icterus galbula*) and Bullock's (*I. bullockii*) orioles was based on frequent hybridization in the central Great Plains. A reconsideration of the issue a few decades later led to a reversal of that decision. The hybrid zone had spread west, and genetic research later revealed that Bullock's and Baltimore weren't even sister species. Needless to say the birding public did not welcome the English name for the combined species pair ("Northern Oriole"), and this included baseball fans and an entire mid-Atlantic city! Uniforms and hats were not changed to accommodate the NACC.

Case Histories

- Juncos
- Mexican Duck
- Tule Goose
- Townsend's Storm-Petrel
- Red-naped/Red-breasted/Yellow-bellied Sapsuckers
- "Western" Flycatcher
- Scrub-jays
- bushtits
- *japonicus* American Pipit
- Red Crossbill, White-winged Crossbill
- Evening Grosbeak
- Yellow-rumped Warbler



Dark-eyed Junco (*dorsalis*) Los Angeles Co., CA 6 Nov. 2020



Dark-eyed Junco (*caniceps*) 21 Jan 2019 Pima Co., Az



Yellow-eyed Junco 07 June 2015, Cochise Co., AZ



Dark-eyed Junco (*pink-sided*) 1 Jan 2002 Portal, Az



Mallard m 0050 6Nov05 Irvine, CA



Mallard female 09 May 2020 Ventura, CA



Mexican Duck female 24 May 2020 Wilcox, AZ



Mottled Duck 19 April 1997 Loxahatchee, FL



Mexican Duck Furnace Creek Death Valley, CA 25 Dec 2016 (JLD)



Greater White-fronted Geese flt 21Dec 2011 Colusa NWR, CA



©Larry Sansone

Greater White-fronted Goose 1 Dec 2004 Los Angeles, CA



Greater White-fronted Goose Colusa NWR winter Ed Harper



Greater White-fronted Goose Colusa NWR winter Ed Harper



©Larry Sansone

Taiga/Tundra Bean-Goose 17 Nov 2010 Salton Sea, CA



Townsend's Storm-Petrel 12 July 2015, Santa Barbara Co. CA.



Pacific-slope Flycatcher 30 May16 Kern County, CA



Cordilleran Flycatcher 30 June 1989 AZ



Bushtit *P.m. plumbeus* jimmy kiy photo from web





Bushtit *Psaltriparus minimus* "coastal" 15 Jan 2015 Tuolumne Co., California Garry Hayes



©Larry Sansone

A.r. japonicus 12 Oct 2003 San Diego Co., CA



Red Crossbill 19 June 2018 Frazier Mtn, CA

©Larry Sansone

White-winged Crossbill *Loxia leucoptera leucoptera* Nov 2009 Connecticut Birding West Campus Yale





White-winged Crossbill *Loxia leucoptera bifasciata* 24 Jan 2012 Uppsala, Sweden

Evening Grosbeak 22 Feb 1997 Hailey ID





Yellow-rumped Warbler (Myrtle) 14 June 20018 Bristol, ME



Yellow-rumped Warbler ("Aududon's") 8 May 1999



Cayaya Birding
since 2003

Goldman's Warbler
photo taken by
© Allan Obertreiber
during a CAYAYA BIRDING tour

Red-breasted Sapsucker 30 Dec 2005 Los Angeles, CA
S.r. daggetti



Red-naped Sapsucker male 28 Nov92 Riverside
Co, CA



©Larry Sansone



“Great White Heron” 18 Apr 1997 Florida Keys



“Great White Heron” 18Apr97 Florida Keys

Acknowledgements

- Larry Sansone
- Dan Gibson
- Terry Chesser



References

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