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*On the cover:* Jen Brumfield created the lovely cover artwork for this issue. It depicts an array of species for which taxonomic fortunes have changed this year. *Birder’s Guide to Listing & Taxonomy* aims to explain these changes in straightforward language. From top: Buller’s Shearwater, Townsend’s Storm-Petrel, California Scrub-Jay, Woodhouse’s Scrub-Jay, Sandhill Crane, and “Caribbean Coot.” Colored pencil illustrations © Jen Brumfield
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The ABA is all about birders sharing the wonder and excitement of birding across North America and around the world. We are the voice and face and heart and soul of the birding community. Joining the ABA will make you a better birder. You joining the ABA will make birding better for all.

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Welcome to the fourth annual edition of Birder’s Guide to Listing & Taxonomy. I hope that, like me, you’ve come to look forward to this useful and entertaining survey of both the shape of the playing field and the state of play, whether you consider yourself a field ornithologist, a lister, a mixture of both, or neither in particular.

That’s one of the real strengths of birding—there are innumerable ways to approach it, to enjoy it, and to contribute to it. Birds offer us endless opportunities for contemplation, consideration, and recreation. They have something to offer each of us.

So however you identify birds—and however you self-identify as a birder—I trust that you’ll find much of interest here and in all the Birder’s Guides.

The Birder’s Guide series, which is free online to all at aba.org/birdersguide, is just one way the American Birding Association works to fulfill its mission to inspire all people to enjoy and protect wild birds. To those of you who support our work through membership and donations, my sincere thanks. And if you’re not an ABA member yet, I cordially invite you to consider joining at aba.org/join or by calling us at 800-850-2473.

Good birding,

Jeffrey A. Gordon
President, American Birding Association

Listing and taxonomy may not immediately seem related, but dive a bit deeper, and it soon becomes apparent. Of course, ABA Area listers depend on the American Ornithologists’ Union to maintain its checklist because they use its taxonomy as the scorecard for their listing endeavors. Alan Knue explains what evidence is weighed by the committee when deciding to make changes to the checklist, and he lists some possible future splits and lumps. Our annual “Check-list Redux” explains in simple terms all that's changed on the AOU Check-list this year.

You can use this information to update your list totals in ABAs Listing Central. Greg Neise tells us what’s new there in the “Listing Central Update”, and last year's top totals are found in the “Listing Snapshot”. Other listing articles in this issue include details on an impressive Big Day effort in Texas, a new world-record Big Day in Ecuador, and a strategy for seeing all of the world’s bird families with the least amount of travel.

Whether your passion is attending bird walks in a local park, competing in Big Days, or keeping up-to-date on the latest details on storm-petrel identification, I hope you will find something of interest in this issue. Please take a moment to let us know what you did and didn’t like, and what was missing. Even better, write something for us! And, finally, be sure to check in at aba.org/birdersguide, where you will find an expanded e-version of this issue and links to discussions about the articles you see here. We look forward to hearing from you!

Good birding,

Michael L. P. Retter
Editor, Birder’s Guide
Keith Barnes is a co-founder of Tropical Birding Tours and its sister photo-tour company, Capturing Nature. He has traveled the world, following his passion to find all the world’s bird families. With just four to go, he hopes to accomplish this soon. Keith wrote an article in the Sep./Oct. 2008 issue of Birding on a strategy for building a large world life list with limited time and money. It was, therefore, only natural that he would tackle the growing interest in plotting to see all the world’s bird families. Keith hails from South Africa but lives in spectacular Taiwan, where he regularly practices his pidgin-Mandarin on the polite locals.

Jen Brumfield eagerly combines her passions for extreme birding, field studies, outdoor education, and detailed scientific illustration into a truly “wild” career. Each year, she reaches thousands of children through outdoor education programming as a naturalist with Cleveland Metroparks and is an active rep with Leica’s Birding Optics Pro-staff team. Jen has authored and illustrated seven natural history field guides. Currently residing in Cleveland, Ohio, she runs multiple “pelagic” boat trips on Lake Erie each fall and is forever scouring the lakefront for rare county birds.

Alan Knue is a field ornithologist whose lifelong interest in birds led him to pursue bird studies in college, where he worked with several endangered species, including Spotted Owl, Marbled Murrelet, Piping Plover, and Bald Eagle. Alan continues to have a keen interest in bird evolution, classification, taxonomy, biogeography, and paleontology, and he has taught courses on these subjects through his local Audubon Society chapter. He currently is a director of the Washington Assistive Technology Act Program, which promotes technologies for persons with disabilities. Alan lives in Seattle, Washington.

Stuart Mackenzie has been exploring the natural world since the age of two, and birding adventures have taken him all over the world. He works as the Migration Program Manager at Bird Studies Canada, where his duties include managing the Motus Wildlife Tracking System and Long Point Bird Observatory. For the past decade, Stu has been conducting coordinating, and managing bird monitoring and research projects on a wide variety of species. He lives in Long Point, Ontario, with his loving and patient family...and the birds.

George L. Paul has been birding in the Neotropics since high school. After graduating from Yale Law School in 1982, he became a practicing litigation lawyer but abandoned neither his love of the natural world nor the joy of being a well-rounded naturalist. George’s books and articles on the law of digital evidence draw heavily on his understanding of complexity theory and ecosystem behavior. He lives in Phoenix, Arizona.

Michael L. P. Retter is the editor of Birder’s Guide magazine. A former full-time and now part-time birding tour leader (with BRANT), he has traveled extensively in the northern half of the Americas. Michael is the author of the upcoming ABA Field Guide to the Birds of Illinois, serves on the Indiana Bird Records Committee, and runs the continent’s informal LGBT birders club, GBNA. He lives and gardens in Fort Worth, Texas, where he currently spends much of his time writing an upcoming Princeton guide to the birds of Mexico, Guatemala, and Belize.

Sam Woods has been working as an international tour leader for Tropical Birding Tours for 10 years. In that time, he has traveled to all seven continents and is now missing only a handful of the world’s bird families. He likes nothing more than seeing a life bird species, or better still, a life bird family. Sam grew up in London but got hooked on tropical birding and moved to Ecuador.

Rick Wright is the Book Review Editor for Birding and The ABA Blog. Earlier this century, he served as editor of Winging It; he also coordinated the field trip program for the ABA’s 2009 conference in Xalapa, Mexico. Rick leads Birds and Art tours in Northern American and in Europe, and is a frequent lecturer and field trip leader at festivals and other birding events. He lives in northern New Jersey with his wife, Alison Beringer, and their chocolate lab, Gellert. You can read about their adventures at Rick’s blog, “Birding New Jersey”.

About the Contributors
2015: A Big Year

2015 saw more than a few birding records eclipsed. At the top of the list of lists, Oregon birder Noah Strycker set a World Big Year record, with 6,042 species of birds, surpassing the previous Big Year world record of 4,341 recorded by British birders Ruth Miller and Alan Davies in 2008 (bit.ly/1sCCHyU). California birder John Sterling set a record Golden State Big Year with an even 500 (bit.ly/1sCC48v).

In the Big Day category, Dušan Brinkhuizen, Rudy Gelis, Mitch Lysinger, and Tuomas Seimola set a new World Big Day record with 431 species on October 8 in Ecuador (bit.ly/1sCEkNb). On April 18, Christian Friis, John Brett, Yousif Attia, Stuart Mackenzie, and Ross Wood totaled an impressive 271 species in Texas (bit.ly/1sCEAM9). These are just some of the past year's highlights archived at ABA Listing Central (listing.aba.org). In addition, you will find an up-to-date version of the ABA Checklist, and ABA Checklist Committee reports, ABA Recording Rules, the ABA Birding Code of Ethics, reports and updates from the Recording Standards & Ethics Committee—and, of course, the complete life, year, month, and Big Day list totals from more than 2,000 ABA members.
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It’s a Family Affair
A Suggested Itinerary for Seeing All the

Attempting to see one member of each of the world’s bird families has become an increasingly popular pursuit among birders. Given that we share that aim, the two of us got together and designed what we believe is the most efficient strategy to pursue this goal.

Editor’s note: Generally, the scientific names for families (e.g., Vireonidae) are capitalized, while the English names for families (e.g., vireos) are not. In this article, however, the English names of families are capitalized for ease of recognition. The ampersand (&) is used only within the name of a family (e.g., Guans, Chachalacas, & Curassows).
There are 234 extant bird families recognized by the eBird/Clements checklist (2015, version 2015), which is the official taxonomy for world lists submitted to ABA’s Listing Central. The other major taxonomic authority, the IOC World Bird List (version 5.1, 2015), lists 238 families (for differences, see Appendix 1 in the expanded online edition). While these totals may appear daunting, increasing numbers of birders are managing to see them all. In reality, save for the considerable time and money required, finding a single member of each family is mostly straightforward. In general, where family totals or family names are mentioned below, we use the eBird/Clements taxonomy unless otherwise stated.

Family Feuds: How do world regions compare?
In descending order, the number of bird families supported by continental region are: Asia (125 Clements/124 IOC), Africa (122 Clements/126 IOC), Australasia (110 Clements/112 IOC), North America (103 Clements/IOC), South America (93 Clements/IOC), Europe (73 Clements/74 IOC), and Antarctica (7 Clements/IOC). Europe and Antarctica can be skipped entirely on this family listing mission; they hold nothing unique. This is fiscally fortunate, given that they are expensive to visit! However, the relative importance of these regions shifts when we consider families that are endemic to each region. As a result, in order to target all the bird families on Earth, a minimum of five continents and 16 nations must be visited. Below, we outline what is, in our experience, the most efficient route to achieve this quest.

Family Planning: Which countries do I need to visit, what must I target, and where?
By visiting 16 of the countries listed here, you can see the full complement of world bird families. This assumes that dedicated searches are taken for some of the more difficult families like Trumpeters and Scrub-birds. We are not suggesting that the nations in this itinerary are the only, or the best possible, options for all the families.
They were chosen as the most economical and efficient route for encountering all the families while visiting the fewest countries. **NORTH AMERICA** and its associated islands offer up just four families found nowhere else: the Todies and Palmchat in the Caribbean, and the Silky-flycatchers and Olive Warbler in Middle America and the southwestern U.S. The **Dominican Republic** is the best place to start, as the bright green-and-pink Todies and the subdued Palmchat are easily seen here, while the Silky-flycatchers and Olive Warbler are readily found in the U.S.

For most ABA members, this quest can begin close to home. There are six families that are best targeted in North America, and this can be achieved by visiting just two areas in the Lower 48 of the U.S.: a coastal location in cooler months (such as Seattle, Washington or Boston, Massachusetts) and southeast Arizona. The northerly coastal locations should ensure that the Loons, Alcids, Waxwings, and Longspurs & Snow Buntings are all seen. Watching for Skuas & Jaegers also would be advised, as they are much trickier elsewhere on this itinerary. Once these families have been secured, move on to the high deserts and mountains of southeast Arizona. Here, there are six ad-
ditional target families, two of which are essential: Olive Warbler and Silky-flycatchers (in the form of Phainopepla). While here, it is advisable to also track down a representative of New World Quail, Golden-crowned or Ruby-crowned kinglet (Kinglets), Verdin (Penduline-tits), and a member of Cardinals & Allies, as this area offers your best chances for them on this schedule.

On the “Bird Continent” of SOUTH AMERICA, there are only 10 endemic bird families. Planning visits to this continent requires interesting logistical choices, as many target families are spread far and wide. However, all the endemic families (Hoatzin, Rheas, Screamers, Trumpeters, Seriemas, Seedsnipes, Crescentchests, Gnatcatchers, Donacobius, and Magellanic Plover), and a slew of other Neotropical families required to complete the puzzle can all be seen by combining Ecuador, Brazil, and Argentina. The trickiest of the Neotropical families, all of which require time or strategy to see, include Antpittas, Anthrashes, Sharpbill, Toucan-barbets, Sapayoa, Oilbird, and Sunbittern. While in South America, it would be a good idea to see Diving-petrels, Dippers, and Footstools, and it is essential to find Sheathbills.

In northern South America, the tiny nation of Ecuador looms, with its promise of Oilbird, Sapayoa, and Toucan-barbets in the northwest, and Hoatzin lurking in the Amazon. This is the only country where these four families are targeted on our itinerary, so seeing them is critical. While targeting Toucan-barbet in the Mindo/Tandayapa area, it would be wise to pick up Antpittas, Tapaculos, Dippers, and New World Barbets, as they are readily found. The Amazon is excellent for Donacobius, often occupying the same habitat as Hoatzin and Potoos. Ecuador is also a great place to knock off other Neotropical families, such as Guans, Chachalacas, & Curassows; Motmots; Puffbirds; Jacamars; Toucans; Anthrashes; Manakins; and Cotingas. So an extended

Clockwise from top left:
- Apostlebird • AUSTRALIA. Photo © Dave Curtis
- Ibisbill • CHINA. Photo © Ken Behrens
- Olive Warbler • ARIZONA. Photo © Ron Knight, USFWS
- Schlegel’s Asity • MADAGASCAR. Photo © Ken Behrens
stay here should be very rewarding.

Next up is gigantic Brazil, where three discrete areas must be covered, best timed between June and October: (1) the Chapada and Pantanal (near Cuiabá), (2) the Amazon (out of Alta Floresta), and (3) the southeast (out of Rio de Janeiro). It takes special effort to head north of Cuiabá and into the Chapada to track down the Collared Crescentchest, as our strategy does not permit another chance at seeing this family, although it is also available in southwestern Ecuador and northern Argentina if it is missed in Brazil. The birding is easy in the Pantanal, and a little effort will ensure key families like the gangly-legged Seriemas, the rotund Screamer, and the flashy Sunbittern. Birding along the Pantanal Highway offers families like the Finfoots (Sungrebe is often found along backwater rivers); Limpkins; Rheas; and Guans, Chachalacas, & Curassows. The bizarre Trumpeters are elusive denizens of deep forest, and are a major target in the Brazilian Amazon. This is the only place to get them using our strategy, and is likely to be the toughest of the families to find. The best technique is to spend as much time as possible in their preferred habitat—and to hope! If you fail to connect with a Trumpeter here, you could make a special trip to the Manu area of Peru, which is arguably better for Trumpeters. The Brazilian Amazon will reveal plenty of other families, including Puffbirds, Trogons, Jacamars, Toucans, Manakins, and Donacobius. The final stop on this Brazilian circuit should be a short stay in the Atlantic rainforests of the southeast, close to Rio. A trip to a reserve like Reserva Ecológica de Guapiaçu (REGUA) or Parque Estadual Intervales is recommended for the excellent opportunities to catch up with Sharpbills and Gnateaters.

The final South American destination is Argentina, best visited from October to December during the austral spring or summer. Argentina promises three must-get families: the bubblegum-pink-legged Magellanic Plover near El Calafate; the ptarmigan-like Seedsnipes; and Snowy Sheathbills, which scavenge around the penguin colo-
nies. The sheathbill search from a boat ride along the Beagle Channel should also yield Penguins and Diving-Petrels. Sheathbills are essential in Argentina if you prefer to avoid a money-sapping trip to the Subantarctic Islands or Antarctica. Patagonia’s grasslands are also excellent for Rheas, Screamers, and the easiest-to-see Tinamous in the world, which should all be sought while you quaff some of the finest red wine in the Americas.

AFRICA boasts a high number of endemic families according to both major taxonomies (27 for eBird/Clements and 30 for IOC). Madagascar leads the way with five families all its own (Mesites, Ground-rollers, Cuckoo-roller, Asities, and Malagasy Warblers). Of the other African-endemic families, the Rockjumpers and Sugarbirds are both very local and best seen in South Africa. Therefore, Madagascar and South Africa are essential. Most of the remaining African-endemic families are more widespread, making planning where to see them less straightforward. The trickiest are Shoe-bill, Egyptian Plover, Rockfowl, and Dappled-throat & Allies (IOC only). However, by adding Ghana and Uganda into the itinerary, all the African-endemic families, plus many other Old World families, can be found.

The first stop in Africa is Ghana, a bastion of political stability and best visited from February to April. The Rockfowl comprise a two-species family found only in west and central Africa, and it is now most easily seen in Ghana. Birds don’t get much stranger than this chicken-sized weirdo that dwells within rainforest caves. The “Crocodile Bird”, or Egyptian Plover, is another must-get family while in Ghana, available only in the dry north. Ghana is also a good bet for Flufftails, African & Green Broadbills, Yellow Flycatchers (IOC only), Hyliotas, and Indigobirds. There are also more widespread families to encounter, including Guineafowl, Hamerkop, Thick-knees;
Painted-snipes; Turacos; Woodhoopoes & Scimitar-bills; Hornbills; African Barbets; Honeyguides; Wattle-eyes & Batises; Vangas, Helmetshrikes (IOC only), & Allies; Bushshrikes & Allies; Nicators; and African Warblers. Finfoots can also be sought here if missed elsewhere.

The only nation necessary to visit in East Africa is Uganda, the “Pearl of Africa”. The reason for its inclusion is simple: Shoebill, which is most reliably found stalking the papyrus swamps near the capital. It can be visited year-round. A trip into the montane forests in the far south of the country is also essential to find Gray-chested Illadopsis (Babbler), the sole member of the Dapple-throat & Allies family (currently recognized only under IOC) that is targeted using our strategy. Uganda also offers good chances for the following families: Secretary-bird, Cranes, Hamerkop, Ground-Hornbills, Honeyguides, Hyliotas, Fairy Flycatchers, Yellow Flycatchers (IOC only), and Indigobirds. It is a good place to find Finfoots; Thick-knees; Turacos; Mousebirds; Woodhoopoes & Scimitar-bills; African Barbets; African & Green Broadbills; Wattle-eyes & Batises; Oxpeckers; Vangas, Helmetshrikes (IOC only) & Allies; and Bushshrikes & Allies.

South Africa is an essential stop for three families: Ostriches, Rockjumpers, and Sugarbirds (the latter two near-endemic), and all are readily found around Cape Town within a few days any time of year, although September to February is the most productive time. Venturing around the Cape should also yield a glut of other important families, including several that are tricky to find elsewhere, such as Penguins, Secretary-bird, Bustards, Flufftails, Cranes, Sandgrouse, and Fairy Flycatchers. A side trip to Kruger National Park, wonderful for both bird and animal lovers, is recommended to find Oxpeckers and give yourself a further shot at finding Thick-knees; African Barbets; Woodhoopoes & Scimitar-bills; and Ground-Hornbills.
Other families that may present themselves on a South African trip, which could be needed if missed elsewhere in Africa, are Guineafowl; Hamerkop; Finfoots; Turacos; Mousebirds; Honeyguides; Wattle-eyes & Batises; Bushshrikes & Allies; Vangas, Helmetshrikes (IOC only) & Allies; Nicators; African Warblers; and Sylvia Warblers.

Another critical stop is the island nation of Madagascar, which has 11 principal target families. Most standard bird tours on the island from September to November explore the various distinct habitat zones: the dry zone of the west, wet rainforest belt of the east, and spiny forest of the south. By doing this, it is straightforward to pick up all five Malagasy-endemic bird families: Mesites, Ground-rollers, Cuckoo-roller, Asities, and Malagasy Warblers. Aside from these essential groups, there are six other families that should be sought, too, as most of them are easier here than anywhere else in our plan: Tropicbirds, Crab-plover, Flufftails, Buttonquail, Painted-snipes, and Hoopoes.

A quick junket to Oman and/or Bahrain (easily combined) in the Middle East is recommended as the best way of connecting with the oft-forgotten Hypocolius, a tricky species (and family) away from either Bahrain or western India. It is crucial to time your visit between November and February, as Hypocolius is only a winter visitor. We chose this location over India because it also offers Streaked Scrub Warbler, which is in a monotypic family if using IOC taxonomy. This corner of the Arabian Peninsula also offers the greatest number of Crab-plovers on Earth, making it a good backup if you get skunked in Madagascar. Sandgrouse are numerous in this area, and Oman is the nation that offers the greatest variety of Sylvia Warblers, and, therefore, at least one member of these families should be sought if still required while you are there.
ASIA contains a dozen endemic bird families, three of which are extremely localized. The Tibetan Plateau has to be visited for Przevalski’s Pinktail, Borneo’s lowland rainforest for Bristlehead, and montane Sulawesi for Hylocitrea. The remaining endemic families are widespread, making the areas in which to chase them less obvious; however, Rail-babbler is best found on peninsular Malaysia and Spotted Elachura occurs in China. So, China, Malaysia (both the peninsula and Borneo), and Indonesia (Sulawesi) is the optimum combination.

China is one of the largest nations on Earth, and our strategy targets seven different families here, and an additional six families that are best found while here, most of which are generally easy to find. Like Brazil, China deserves an extended stay, with three distinct areas to be covered: (1) the Tibetan provinces of Qinghai and Sichuan for Ibisbill, Wallcreeper, Accentors, Treecreepers, Parrotbills & Allies, and the endemic Przevalski’s Pinktail; (2) Southeast China to add Spotted Elachura; and (3) the Xinjiang region for Bearded Reedling, not available elsewhere using this strategy. Other families that are high priority in China are Long-tailed Tits, Dippers, Cupwings, Tree-Babblers, Scimitar-Babblers & Allies, and Laughingthrushes & Allies.

Heading into tropical Asia, a trip to Malaysia between March and October is vital. Both the peninsula and the island of Borneo must be visited. Borneo’s lowland jungles are the only place where the Bristlehead occurs, and the peninsula’s lowland jungles are indispensable for Rail-babbler, which is rarely seen elsewhere. Between the peninsula and Borneo, one should encounter Vangas, Helmetsrikes & Allies (although the IOC taxonomy treats Woodshrikes in a separate family!); fig-loving Fairy-Bluebirds; and Ioras. Other high-priority families include the majestic Treeswifts, Asian & Grauer’s Broadbills, African & Green Broadbills, Leafbirds, and Flowerpeckers. And with 11 Pitta species in Malaysia, it is wise to search for this family here, too, even though arguably they are easier to see in Australia.

The final Asian piece of the jigsaw puzzle is in the archipelago of Indonesia, homing in on the island of Sulawesi between July and September. The main reason for its inclusion is a dingy and inconspicuous endemic bird and family—Hylocitrea—confined to its mountains. There are no other essential birds on Sulawesi, but the usual areas visited frequently also yield members of the Tree-Babblers, Scimitar-Babblers, & Allies, as well as the Pittas and Treeswifts.

AUSTRALASIA is the world champion of endemic families, with 33 Clements/35 IOC endemic families spread among four distinct areas: New Guinea, New Caledonia, Australia, and New Zealand. New Guinea hosts three (Clements) to seven (IOC) endemic families: Satinbirds, Berrypeckers & Longbills, Tit Berrypecker & Crested Berrypecker, Ifrita, Ploughbill, Mottled Whistler, and Melampittas (the last four only recognised by IOC). A trip to the Gondwanaland relict New Caledonia is essential, for the strange Kagu exists nowhere else. It is so symbolic of the island that it adorns the bank notes. Australia has seven unique bird families: Emu, Plains-wanderer, Lyrebirds, Scrub-Continued on page 18
ABA Event

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World Bird Families

Continued from page 16

birds, Bristlebirds, Pardalotes, and White-winged Chough & Apostlebird. It's also the best place to find several families that are more difficult to find in New Guinea. New Zealand is non-negotiable, with six families confined to the country: Kiwis, New Zealand Parrots, New Zealand Wrens, Whiteheads, Wattlebirds, and Stitchbird.

The first stop in Australasia is the large, forest-clad island of New Guinea, nation of Papua New Guinea (although for the fittest folks, one could see the same families in the province of West Papua in Indonesia). The timing of the visit should be between June and September. The highlands here support three endemic New Guinea families: Satinbirds, Berrypeckers & Longbills, and Tit Berrypecker & Crested Berrypecker. Other likely family additions in the mountains are Boatabills, Australo-Papuan Bellbirds, Sitellas, Quail-thrushes & Jewel-babblers, and the amazing Birds-of-paradise. The highlands are not the only areas to offer notable families, though, as regular daytime stakeouts for Owlet-nightjars are often available near the capital Port Moresby, which is also a good place to find roosting Frogmouths.

The island of New Caledonia may appear isolated, but there are regular flights from there to both Australia and New Zealand, making all four nations in the region reachable on a single long trip. A short trip to New Caledonia—all the endemic birds of the island can usually be found within three days—is undertaken primarily for one quirky bird in its own family: the dirty-white, carrot-billed, and hoopoe-crested Kagu, a rainforest bird like no other. Once you have this, you are ready to move on to Australia.

The enormous country-cum-continent of Australia deserves plenty of time during the austral spring and summer (September to December), with seven endemic families and Magpie-goose, Cassowaries, Whipbirds & Wedgebills, and Logrunners all more easily found here than in New Guinea. Most of these families are available in the eastern coastal belt, with some time needed to drive into the Outback for a few additional families. A trip to northern Queensland (near Cairns) and southern Queensland (near Brisbane) should yield Cassowaries, Megapodes, Lyebirds, Woodswallows, Thick-knees, Magpie-goose, Cockatoos, Pittas, Fairywrens, Pardalotes, Whipbirds & Wedgebills, Australasian Treecreepers, Logrunners, Honeyeaters, Pseudo-babblers, Sitellas, Thornbills & Allies, Bowerbirds, Bellmaggies & Allies, Australian Robins, and Birds-of-paradise.

A journey into inland New South Wales is also required for Emu; Plains-wanderer; and White-winged Chough & Apostlebird. Some of the toughest target Aussie families are likely to be Bristlebirds (which often require extended time on the heaths of coastal New South Wales), Quail-thrushes & Jewel-babblers (Spotted Quail-thrush is not too difficult close to Brisbane); and Scrub-birds. This last family might be the most difficult of the entire set and may require a trip to Western Australia.

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to find the marginally easier Noisy Scrub-bird near Albany.

The final stop on this world tour of bird families is New Zealand, a country with low overall diversity but with extraordinarily high levels of endemism, especially at the family level. The country list just tops 350 species, but that includes an amazing six endemic families: the curious Kiwis, New Zealand Parrots (a family with a famous habit of indiscriminate vandalism to human property), Stitchbird, the chickadee-like Whiteheads, the caruncle-adorned Wattlebirds, and the New Zealand Wrens, sometimes described as the most primitive family of songbirds on Earth. These families are all frequently found on a standard bird tour itinerary, covering South Island, Stewart Island, and Tiritiri Matangi Island. While on South Island, the easiest-going pelagic on the planet can be taken out of Kaikoura to add Albatrosses; Shearwaters & Petrels; and Storm-Petrels (Austral Storm Petrels on IOC). It is worth doing other pelagics out of Stewart Island or in the Hauraki Gulf, both of which are good outings to add Diving-Petrels to the list.

Are there potential new families?
A number of species regularly confound taxonomists—both traditional museum scientists and the new breed of DNA phylogeneticists—and may represent potential new families that you should see “just in case” during your quest. Good examples include Swallow-tailed Cotinga in Brazil; Mottled Whistler, Wattled Ploughbill, Rufous-naped Whistler, Crested Pitoihui, Crested Bellbird, Melampittas, and Blue-capped Ifrita in New Guinea; Crested Shrike-tit in Australia; Grauer’s Warbler, Green Hylia, and Tit-Hylia in Africa; White-bellied Erpornis and Cinnamon Ibon in Asia; Green-tailed Warbler, White-winged Warbler, and Yellow-headed & Oriente Warblers in the Caribbean; and Bananquit, Rosy Thrush-Tanager, Wrenthrush, and Yellow-breasted Chat in Central America. Most of these may be found in the countries already suggested, except for Yellow-headed & Oriente Warblers (which would necessitate a visit to Cuba), Wrenthrush (which is confined to the highlands of Costa Rica and Panama), and Cinnamon Ibon (which requires a trip to the Philippines).

We’ve spent many years thinking about this strategy. By using our advice, you should be able to concentrate on searching for and enjoying all the world’s bird families rather than researching the best strategy by which to see them.

The authors wish to thank Andrew Spencer, Ken Behrens, Charley Hesse, Rob Hutchinson, and Nick Athanas for providing advice regarding this article.

Editor’s note: The 2016 Clements update, released shortly before publication of this article, recognizes some of the “potential new families” (e.g., Ploughbill, Shrike-tit, Ifrita, Melampittas, Mottled Berrybecker) mentioned toward the end of this article.

For a detailed breakdown of families within each continental region, an entire list of bird families regularly available in each nation discussed, and a breakdown of the major family differences between the Clements and IOC taxonomies, check out the expanded web-only content at tinyurl.com/WoodsBarnes2016.
Texas is a hub of avian diversity in North America. Its central location in the continent, diversity of landscapes, and extensive coastline provide the perfect arena for competitive birding. Indeed, Texas has a long history of Big Days (see table).

The attempts by Victor Emanuel and company (including Roger Tory Peterson) using airplanes are firmly embedded in birding lore. The game changed in 2011 when one team set the highest land-only record with 233 species, only to be bested a week later by a team with 258 species. Recently, Cornell Lab’s Team Sapsucker mustered 264 species in 2011 and then proceeded to surpass its own record in 2013 with an astonishing 294!

Our team, the self-styled Anous Birding Syndicate, comprised five determined Canadians who are life-long birders and wildlife biologists. For Yousif Attia from Vancouver, British Columbia; John Brett from Toronto, Ontario; Christian Friis from Toronto, Ontario; and Stu Mackenzie and Ross Wood from Campbellville, Ontario, the lure of a Texas Big Day and the potential to reach the coveted 300-species benchmark was tantalizing. Anous is the noddy genus, and, while it is Greek for “stupid”, we like to think we represent their mysterious splendor. Most of the team was relatively new to Texas, but we were an experienced, well-oiled Big Day machine: In 2011, we set current-standing Big Day records for Ontario (205) and Alberta (226, the highest in Canada).

The Route
Texas offers an abundance of potential routes for the Big Day enthusiast, but the tried, tested, and true “Hills to Coast” is the route of choice. It begins in the Hill Country of Uvalde County and finishes on the Gulf Coast. Relatively minor individual team variations make every Big Day unique and special.

Our attempt window of April 14–19, limited due to real-world commitments, was about a week too early for prime time in the region. This left us with six days to scout the route, familiarize ourselves with Texas and the specialties, and make one solid attempt.

We enlisted the aid of a critical planning tool: eBird. We collated countless checklists along the route, mapped species densities and detection probabilities across the state, and weighed species accumulation against time, trying to squeeze out every drop of efficiency that might give us an edge. During the planning
and Curve-billed Thrasher. Farther east, the Hummingbird, Ladder-backed Woodpecker, Grebe, Sharp-shinned Hawk, Black-chinned species, including Green-winged Teal, Eared Bon Center near San Antonio yielded 54 ed east, about 40 minutes behind schedule. Fish Hatchery for Cinnamon Teal, we head- Blackbird. After one last stop at the Uvalde Harris's Hawk, Osprey, and Yellow-headed echoed on a still, clear night.

west of Uvalde for numerous specialties, Swainson's Thrush, and Common Poorwill the next hour, we scoured the desert scrub around 02:30, where sounds of Elf Owl, Swainson’s Thrush, and Common Poorwill echoed on a still, clear night.

A quick hike at Cook’s Slough pro-duced Great Kiskadee and Green Jay before we headed to Chalk Bluff Park for dawn. Chalk Bluff delivered around 70 new spe-cies, including White-tipped Dove, Green and Ringed kingfishers, Couch’s Kingbird, Brown-crested Flycatcher, five wren spe-cies, Hooded Oriole, Lesser Nighthawk, and vocalizing Chihuahuan Ravens. Over the next hour, we scour ed the desert scrub west of Uvalde for numerous specialties, such as Gray and Black-capped vireos and Golden-cheeked Warbler. A risky, stress-fully long stop at a border patrol station (30 seconds that felt like an eternity) produced Harris’s Hawk, Osprey, and Yellow-headed Blackbird. After one last stop at the Uvalde Fish Hatchery for Cinnamon Teal, we headed east, about 40 minutes behind schedule.

A 15-minute stop at Mitchell Lake Audubon Center near San Antonio yielded 54 species, including Green-winged Teal, Eared Grebe, Sharp-shinned Hawk, Black-chinned Hummingbird, Ladder-backed Woodpecker, and Curve-billed Thrasher. Farther east, the grasslands of Attwater Prairie Chicken Na-tional Wildlife Refuge produced Northern Bobwhite and a pair of White-tailed Hawks. We didn’t expect to see the chicken, but on the drive out, a gracious hen scurried across the road. Big Day magic!

Outside Houston, Red-bellied, Red-headed, and Pilate ed woodpeckers, Tufted Titmouse, Brown-headed Nuthatch, and Fish Crow all fell into place before we headed to the coast—miraculously only a half hour behind schedule. As we ap-proached the wet shorebird fields just north of Anahuac National Wildlife Ref-uge, we realized that torrential rain dur-ing the previous week had turned them all into lakes. This ended up working to our advantage because, when we did find a “drier” field, almost everything was there for a one-stop shorebird shop: American Golden-Plover, Upland Sandpiper, Stilt Sandpiper, thousands of peeps, and a single Wilson’s Snipe. We had a flock of White-faced Ibis along the road but didn’t take the time to scan for a Glossy—just one of a few Big Day blunders.

We reached the Bolivar Peninsula with around 200 species, but then the total quickly skyrocketed. As we had hoped, afternoon thundershowers had grounded some migrants, and we quickly accumu-lated another 30 species in and around Boy Scout Woods and Smith Oaks. The oil fields south of High Island were fruitful, yielding our rarest bird of the day, a young Little Gull, accompanied by seven species of tern. Our last minutes of daylight were spent delighting in a group of Red Knots on the beach at Bolivar Flats. With darkness upon us, we made our way to the Anahuac National Wildlife Refuge marshes, where we mopped up a few nocturnals: Marsh and Sedge wrens, both bitterns, Black and King rails, and the last bird of the day, a vocal Yellow Rail.

Our final total was 271 species, the second-highest Texas Big Day. Although our effort was 23 species short of the 2013 record, we were extremely pleased with the result, considering our inexperience with Texas and the early date. We had more than our share of big misses and a relatively poor show-
The answer to the question “What is a species?” is of great interest to birders because many of us make lists, use field guides, and attempt to name every bird we see in the field.

This ability to name birds is based on years of cumulative observation, data, study, and research, all of which has resulted in various lists of currently recognized species. The ABA bases its checklist of birds on the American Ornithologists’ Union (AOU) Check-list of North American Birds, which is produced by the AOU’s Committee on Classification and Nomenclature of North and Middle American Birds (a.k.a. the “North American Classification Committee” or NACC). The NACC is tasked with maintaining this list and updating it, usually annually, drawing on proposals based on evidence-based research. This annual update is like Christmas for many birders, because it often contains gifts in the form of newly recognized species.

Why does the list change? Species determination depends on the accumulation of evidence, and our knowledge base increases every year. Also, answering the question “What is a species?” isn’t straightforward. Species concepts are human constructs. We view species formation as a snapshot in time. But evolution doesn’t proceed like clockwork with all species formation happening on the same timetable. Some species pairs are quite divergent with no mixing, while others have only recently diverged with limited hybridization at their range boundaries. Still other pairs consist of two distinctive “bookends”, with every conceivable combination of traits in between. The boundaries of some species pairs will always look a bit blurred and will not easily fit into any system of rules for determining species limits.

We at least know that the NACC uses the biological species concept (BSC) as the basis for inclusion of species on the Check-list (see Churchill, 2014, for a history and discussion of species concepts). In the preface of the seventh edition (AOU, 1998), species “are considered to be genetically cohesive groups of populations that are reproductively isolated from other such groups”. Further, “geographic isolation leads to genetic change and potentially to the reproductive isolation of sister taxa. If and when these closely related forms later coexist, reproductive isolating mechanisms, such as distinctive displays and vocalizations, serve to maintain the essential genetic integrity of the newly formed biological species”.

This is the definition by which all groups of birds are measured, and it works well in most cases. However, some subjective judgment will always be involved when determining species limits according to the BSC. There are two challenges in the application of the BSC: (1) how to treat related populations that do not overlap...
(allopatric populations) and (2) how to interpret hybridization between populations.

As Churchill (2014) pointed out, allopatric populations are problematic for the BSC because one cannot test what would naturally happen should these populations come into contact. In the more distant past, treatment of these forms was subject more to opinion than good evidence. That’s where modern research techniques, such as studies focusing on vocalizations and genetics, contribute greatly to sorting out just how distinctive these populations are and whether they should be lumped or split.

For example, the distinctive western subspecies (elegans) of Red-shouldered Hawk is separated geographically from the other subspecies of Red-shouldered Hawk by thousands of miles. (The closest ones are in central Texas.) It is distinctive in both adult and immature plumages and is about 10% smaller than the eastern birds. In the past, elegans earned the ranking of a well-differentiated subspecies because it was believed that these differences were not enough to allow the populations to function as separate species. It has since been demonstrated that elegans is well divergent in both mitochondrial and nuclear DNA (Hull et al., 2008). Could this be the evidence needed to elevate elegans to separate species status in a future supplement of the Checklist? Perhaps…

That brings us to populations that interbreed. The NACC’s preface states that the “essential lack of free interbreeding rather than complete reproductive isolation has been and continues to be the fundamental operating criterion for species status by workers adhering to the BSC”. At
one time, the interbreeding of two forms across a contact zone with viable intermediate individuals was a sufficient criterion for treatment as one species. Looking back to the sixth edition of the AOU Check-list (1983), many species pairs fit into this scenario. Baltimore and Bullock’s orioles, all of the rosy-finches, and Myrtle and Audubon’s warblers were lumped into single species (Northern Oriole, Rosy Finch, and Yellow-rumped Warbler, respectively).

But now a hybrid zone that is characterized as narrow and stable is viewed as evidence for lack of free interbreeding. Often, the fitness of hybrids is seen as being viable only within a narrow geographic zone due to particular climatic or habitat conditions. As a result, several of these pairs have been re-split as separate species, with the split typically supported by evidence for divergent vocalizations and genetics.

Hybrid zones characterized as being wide and geographically unstable (either moving in one direction or another or not tied to a particular climatic or habitat zone) are often interpreted as evidence for single species status. Northern Flicker is a good example of such a species, with the extremes in the ABA Area (Yellow-shafted and Red-shafted) connected by a wide, unstable integration zone (Wiebe and Moore, 2008).

### Potential Splits and Lumps in the ABA Area

Table 2 (starting on p. 28) presents a comprehensive list of potential splits and lumps in the ABA Area that result in a net gain or loss of species. The included species groups are often well represented and discussed in the literature, but there are a few based on more anecdotal information that are included for completeness. All of these species pairs or groups are more “gray” in terms of allopatry and hybridization, which is why their current taxonomy has been the subject of ongoing question and research.

Not included are species changes that result from a different treatment with extralimital groups. For instance, Magnificent Hummingbird may be split, resulting in the more northerly Magnificent Hummingbird (Eugenes fulgens sensu stricto) and the Costa Rican/Panamanian Admirable Hummingbird (E. spectabilis) (Zamudio-Beltrán and Hernández-Baños, 2015). Because this split would not result in a net increase in total species in the ABA Area (Admirable Hummingbird has not been recorded here), it is not included in the table. A list of potential splits and lumps involving extralimital species is provided online in Appendix 1.

In some cases, not all members of a potential split or lump are of equal standing. For example, Ipswich Sparrow (ssp. princeps) is usually recommended to remain within Savannah Sparrow (Passerculus sandwichensis). Some birders may be surprised to not see a potential lump of Blue-winged Warbler (Vermivora cyanoptera) and Golden-winged Warbler (V. chrysoptera) or a re-lumping of the Yellow-bellied Sapsucker complex. Current evidence, such as it exists, supports these longstanding decisions, and there have been no serious challenges to the status quo.

Common names used in Table 2 are either in current usage for the species groups or descriptive when no common name is available. The use of these names should not be considered an endorsement for one name over another.

The key to Table 2 presents a list of characteristics (similar to those provided in Tobias et al., 2010) for which each potential split and lump is coded as to whether there is evidence available (usually published) to support or refute the change in taxonomy. The most common characteristics used are differences in vocalizations, plumage and soft part color and pattern, and morphology (size and structure). But other characteristics can be informa-
Table 1 • Key to understanding how to read Table 2.

- Morphology: (√)= minor differences in size and/or structure; (+)= moderate to significant differences in size and/or structure
- Vocalizations: (√)= minor differences in song and/or calls; (+)= moderate to significant differences in song and/or calls
- Plumage and Bare Parts: (√)= minor differences in color and pattern; (+)= moderate to significant differences in color and pattern size and shape
- Ecology and Behavior: (√)= differences in habitat, foraging, breeding, migration, molt strategy, and/or courtship
- Level of Hybridization: (-)= broad hybrid zone; (√)= narrow hybrid zone
- Genetic Divergence: (√)= detected in mitochondrial and/or nuclear DNA
- (*)= differences anecdotal, conflicting evidence, or in need of more study
- (X) = extralimital (not recorded in the ABA Area); (V) = generally a vagrant to the ABA Area

In summary, nearly all of these forms may be identified in the field (see Sibley, 2012) and should be of interest to birders. There’s a whole fascinating taxonomic world beyond the current ABA Checklist, and—who knows?—maybe someday that “Cape Sable” Seaside Sparrow you saw in Everglades National Park will give you an armchair tick. I encourage you to pursue and enjoy all of these identifiable forms!
<table>
<thead>
<tr>
<th>Species</th>
<th>Current Taxonomy</th>
<th>Potential New Taxonomy</th>
<th>Morphology</th>
<th>Vocalizations</th>
<th>Plumage &amp; Bare Parts</th>
<th>Ecology &amp; Behavior</th>
<th>Level of Hybridization</th>
<th>Genetic Divergence</th>
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| Pacific-slope Flycatcher Empidonax difficilis | Split Pacific-slope Flycatcher Empidonax difficilis
Channel Islands Flycatcher E. insulicola |
| Pacific-slope Flycatcher Empidonax difficilis | Lump Western Flycatcher Empidonax difficilis |
| Rose-throated Becard Pachyramphus aglaiae | Split Rose-throated Becard Pachyramphus aglaiae
White-vented Becard P. albiventris |
| Northern Shrike Lanius excubitor | Split Great Gray Shrike Lanius excubitor (V)
Northern Shrike L. borealis |
| Bell's Vireo Vireo bellii | Split Eastern Bell's Vireo Vireo bellii
Western Bell's Vireo V. pusillus |
| Hutton's Vireo Vireo huttoni | Split Hutton's Vireo Vireo huttoni
Stephen's Vireo V. stephensi |
| Warbling Vireo Vireo gilvus | Split Eastern Warbling Vireo Vireo gilvus
Western Warbling Vireo V. swainsoni |
| Gray Jay Perisoreus canadensis | Split Canada Jay Perisoreus canadensis
Oregon Jay P. obscurus |
| Mexican Jay Aphelocoma wollweberi | Split Arizona Jay Aphelocoma wollweberi
Couch's Jay A. couchi |
| American Crow Corvus brachyrhynchos | Lump American Crow Corvus brachyrhynchos
Northwestern Crow C. caurinus |
| Northern Raven Corvus corax | Split Northern Raven Corvus corax
Florida Crow C. pascuus |
| Purple Martin Progne subis | Split Purple Martin Progne subis
Western Martin P. heuglinia |
| Barn Swallow Hirundo rustica | Split Eurasian Swallow Hirundo rustica (V)
Barn Swallow H. erythrogaster |
| Cliff Swallow Petrochelidon pyrrhonota | Split American Cliff Swallow Petrochelidon pyrrhonota
Mexican Cliff Swallow P. melamaster |
| Cave Swallow Petrochelidon fulva | Split Caribbean Cave Swallow Petrochelidon fulva
Mexican Cave Swallow P. pallida |
| Mountain Chickadee Poecile gambelii | Split Gambel's Chickadee Poecile gambelii
Sierra Chickadee P. baileyae |
| Chestnut-backed Chickadee Poecile rufescens | Split Chestnut-backed Chickadee Poecile rufescens
Gray-sided Chickadee P. barlowi |
| Bushtit Psaltriparus minimus | Split Pacific Bushtit Psaltriparus minimus
Interior Bushtit P. plumbeus
Black-eared Bushtit P. melanotis (X) |
| White-breasted Nuthatch Sitta carolinensis | Split White-breasted Nuthatch Sitta carolinensis
Slaty-billed or Oak Nuthatch S. alascoides
Rocky Mountain Nuthatch S. obsoletus
Mexican Nuthatch S. mexicana |
| Brown Creeper Certhia americana | Split Brown Creeper Certhia americana
Pacific Creeper C. occidentalis
Rocky Mountain Creeper C. montana
Mexican Creeper C. albescens
Central American Creeper C. estima (X) |
| House Wren Troglodytes aedon | Split Northern House Wren Troglodytes aedon
Gazamel Wren T. gazamel (X)
Brown-throated Wren T. brunneicolis
Southern House Wren T. musculus (X)
+ Caribbean taxa (X - need further study) |
| Marsh Wren Cistothorus palustris | Split Eastern Marsh Wren Cistothorus palustris
Western Marsh Wren C. paludicola
Worthington's Marsh Wren C. gryaeus |
| Bewick's Wren Thryomanes bewickii | Split Interior Bewick's Wren Thryomanes bewickii
Pacific Bewick's Wren T. spilurus |
| Blue-gray Gnatcatcher Polioptila caerulea | Split Eastern Blue-gray Gnatcatcher Polioptila caerulea
Western Blue-gray Gnatcatcher P. obsoleta
Gazamel Gnatcatcher P. gazamel (X) |
| Eastern Bluebird Sialia sialis | Split Eastern Bluebird Sialia sialis
Azure or Mexican Bluebird S. guatemalae |
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<td>Swainson's Thrush Catharus ustulatus</td>
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<td>Hermit Thrush Catharus guttatus</td>
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<td>Dusky Thrush Turdus naumanni</td>
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<td>Curve-billed Thrasher Toxostoma curvinostre</td>
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<td>American Pipit Anthus rubescens</td>
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<td>Yellow Warbler Setophaga petechia</td>
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<td>Brewer’s Sparrow Spizella breweri</td>
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<td>Bell’s Sparrow Artemisiospiza belli</td>
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<td>Savannah Sparrow Passerculus sandwichensis</td>
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<td>Nelson’s Sparrow Ammodramus nelsoni</td>
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<td>Seaside Sparrow Ammodramus maritimus</td>
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<td>White-crowned Sparrow Zonotrichia leucophrys</td>
<td>Split, White-crowned Sparrow Zonotrichia leucophrys, Gambel’s Sparrow Z. gambelii, Nuttall’s Sparrow Z. nuttalli</td>
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<td>Summer Tanager Piranga rubra</td>
<td>Split, Summer Tanager Piranga rubra, Cooper’s Tanager P. cooperi</td>
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### Changes

- **Fox Sparrow** (*Passerella iliaca*): Split into Red Fox Sparrow (*P. rutilus*), Sooty Fox Sparrow (*P. rutilus*), Slate-colored Fox Sparrow (*P. schistacea*), and Thick-billed Fox Sparrow (*P. megarynchus*).
- **White-crowned Sparrow** (*Zonotrichia leucophrys*): Split into White-crowned Sparrow (*Z. gambelii*), Nuttall’s Sparrow (*Z. nuttalli*).
- **Summer Tanager** (*Piranga rubra*): Split into Summer Tanager (*P. rubra*), Cooper’s Tanager (*P. cooperi*).

### Further Changes

- **Painted Bunting** (*Passerina ciris*): Eastern Painted Bunting (*P. ciris*), Western Painted Bunting (*P. gambelii*).
- **Eastern Meadowlark** (*Sturnella magna*): Eastern Meadowlark (*S. magna*), Cuban Meadowlark (*S. hippocrepis*), Lilian’s Meadowlark (*S. lilianae*).
- **Great-tailed Grackle** (*Quiscalus grallaria*): Great-tailed Grackle (*Q. grallaria*), Sinaloa Grackle (*Q. sinaloa*), Mexican Bicolored Blackbird (*Q. mexicanus*).
- **Orchard Oriole** (*Icterus spurius*): Orchard Oriole (*I. spurius*), Ochre Oriole (*I. griseus*), and Fuertes’s Oriole (*I. fuertesi*).
- **Hooded Oriole** (*Icterus cucullatus*): Sennett’s Oriole (*I. sennettii*), West Mexico Oriole (*I. westensis*).
- **Gray-crowned Rosy-Finch** (*Leucosticte tephrocotis*): Gray-crowned Rosy-Finch (*L. tephrocotis*), Aleutian Rosy-Finch (*L. griseonucha*), and Hepburn’s Rosy-Finch (*L. hepbernii*).
- **Purple Finch** (*Hyemochroa purpuriceps*): Eastern Purple Finch (*H. purpuriceps*), California Purple Finch (*H. gilva*).

### References

139, 140, 198, 199, 200
References


29. Brown, R. D., A. McCracken, A. Gaston, T.P. Birt, and V.L. Friesen. 2010. Evidence of recent population differentia-


Species **Changes**


165. Ruiz-Sánchez, A., K. Renton, R. Landgrave-Ramírez, E.F.


Changes

Ecology 20: 2390-2402.


Appendix 1

EXTRALIMITAL SPLITS -

Montezuma Quail Cyrtonyx montezumae and Salle's Quail C. sallei

Ring-necked or Common Pheasant Phasianus colchicus and Japanese Green Pheasant P versicolor

Willow Ptarmigan Lagopus lagopus and Red Grouse L. scotica

Western Yellow-nosed Albatross Thalassarche chlororhynchos and Eastern Yellow-nosed Albatross T. Carteri

Black-browed Albatross Thalassarche melanophris and Campbell Albatross T. Impavida

Great-winged Petrel Pterodroma macroptera and Grey-faced Petrel P. Gouldi

Fea's Petrel Pterodroma feae and Desertas Petrel P. Deserta

British Storm-Petrel Hydrobates pelagicus and Mediterranean Storm-Petrel H. Melitensis

Western Osprey Pandion haliaetus and Eastern Osprey P. crista

Hook-billed Kite Chondrohierax uncinatus and Cuban Kite C. Wilsonii

Sharp-shinned Hawk Accipiter striatus, White-breasted Hawk A. Chionogaster, Plain-breasted Hawk A. Ventralis, and Rufous-thighed Hawk A. Erythronemius

Northern Goshawk Accipiter gentilis and American Goshawk A. atricapillus

Hen Harrier Circus cyaneus and Northern Harrier C. Hudsonius

Southern Crane Hawk Geranospiza caerulescens and Northern Crane Hawk G. nigra

Bay-winged Hawk Parabuteo unicinctus and Harris's Hawk P.
and Magellanic Horned
Bubo virginianus
Western Barn-Owl
Eastern Spotted Dove
Eurasian Collared-dove
Mongolian Plover
and Black-fronted
Black-necked Stilt
Himantopus mexicanus,
Hawaiian Stilt
A. aramus pictus
Northern Limpkin
and Southern Limpkin
Common Gallinule
G. galeata,
Hawaiian Gallinule
G. sandvicensis,
and Altiplano Gallinule
G. garmani
Northern Limpkin
Aramus pictus
and Southern Limpkin

A. caparoch
Southern Burrowing Owl
Athene cunicularia
and Northern
Burrowing Owl
A. floridana
Mottled Owl
Strix virgata,
Mexican Wood Owl
S. squamulata,
and Atlantic Forest Owl
S. borelliana

Barred Owl
Strix varia
and Cinereous Owl
S. sartorii
Great Grey Owl
Strix nebulosa
and Lapland Owl
S. lapponica
Ferruginous Pygmy Owl
Glaucidium brasilianum,
Ridgway’s
Pygmy-Owl
G. ridgwayi,
and Tucuman Pygmy-Owl
G. tucumanum
Long-eared Owl
Asio otus
and American Long-eared Owl
A. wilsonianus
Northern Black Swift
Cypseloides borealis,
Central American
Black Swift
C. costaricensis,
and Caribbean Black Swift
C. niger
Vaux’s Swift
Chaetura vauxi,
Yucatan Swift
C. gaumeri,
Richmond’s Swift
C. richmondi,
and Ashy-tailed Swift
C. andrei
Green-breasted Mango
Anthracothorax prevostii
and Ecuadorian
Mango
A. iridescens
Magnificent Hummingbird
Eugenes fulgens
and Admira1
Hummingbird
E. spectabilis
Broad-billed Hummingbird
Cynanthus latirostris,
Doubleday’s
Hummingbird
C. doubledayi,
and Lawrence’s Hummingbird
C. lawrencei
Coppery-tailed Trogon
Trogon ambigua
and Elegant Trogon
T. elegans
Eurasian Hoopoe
Upupa epops
and African Hoopoe
U. africana
Acorn Woodpecker
Melanerpes formicivorus
and San Lucas
Woodpecker
M. angustifrons
Golden-fronted Woodpecker
Melanerpes aurifrons
and Velasquez’s Woodpecker
M. santacruzi
Ivory-billed Woodpecker
Campephilus principalis
and Cuban
Ivory-billed Woodpecker
C. bairdii
American Kestrel
Falco sparverius
and Cuban Kestrel
F. sparveroides
American Merlin
Falco columbarius
and Eurasian Merlin
F. aesalon
Monk Parakeet
Myiopsitta monachus
and Cliff Parakeet
M. fuchsi
Green Parakeet
Psittacara holochlorus,
Socorro Parakeet
P. brevipes,
and Red-throated Parakeet
P. rubritorquis
Greenish Elaenia
Myiopagis viridicata
and West Mexican Elaenia
M. minima
Northern Tufted Flycatcher
Mitrephanes phaeocercus
and Costa
Rican Tufted Flycatcher
M. aurantiiventris
Cuban Pewee
Contopus caribaeus
and Bahaman Pewee
C. bahamensis
Black Phoebe
Sayornis nigricans
and White-winged Phoebe
S. latirostris
Vermilion Flycatcher
Pyrocephalus rubinus,
Galápagos
Vermilion Flycatcher
P. nanus,
and San Cristóbal Vermilion
Flycatcher
P. dabus
Nuttings Flycatcher
Myiarchus nuttingi
and Ridgway’s
Flycatcher
M. flavidior
La Sagra's Flycatcher *Myiarchus sagrae* and Lucayan Flycatcher *M. lucayensis*
Loggerhead Kingbird *Tyrannus caudifasciatus*, Puerto Rican Kingbird *T. tayloiri*, and Hispaniolan Kingbird *T. gabbii*
White-eyed Vireo *Vireo griseus*, Bermuda Vireo *V. bermudianus*, and Veracruz Vireo *V. periquitor*
Plumbeous Vireo *Vireo plumbeus* and Notable Vireo *V. montanus*
Cassin's Vireo *Vireo cassinii* and San Lucas Vireo *V. lucasianus*
Red-eyed Vireo *Vireo olivaceus* and Chivi Vireo *V. chivi*
Green Jay *Cyanocorax luxuosus* and Inca jay *C. yncas*
Steller's Jay *Cyanocitta stelleri* and Blue-crested Jay *C. coronata*
Woodhouse's Scrub-Jay *Aphelocoma woodhousei* and Sumichrast's Scrub-Jay *A. sumichrastii*
American Horned Lark *Eremophila alpestris*, Atlas Horned Lark *E. atlas*, Caucasian Horned Lark *E. penicillata*, Himalayan Horned Lark *E. longirostris*, Shore Lark *E. flava*, and Steppe Horned Lark *E. brandti*
Northern Rough-winged Swallow *Stelgidopteryx serripennis* and Ridgway's Rough-winged Swallow *S. ridgwayi*
Gray-headed Chickadee *Poecile cinctus* and Alaska Chickadee *P. lathamii*
Brown-headed Nuthatch *Sitta pusilla* and Grand Bahama Nuthatch *S. insularis*
Northern Rock Wren *Salpinctes obsoletus* and Central American Rock Wren *S. guttatus*
Carolina Wren *Thryothorus ludovicianus* and White-browed Wren *T. albinucha*
Northern Cactus Wren *Campylorhynchus brunneicapillus* and Cape Cactus Wren *C. affinis*
American Dipper *Cinclus mexicanus* and Costa Rican Dipper *C. ardesiacus*
Red-spotted Bluethroat *Luscinia svecica*, White-spotted Bluethroat *L. cyaneula*, and Turkish Bluethroat *L. magna*
Northern Wheatear *Oenanthe oenanthe*, Oenanthe oenanthe, and Seebohm's Wheatear *O. seebohmi*
White-throated Thrush *Turdus assimilis* and Dagua Thrush *T. daguae*
American Robin *Turdus migratorius* and San Lucas Robin *T. confinis*
Western Red-legged Thrush *Turdus plumbeus* and Eastern Red-legged Thrush *T. ardesiacus*
LeConte's Thrasher *Toxostoma lecontei* and Vizcaino or Rosalia Thrasher *T. arenicola*
Bahama Mockingbird *Minimus gundlachii* and Hill's Mockingbird *M. hillii*
Alaska Yellow Wagtail *Motacilla tschutschensis*, Green-headed Wagtail *M. taivana*, and Manchurian Wagtail *M. macronyx*
Citrine Wagtail *Motacilla citreola* and Tibetan Wagtail *M. werae*
Rufous-capped Warbler *Basileuterus rufifrons* and Chestnut-capped Warbler *B. delattrei*
Stripe-crowned Warbler *Basileuterus calcivorus*, Cabanis's Warbler *B. cabanisi*, Golden-crowned Warbler *B. auricapillus*, and White-bellied Warbler *B. hypoleucus*
Red-bellied (Slate-throated) Redstart *Myioborus minimus* and Yellow-bellied Redstart *M. verticalis*
Caribbean Bananquit *Coereba flaveola*, Bahamas Bananquit *C. bahamensis*, Cozumel Bananquit *C. caboti*, and Continental Bananquit *C. mexicana*
Olive Sparrow *Arremonops rufivirgatus* and West Mexican Sparrow *A. superciliosus*
Spotted Towhee *Pipilo maculatus* and Olive-backed Towhee *P. macronyx*
Botteri's Sparrow *Peucaea botterii* and Peten Sparrow *P. petenica*
Yellow-eyed Junco *Junco phaeonotus*, Baird's Junco *J. bairdii*, Chiapas Junco *J. fulvescens*, and Guatemalan Junco *J. alticola*
Northern Hepatic Tanager *Piranga hepatica*, Highland Hepatic Tanager *P. lutea*, Blood-red Tanager *P. haemalea*, and Lowland Hepatic Tanager *P. flava*
Flame-colored Tanager *Piranga bidentata* and Lafresnaye's Tanager *P. sanguinolenta*
Caribbean Bananaquit *Coereba flaveola*, Bahamas Bananaquit *C. bahamensis*, Cozumel Bananaquit *C. caboti*, and Continental Bananaquit *C. mexicana*
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Flame-colored Tanager *Piranga bidentata* and Lafresnaye's Tanager *P. sanguinolenta*
Yellow Grosbeak *Pheucticus chrysopeplus* and Orange Grosbeak *P. aurantiacus*
Eastern Blue Bunting *Cyanocompsa parellina* and Western Mexico Blue Bunting *C. indigotica*
Audubon's Oriole *Icterus graduacauda* and Dickey's Oriole *I. l. dickeyei*
Northern House Finch *Haemorhous vinosus*, Mexican House Finch *H. mexicanus*, Guadalupe House Finch *H. amplus*, McGregor's House Finch *H. mcgregori*
White-winged Crossbill *Loxia leucoptera* and Manchurian Wagtail *M. verticalis*
Northern House Finch *Haemorhous vinosus*, Mexican House Finch *H. mexicanus*, Guadalupe House Finch *H. amplus*, McGregor's House Finch *H. mcgregori*
White-winged Crossbill *Loxia leucoptera* and Manchurian Wagtail *M. verticalis*

**EXTRALIMITAL LUMPS**

Green Heron *Butorides virescens* with Striated Heron *B. striata*
All Stilts into Black-winged Stilt *Himantopus himantopus*
Blackish Oystercatcher *Haematopus ater* and Black Oystercatcher *H. bachmani*
Himalayan Cuckoo *Cuculus saturatus* and Oriental Cuckoo *C. optatus*
Eurasian Three-toed Woodpecker *Picoides tridactylus* and American Three-toed Woodpecker *P. dorsalis*
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October 2016   |   Birder’s Guide to Listing & Taxonomy
On October 8, 2015, a team of four birders identified 431 bird species during a Big Day in Ecuador. Dušan Brinkhuizen, Rudy Gelis, Mitch Lysinger, and Tuomas Seimola are now the world record holders for the number of bird species identified in 24 hours. I accompanied the team to document their efforts. This article briefly explains what happened, describes the strategies employed, and comments on factors contributing to the new record.
Background
Dušan Brinkhuizen of the Netherlands and Rudy Gelis of the U.S. are professional bird guides living in Quito, Ecuador. The two friends had periodically discussed trying to break the longstanding Big Day record of 331 species, set in 1982 by Ted Parker and Scott Robinson. They invited two other birders to participate in their attempt to break the record: professional bird guides Tuomas Seimola of Finland and Mitch Lysinger, a U.S. citizen living in Quito. During the planning stages of this effort, a group from Louisiana State University broke the 1982 mark and established a new record of 354 species.

The Choice of Ecuador
The two previous records of 331 species and 354 species had both been established in Peru, and Ecuador was chosen for this attempt. It is one of Earth’s most biodiverse countries and home to more than 1,600 bird species. In addition, three of the team members live...
in Ecuador, and the fourth frequently guides there. They already knew the right roads and the right hillsides, and they drew heavily on this knowledge to begin constructing a Big Day route.

**Importance of Previous Big Day Experience**

I learned many things during this South American adventure. One was that a Big Day is most definitely a game. It has rules. It can be conceived as a birdfinding race. To succeed, it is not enough to be an expert in bird identification. One must employ strategies designed to maximize the chances of winning.

The two Europeans on the team, Brinkhuizen and Seimola, had significant, previous experience in Big Day competitions. Seimola had been participating in them for more than 15 years, and Brinkhuizen held the Big Day record for the Netherlands when I met him on October 2, 2015. This particular effort thus incorporated many years of experience in Big Day competitions in Europe, and I believe this was a significant factor contributing to the team’s success.

**Cost/Benefit Analysis**

**Determining the Route and Timetable**

A route was devised and fine-tuned during several days of scouting between October 2 and October 7, 2015. During the scouting, team members compiled data about what species were to be found where and when. On the slopes of the Andes, a change in altitude of as little as 200m (650 ft.) may bring a whole new suite of bird species. The team’s route started in the Amazonian lowlands and moved successively higher into foothill forest, subtropical montane forest, temperate montane forest, high-altitude páramo, and finally down to the disturbed areas of the dry Interandean Valley surrounding the Quito airport.

The team considered various routes that would maximize birding in areas of high species density. Birding in any particular high-density area, however, could occur only for so long. Once
the rate of species detection slowed down, the team would need to move on. Although precisely when to move on was a matter of intuition as much as anything else, the team employed a time cost/species benefit analysis. The timing for the decision to move on was tested during the days of scouting and then gradually finalized. Ultimately, a minute-by-minute timetable was established.

More than the others, it was Brinkhuizen who worked out the equations to determine where to go, how long to stay, when to move on, and where to go next. He was on his computer for long periods during the week of scouting. It was as if he were solving a grand birdfinding puzzle. The solution to this puzzle was the most important element of the Big Day strategy.

**Travel by Commercial Jet to a Radically Different Ecosystem**

In this record-breaking effort, there was one piece of the puzzle that had been worked out in advance. It related to the fact that, at the Equator, there...
are roughly 12 hours of daylight and 12 hours of darkness.

How can one identify birds when it is dark? One way, of course, is to identify night birds. But what if enough species of night birds are identified in the morning hours of darkness so that it is not productive to seek night birds for six hours in the evening? What should the team do during the last six hours of the 24 hours in a Big Day?

Brinkhuizen devised a strategy to address the limiting factor of darkness. His idea was for the team to take a commercial jet airliner to the coast of Ecuador—at night. Several weeks before the count, Brinkhuizen had travelled to Salinas, Ecuador, to scout for shorebirds. Salinas is an ancient settlement on the coast, adjoined by huge salt deposits and commercial shrimp farming operations. These habitats attract birds, which can be identified at night aurally by their calls and visually using spotlights. Plane tickets were purchased three weeks before the count.

The team’s strategy to use aircraft to increase
their tally worked because the flight occurred at night, and after the flight, there were more new species to identify in the dark. Team members had to stop birding for two and a half hours to make the flight from Quito to the coast. During the day, however, there was a two-and-a-half-hour stretch when the team identified 154 species of birds; so taking a flight during the daytime could have meant missing 150 species. Making up such a deficit would have been difficult, to say the least.

**The Biggest Day Unfolds**

Like all serious Big Day attempts, birding began at midnight on October 8. The team spent the next five hours driving from subtropical montane forest at 2,050m (6,800 ft.)—the location of Cabañas San Isidro, where the team had rested in preparation for the day—down to Amazonian lowland rainforest at 450m (1,475 ft.). During this time, the team stopped at precise locations where the participants suspected—from years of experience and from scouting the night before—that they would find specific species of night birds. They broadcast bird recordings (called playback) and used different kinds of floodlights.

Only 16 species of birds were identified during the first five hours, an average of one species for each 19 minutes. These included eight species of owl, three species of nightjar, and two species of tinamou.
As I watched, the four team members deployed along the road, stretching out 50m (165 ft.) with two team members operating playback devices, one using a floodlight, and one staying far away from the playback devices so that he could hear the birds. Twelve of the 16 species were identified by sound only.

At 5:23 a.m., the group arrived at river island habitat in the Amazonian lowlands, where bird species were encountered much more rapidly. During the next two hours, driving through different forests and degraded habitats, more than 140 species of birds were identified, an average of about one species each 51 seconds—20 times the rate experienced in the darkness of the early morning hours.

During daylight, I could see that team members were keenly interested in encountering flocks. In the Neotropics, 10 or more species can be found in the same flock of birds—a great way to quickly increase one’s tally. On more than one occasion, the vehicle was halted abruptly when someone yelled excitedly, “There is a flock here! Stop and back up!”

The weather was of utmost concern. Participants viewed the weather as the factor which, above all others, would make or break their effort. A 30-minute downpour could mean detecting just one or two species instead of 10 or 20. But if, on the other hand, the weather was too sunny, the birds could be inactive. At about 11:30 a.m. on the Big Day, the sun started to come out, which led to furrowed brows and general demoralization. But then it clouded up again, and thereafter it remained relatively good. Good weather for the eastern slope of the Ecuadorian Andes. Favorable weather was a big reason a new world record was possible that day.

By 6:09 p.m., the team had already identified 392 species, surpassing the existing Big Day record of 354 by 38. With record in hand, the group flew to the coast. Upon arriving in Salinas at 8:30 p.m., the team jumped in a truck and drove to the ocean and adjoining salt flats to begin identifying a new palette of birds. The last bird, a Snowy Plover, was seen at 11:50 p.m. With 39 new species recorded on this last leg of the Big Day, a final total of 431 species was set as the world’s new Big Day record. This surpassed the longstanding 1982 mark by precisely 100 species and the then-existing world record by 77 species.

**Conclusion:** A Virtual Army for the New Age

This was my first Big Day. I wish it had allowed for some birding, but that was not to be. On this particular day, the participants were not birding in the normal sense of the word anyway. Once they recognized a species, they sought out a new one at lightning speed. And, obviously, I was not birding, either. I was an observer not of birds but of men.

What did it all mean? For me, it had been a geologic experience of sorts. Birds—that riotous florescence of...
Cenozoic dinosaurs—are the most numerous of all the terrestrial vertebrates. For this and many other reasons, birds are emblematic of the diversity of living systems. And I had been privileged to witness four people identify more of them, more rapidly, than at any other time in human history.

And thus, my adventure had hammered home our great predicament. This inheritance is threatened. Our species is triggering profound transformations on the planet, and the question is whether we can devise a sustainable culture. Birders have a special role to play in this ultimate testing ground. There are huge numbers of us worldwide—of many types and talents—and we are united by our special relationship with the natural order. Let us better band together. Let us become self-aware of both our awesome power and our ethical duties. In this critical phase of humanity, we birders should constitute a virtual army, whose soldiers acknowledge a duty to preserve the integrity of all living systems.
Every summer, birders anxiously await publication of the “Check-list Supplement” by the American Ornithologists’ Union’s Committee on Classification and Nomenclature of North and Middle American Birds (NACC). The supplement details revisions to the NACC’s Check-list. This “Check-list Redux”, the sixth annual summary appearing in ABA publications, aims to explain in straightforward terms what has changed and how those changes affect anyone birding in the U.S. or Canada. Illustrations, photos, charts, and maps are employed where applicable. Note that although the NACC does not use diacritical marks (and completely deletes some letters from Hawaiian bird names), such marks and letters are used here in order to facilitate communication and pronunciation.

You can read all the proposals on which the NACC voted this year at checklist.aou.org. Species marked with asterisks (*) here are those which do not appear on the ABA Check-list, either because there are no currently accepted records in the ABA Area or because they are non-natives that have not yet been admitted to the list. Daggers (†) denote extinct species. Nowadays, it can be assumed that any change in taxonomy is due (at least partly) to analysis of new genetic data, so that is not always mentioned.

As a general policy, the NACC accepts as additions to its North American Check-list any species that the ABA’s Checklist Committee adds to its list. Those changes are not listed here.

The largest and most-likely-to-be-talked-about change this year is a radical “reshuffling of the deck”, so to speak. The sequences of non-passerine orders and oscine passerine families are changing substantially. Whether this will impact field guides is yet to be seen. Some authors (e.g., Howell et al. in the Nov. 2009 issue of Birding) advocate for stability, while others suggest we immediately update the sequence of field guides after each change, as is currently the case in most authoritative field guides. The former may start to look more appealing to many people in light of this year’s changes—at least until it seems clear that changes in higher-level taxonomy have settled down.

Speaking of higher-level taxonomy, there were a number of changes to superorders, infraclasses, parvclasses, and such, which are not described here. Furthermore, there are many changes which affect species only found south of the U.S.–Mexico border. They are detailed at the ABA Blog at tinyurl.com/AOU2016.

Ruby-throated Hummingbird now appears before cranes and rails on the Check-list.

Photo © Tibor Nagy

House Sparrow will no longer appear near the end of the Check-list.

Photo © Matthias Appel

New Sequence for Non-Passerine Orders

The sequence of non-passerine orders between Galliformes (“chickens”) and Trogoniformes (trogons) is now as follows:

- Phoenicopteriformes (flamingos)
- Podicipediformes (grebes)
- Pteroclidiformes (sandgrouse*)
- Columbiformes (pigeons)
- Cuculiformes (cuckoos)
- Caprimulgiformes (goatsuckers and nighthawks)
- Apodiformes (swifts and hummingbirds)
- Gruiformes (cranes and rails)
- Charadriiformes (shorebirds, auks, gulls, etc.)
- Phaethontiformes (tropicbirds)
- Gaviiformes (loons)
- Procellariiformes (tubenoses)
- Ciconiiformes (storks)
- Suliformes (gannets and boobies)
- Pelecaniformes (pelicans, herons, ibises)
- Cathartiformes (New World vultures)
- Accipitriformes (hawks)
- Strigiformes (owls)

Note the new appearance of Cathartiformes, which was split from Accipitriformes.

New Sequence for Some Old World Passerine Families

A group of mostly Old World passerine families falls backward in sequence to immediately follow Peucedramidae (Olive Warbler) and precede Calcariidae (longspurs). The members of this group are, in sequence:

- Prunellidae (accentors)
- Ploceidae (weavers)
- Viduidae (whydahs)
- Estrildidae (waxbills)
This long-anticipated split has finally happened. The two “new” species barely overlap in range (see maps). A recent study states that the only place this seems to happen regularly is the Pine Nut Mountains of Storey County, Nevada, and that hybridization is limited to this very small area; however, local birders report overlap in Reno, as well. Limited hybridization in addition to consistent differences in voice, habitat, behavior, and morphology was enough to tip the scales toward a split.

California Scrub-Jay is the more coastal species, and, predictably, it is darker in overall color. It lives in oak woodlands, which likely has led to its having a larger bill than Woodhouse’s, a species that, in the Great Basin, mostly lives in piñon-juniper scrub.

Most vagrant scrub-jays seem to have been Woodhouse’s, but there are records of vagrant Californias in eastern Washington and southwestern British Columbia.

Traditionally, Woodhouse’s Scrub-Jay has not referred to the two southernmost subspecies of “Western Scrub-Jay”. Found in southern Mexico, the remota and sumichrasti subspecies differ substantially in genetics, behavior, and morphology and are usually referred to as the sumichrasti group, or “Sumichrast’s Scrub-Jay”. The proposal submitted to the NACC suggests that it (and perhaps the subspecies texana) may deserve species status, as well, but that more study is needed. In light of this, one may wonder whether including sumichrasti and remota under the name “Woodhouse’s Scrub-Jay” is well advised, as it sets up another potential sensu stricto/sensu lato issue. Would a more inclusive and less specific name such as “Inland Scrub-Jay” have been preferable?

For more on identification of “Western Scrub-Jays”, see Dessi Sieburth’s article in the April 2016 issue of Birding.

### Split of Leach’s Storm-Petrel

- **Leach’s Storm-Petrel** *(Oceanodroma leucorhoa)*
- **Townsend’s Storm-Petrel** *(Oceanodroma socorroensis)*
- **Ainley’s Storm-Petrel** *(Oceanodroma cheimomnestes)*

You may be thinking “Which of these have I seen?” The answer is “Probably not more than one, and that one is probably Leach’s.”

In North America, Leach’s Storm-Petrel now consists of two subspecies. The nominate is found in the Atlantic Ocean and the Pacific Ocean. Any Leach’s seen north of Santa Barbara, California, can probably be safely assumed to be leucorhoa. The subspecies chapmani breeds on islands (such as San Benito and the Coronados) fairly close.
Identification of these four forms is complicated by the fact that all of them have variable rump patterns. Even _leucorhoa_ can have a totally dark rump, as has been observed on breeders from the Farallones, but light-rumped _leucorhoa_ usually have a dark mark down the center of the rump—something not seen in many white-rumped Ainley’s and Townsend’s. Field identification should be approached cautiously, to say the least.

If you are confused, don’t feel bad. The issue is extremely complicated, and there’s a reason we’re only now starting to understand what’s going on. For more details, see Steve N. G. Howell’s _Petrels, Albatrosses, & Storm-Petrels of North America_, the article by Howell et al. in North American Birds (vol. 63, p. 540), and the article by David Ainley (for whom Ainley’s Storm-Petrel is named) in the Jan./Feb. 2005 issue of _Birding_.

**Split of Green Violetear**

- **Mexican Violetear** (*Colibri thalassinus*)
- **Lesser Violetear** (*Colibri cyanotus*)

This split separates birds of central and northern Middle America (Mexico through Nicaragua) from those that are found from Costa Rica to Bolivia. Besides being larger, Mexican Violetear, as “our” species is now to the Baja California mainland. Compared to _leucorhoa_, _chapmani_ is smaller on average and usually has a darker rump. It may also appear to have a more deeply forked tail. “Chapman’s Storm-Petrel”, as it is called, can be fairly common off the southwestern California coast in summer.

Townsend’s and Ainley’s storm-petrels are sympatric; they both nest on small islands off the southern tip of Guadalupe Island, which is itself well off the west coast of Baja California. They both average smaller than _chapmani_ and _leucorhoa_, with a more subtle carpal bar. Townsend’s tends to be smaller and darker than Ainley’s, with a larger white rump patch, but some Townsend’s are completely dark-rumped, and some are intermediate. The two differ substantially from one another, and from Leach’s _sensu stricto_, in vocalizations. Townsend’s nests in summer, and Ainley’s nests in winter, so the two cannot interbreed, even though they are allopatric. This phenomenon is referred to as _temporal isolation_, and it is another reason for the three-way split.
called, has an indigo patch on the belly that is lacking in Lesser Violetear.

**No More Sky Lark**

*Alauda arvensis* has had its English name changed from Sky Lark to *Eurasian Sky-lark*. This name conforms with widespread usage elsewhere in the world.

**Lump of Caribbean Coot**

This is the “final nail in the coffin”, so to speak. After having been removed from the *ABA Checklist* because of doubts about ID, the NACC has now made official the doubts that Caribbean Coot (*Fulica caribaea*) ever existed in the first place. Birds with expanded white frontal shields previously had been assigned to this species, and birds with restricted, dark red frontal shields were assigned to American Coot (*Fulica americana*). But we now know that there does not seem to be any assortative mating where the two forms occur together, and there are many intermediates. It is believed that “Caribbean Coot” is just a color morph of American Coot.

**Name Change for Orange Bishop**

*Euplectes franciscanus* has switched English names from Orange Bishop to *Northern Red Bishop*. Though not on the *ABA Checklist*, the NACC recognizes introduced populations, such as those in southern California and the Houston area.

**Split of Puffinus**

The shearwater genus *Puffinus* has been split, and many of our shearwaters now have a “new” genus: *Ardenna*. New scientific names and a new sequence for species in *Ardenna* are listed here. They follow Cape Verde Shearwater on the *Check-list*. Note that the gender of the specific epithet has changed for two species below.

- **Wedge-tailed Shearwater**
  
  *(Puffinus pacificus ➔ Ardenna pacifica)*

- **Buller's Shearwater**
  
  *(Puffinus bulleri ➔ Ardenna bulleri)*

- **Short-tailed Shearwater**
  
  *(Puffinus tenuirostris ➔ Ardenna tenuirostris)*

- **Sooty Shearwater**
  
  *(Puffinus griseus ➔ Ardenna grisea)*

- **Great Shearwater**
  
  *(Puffinus gravis ➔ Ardenna gravis)*

- **Pink-footed Shearwater**
  
  *(Puffinus creatopus ➔ Ardenna creatopus)*

- **Flesh-footed Shearwater**
  
  *(Puffinus carneipes ➔ Ardenna carneipes)*

**New Genus for Sandhill Crane**

The genus *Antigone* has been split from *Grus*. Scientific names for Whooping and Common cranes remain unchanged, but Sandhill Crane has changed from *Grus canadensis* to *Antigone canadensis*. The other members of *Antigone* are White-naped Crane*, Brolga*, and Sarus Crane*. Antigone is the name of Oedipus’s daughter/half-sister in Greek mythology.

**New Sequence for New World Quail**

The new sequence for the family Odontophoridae is as follows:

- *Mountain Quail*
- *Northern Bobwhite*
- *Scaled Quail*
- *California Quail*
- *Gambel's Quail*
- *Montezuma Quail*
- *Black-capped Vireo*
- *White-eyed Vireo*
- *Thick-billed Vireo*
- *Cuban Vireo*
- *Bell's Vireo*
- *Gray Vireo*
- *Hutton's Vireo*
- *Yellow-throated Vireo*
- *Cassin's Vireo*
- *Blue-headed Vireo*
- *Plumbeous Vireo*
- *Philadelphia Vireo*
- *Warbling Vireo*
- *Red-eyed Vireo*
- *Yellow-green Vireo*
- *Black-whiskered Vireo*
- *Yucatán Vireo*

*Caribbean Coot*. Photo © Mark Yokoyama

Orange Bishop is now known as Northern Red Bishop. Photo © Jason Mrachina
Shorebird Subfamily Reshuffle

Relationships among the shorebirds are also now better understood. Below is the new classification scheme, including a change in subfamilies and in sequence. Within each genus, there is no change in sequence of the species.

- Numeniinae (curlews)
- Bartramia (Upland Sandpiper)
- Numenius (traditional curlews)
- Limosinae (godwits)
- Arenariinae (turnstones and Calidrine sandpipers)
- Arenaria (turnstones)
- Calidris (sandpipers, including peeps)
- Scolopacinae (dowitchers, snipes, and woodcocks)
- Limnodromus (dowitchers)
- Lymnocryptes (Jack Snipe)
- Gallinago (other snipe)
- Scolopax (woodcocks)
- Tringininae (tringines)
- Xenus (Terek Sandpiper)
- Actitis (Spotted and Common sandpipers)
- Tringa (“legs”, “shanks”, tattlers, Willet, and Solitary, Green,

Wood, and Marsh sandpipers)
- Phalaropus (phalaropes)

Notable Changes That Were Not Accepted

- A revision of the genus Picoides
- Changing the “surname” of Myioborus redstarts to “whitestart” (e.g., “Painted Whitestart”)
- Split of Eastern Meadowlark (yielding Lilian’s Meadowlark)
- Transfer of Paint-billed Crane from Neocrex to Mustelirallus

Finally, Purple Swamphen (Porphyrio porphyrio) was not split. The established population in Florida pertains to the subspecies poliocephalus; it is native in Asia from Turkey to northern Thailand. It is considered a full species (Gray-headed Swamphen) by the Clements Checklist of Birds of the World. eBird uses Clements taxonomy in the very few instances when it and NACC taxonomy disagree, so swamphens seen in Florida should be entered into eBird as Gray-headed Swamphens.

On the Horizon

A lump of Common and Hoary redpolls was considered this year but tabled for further discussion and a likely ruling in 2017. A White-breasted Nuthatch split is still on many people’s minds. A major overhaul of hummingbird taxonomy is ripe for consideration. And new information regarding “Western Flycatchers” may merit changes, as well.

The author thanks Jon Dunn, Ted Floyd, Paul Lehman, Ian Paulsen, and Van Remsen for assisting with preparation of this article, and all the members of the AOU NACC for their diligence in maintaining the Check-list.

GLOSSARY

Allopatric. Describes two taxa that do not come into physical contact because their ranges are disjunct.

Assortative mating. The phenomenon in which birds choose mates that are most like themselves.

Morphology. Physical characteristics.

Nominate. The nominate subspecies is the subspecies that shares its name with the species as a whole. For instance, Empidonax traillii traillii is the nominate subspecies of Willow Flycatcher.

Phylogeny. A reconstruction, based on analysis of shared traits, of the evolutionary history of a group of organisms. It is usually depicted in a tree-like diagram.

Sensu lato. In the broad sense. For example, “Canada Goose sensu lato” refers to what we called Canada Goose before the split—just the large birds.

Sensu stricto. In the strict sense. For instance, “Canada Goose sensu stricto” means what we call Canada Goose today, after the split—just the large birds.

Taxa. Plural of taxon. A taxon is a biological group or classification of organisms. Classes, orders, families, genera, species, and subspecies are all various levels of taxon.

Many birders breathed a big sigh of relief this summer when they found out that Hoary Redpoll will still appear on their life lists... for now. Photo © Caleb Putnam

This bird, photographed in Florida, is called Purple Swamphen on the AOU Check-list and the ABA Checklist. However, it is currently called Gray-headed Swamphen in eBird. Photo © Michael Retter
### 2015 Year Lists

#### ABA Area - Top 25

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#### United States - Top 25

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### 2015 Listing Snapshot

Printed here are some of the top lists from Listing Central (<listing.aba.org>). To make sure your lists qualify for inclusion in next year’s Listing Snapshot, be sure to have your 2016 totals uploaded by 1 June 2017.

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#### Life Lists

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### 2015 Listing Snapshot

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**North America - Top 25**

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**World - Top 50**

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### Top 25

#### ABA Area [By Year] - Top 25

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<td>Monroe McKay</td>
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<td>648</td>
<td>Leo Miller</td>
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### Top 25

#### World [Photographed] - Top 25

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<td>4247</td>
<td>Ron Hof</td>
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</table>
It is late summer on the northern Great Plains, and the longspurs are gathering to flicker and flutter and flit across windy prairies. For many of us older-timers, there’s something new to think about as we watch the flocks: ever since the publication of the 2010 Supplement to the AOU Check-list, the longspurs and the white buntings have been assigned their own family, Calcariidae, after centuries of taxonomic cohabitation with the passerellids and the fringillids.

The new family name is based on the genus name of three of the longspurs, *Calcarius*, which straightforwardly points to those birds’ inordinately long hind claw (*calcarius* is Latin for “spurred”); it was coined in 1802 by the “father of German ornithology”, Johannes Matthäus Bechstein, and interestingly enough, German appears to be the only European language other than (American) English in which the official vernacular name (“Spornammer”) also refers to the long nail. Kaup’s later proposal, *Centrophanes*, likewise incorporates a word—this time the Greek *centron*—for spur.

All that is well known, but not many birders understand that the white members of the family, Snow and McKay’s buntings, are also named for their toenails. For many years, they were placed in the genus *Plectrophanes*, etymologized in 1815 by Bernhard Meyer, the creator of the name, as “spur-birds” (German “Sporner”). A plectrum, as musicians know, is a spearhead-shaped object used to pluck the strings of an instrument (I’ve heard, and might even believe, that the plectra of some harpsichords were made from the spurs of domestic fowl).

The –*phanes* part of the name is more perplexing. The standard etymology, asserted by Elliott Coues among many others, derives those syllables from the Greek *phaino*, meaning “be evident”: thus, Snow Bunting has a conspicuous spur.

That explanation seems just a bit too easy, but in the case of the white buntings, it doesn’t matter any more. In 1882, Leonhard Stejneger (of petrel and scoter fame) determined that *Plectrophanes* was in fact not properly applied to the Snow Bunting, leaving that genus in need of a new name. “In order to make as little change as possible,” he formally proposed the current genus name, *Plectrophenax*, and gave as its etymology the Greek words for spur and for impostor. Impostor? Stejneger offers no further explanation. I can guess only that the “spurred impostor” is a gentle joke referring to the nomenclatural confusions his new name was intended to clear up.

---

*Snowflake Undercover*

Rick Wright
Bloomfield, New Jersey
rwright@aba.org

*Lapland Longspur.*

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