

## Recent ornithological literature from the Caribbean: 2023

An annual feature of the *Journal of Caribbean Ornithology*, this annotated guide alerts readers to recent ornithological literature from the Caribbean basin that has appeared elsewhere. Most of these articles appeared in 2023, although a few that we previously missed are also summarized below. We would also like to include any unpublished theses or other reports that may be difficult to find in more universally available abstract services. We invite readers of the *Journal of Caribbean Ornithology* to alert our compiler, Steven Latta, to other articles that should be highlighted in this section. Our hope is that by providing these summaries we will increase the exchange of knowledge among Caribbean ornithologists and conservationists.

—Steven C. Latta

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Aguilar, S., L. Mugica, K. Aguilar, M. Acosta, and L. Tonelli Manica. 2023. Potential effects of climate change on the distribution of American Flamingo (*Phoenicopterus ruber*) in Cuba. *Waterbirds* 45:287–299.—E-mail: [susymujica27@gmail.com](mailto:susymujica27@gmail.com).

Alvarez, F., D.D. Ávila, and L.B. da Rosa. 2023. Anthropization and land uses affecting the distribution and abundance of *Cathartes aura* in Ciego de Ávila, Cuba. *Revista Interdisciplinar Animus* 4:1–19.—E-mail: [facualva87@gmail.com](mailto:facualva87@gmail.com).

Bush, S.E., and D.H. Clayton. 2023. Grooming time predicts survival: American Kestrels, *Falco sparverius*, on a subtropical island. *American Naturalist* 201:603–609.—Grooming and survival of marked American Kestrels were monitored on San Salvador Island, Bahamas. A strong association was found between time spent grooming and survival over a 2-year period. This is the first evidence for a correlation between grooming time and survival in a natural population. E-mail: [bush@biology.utah.edu](mailto:bush@biology.utah.edu).

Bush, S.E., M.M. Waller, J.M. Herman, K.S. Hobbs, A.R. Clayton, J.L. Watson, M.D. Oleyar, and D.H. Clayton. 2023. Birds groom more in regions with higher parasite pressure: a comparison of temperate and subtropical American Kestrels. *Animal Behaviour* 201:125–135.—The self-grooming behaviors of preening and scratching of kestrels were compared between birds residing in the subtropical Bahamas and temperate northern Utah, U.S.A., in both summer and winter. This study provides the first demonstration of geographical variation in the grooming behavior of any animal. E-mail: [bush@biology.utah.edu](mailto:bush@biology.utah.edu).

Byerly, P.A., R.T. Chesser, R.C. Fleischer, N. McInerney, N.A. Przelomska, and P.L. Leberg. 2023. Conservation genomics reveals low connectivity among populations of threatened Roseate Terns (*Sterna dougallii*) in the Atlantic Basin. *Conservation Genetics* 24:331–345.—Loss of genetic diversity within populations of

Roseate Terns is unlikely to be buffered by inflow of new alleles from other breeding populations. This is likely to have significance for species persistence in the Atlantic.—E-mail: [pabyerly@gmail.com](mailto:pabyerly@gmail.com).

Campos, B.R., C.J. Smith, and M.D. Johnson. 2023. Habitat selection by an avian predator of insect pests on Jamaican coffee farms. *Global Ecology and Conservation* 44:e02479.—Habitat selection by the Black-throated Blue Warbler (*Setophaga caerulescens*) was modeled using four variables describing coffee habitat: canopy cover, coffee cover, distance to non-cultivated habitat, and distance to nearest shade tree. E-mail: [matt.johnson@humboldt.edu](mailto:matt.johnson@humboldt.edu).

Cañizares, J.R., C.B. Edwards, and J.M. Reed. 2023. Quantifying phenological landmarks of migration shows non-uniform use of the Caribbean by shorebirds. *Ecology and Evolution* 13:e9954.—A statistical approach is used to systematically identify migration phenology for complex passage migrant species such as Boreal- and Arctic-breeding North American shorebirds with individuals that remain in the Caribbean beyond migration. This method identifies the active migration period and then calculates phenology metrics based on quantiles of that migration period. Indices were developed to quantify over-summering and over-wintering patterns with respect to migration for 16 North American shorebird species as they traveled south through the insular Caribbean. Separate migratory patterns were identified for Cuba, Puerto Rico, Guadeloupe, Aruba, Bonaire, Curaçao, and Trinidad and Tobago. Support was found for a long-standing hypothesis that migration strategy (transcontinental vs. transoceanic) leads to geographic differences in migration timing. E-mail: [jessicarozek@gmail.com](mailto:jessicarozek@gmail.com).

Cruz-Mendoza, A.C., F.F. Rivera-Miláns, W.J. Arendt, L.L. Fidalgo-De Souza, J. Ilse, and J.M. Wunderle, Jr. 2023. Effects of Hurricanes Irma and Maria on abundance and occupancy of *Margarops fuscatus* (Pearly-eyed Thrasher) in the Luquillo Experimental Forest, Puerto Rico. *Caribbean Naturalist* 92:1–16.—Despite post-hurricane occupancy and abundance declines, the Pearly-eyed Thrasher remains a potential threat as a predator and competitor of endangered wildlife in mid-elevation forests. E-mail: [jmwunderle@gmail.com](mailto:jmwunderle@gmail.com).

Danielson-Owczynsky, H., H. Madden, and P.G. Jodice. 2023. Parental infanticide by egg destruction in Red-billed Tropicbirds *Phaethon aethereus* on the Caribbean island of Sint Eustatius. *Marine Ornithology* 51:261–264.—E-mail: [hailley.danielson-owczynsky@nioz.nl](mailto:hailley.danielson-owczynsky@nioz.nl).

De Ruyck, C.C. 2023. The life-cycle, diet, and seasonal movement patterns of landbirds on the island of Grenada, and the contribution of diverse small-scale farming to maintaining bird diversity and abundance on small tropical islands. *Ph.D. Dissertation, University of Manitoba*.—E-mail: unavailable.

DeSaix, M.G., E.C. Anderson, C.M. Bossu, C.E. Rayne, T.M. Schweizer, N.J. Bayly, D.S. Narang, J.C. Hagelin, H.L. Gibbs, J.F. Saracco, and T.W. Sherry. 2023. Low-coverage whole genome sequencing for highly accurate population assignment: mapping migratory connectivity in the American Redstart (*Setophaga ruticilla*). *Molecular Ecology* 32:5528–5540.—E-mail: [mgdesaix@gmail.com](mailto:mgdesaix@gmail.com).

Dossman, B.C., A.D. Rodewald, C.E. Studds, and P.P. Marra. 2023. Migratory birds with delayed spring departure migrate faster but pay the costs. *Ecology* 104:e3938.—The Motus Wildlife Tracking System was used to track individual American Redstarts (*Setophaga ruticilla*) as they migrated from wintering grounds in Southwest Jamaica through Florida en route to their breeding areas. E-mail: [bd342@cornell.edu](mailto:bd342@cornell.edu).

Espín, R.M., J.B. Ferrer, and R.C. Pérez. 2023. Nature-based tourism and bird conservation: the case of the White-collared Swift (*Streptoprocne zonaris*) in Cuba. *Universidad y Sociedad* 15:475–481.—E-mail: [montesninin@gmail.com](mailto:montesninin@gmail.com).

Espindola, W.D., A. Cruz-Mendoza, A. Garrastazú, M.A. Nieves, F. Rivera-Milán, and T.A. Carlo. 2023. Estimating population size of Red-footed Boobies using distance sampling and drone photography. *Wildlife Society Bulletin* 47:e1406.—Distance sampling from point-counts was used to estimate population size of Red-footed Boobies (*Sula sula*) on Mona Island, Puerto Rico, USA, before and during the breeding season of 2019. E-mail: [w.espindolac@gmail.com](mailto:w.espindolac@gmail.com).

Exantus, J.M., and F. Cézilly. 2023. Composition of avian assemblage in a protected forested area in Haiti: Evidence for recent decline of both forest-dependent and insectivore species. *Global Ecology and Conservation* 46:e02607.—E-mail: [jeanmary.exantus@yahoo.fr](mailto:jeanmary.exantus@yahoo.fr).

Exantus, J.M., A. Vidal, and F. Cézilly. 2023. Effects of deforestation on foraging behavior, ectoparasites, and adult survival in the Vulnerable La Selle Thrush, *Turdus swalesi*, in Haiti. *Sustainability* 15:16035.—Mark-recapture, visual observations, and camera traps were used to document foraging ecology and estimate adult survival over 26 months of the Hispaniola-endemic La Selle Thrush. Most birds foraged mainly in deciduous woodlots. However, some individuals regularly foraged on or around dung pats in fallow pastures. Coincidentally, 16.5% of 79 mist-netted individuals harbored Ixodid ticks, suggesting that infestation with ticks might come as a cost of opportunistically exploiting a new food resource. Apparent annual adult survival rate was independent of sex, and varied between 0.393 and 0.440. This low value was possibly due to “permanent” emigration from the site during the study. E-mail: [exantus@caribaea.org](mailto:exantus@caribaea.org).

Exantus, J., C. Cambrone, E. Bezault, and F. Cézilly. 2023. Contrasted avian communities between two protected areas in the metropolitan area of Port-au-Prince, Haiti. *Research Square Preprint (version 1)*.—E-mail: [exantus@caribaea.org](mailto:exantus@caribaea.org).

García-Quintas, A., A. Roy, C. Barbraud, H. Demarcq, D. Denis, and S. Lanco Bertrand. 2023. Machine and deep learning approaches to understand and predict habitat suitability for seabird breeding. *Ecology and Evolution* 13:e10549.—Using deep and machine learning algorithms, potentially suitable breeding sites and breeding macrohabitat selection for Larids was predicted based on compilations from 49 historical records of Larid

colonies in Cuba between 1980 and 2020. E-mail: [agquintas86@gmail.com](mailto:agquintas86@gmail.com).

Grievés, L.A., G.B. Gloor, and J.S. Quinn. 2023. Symbiotic microbiota vary with breeding group membership in a highly social joint-nesting bird. *Behavioral Ecology* 34:653–661.—Predictions were tested suggesting that communally breeding Smooth-billed Anis (*Crotophaga ani*) belonging to the same breeding group share more similar microbes, and that microbial community composition differs between body regions. Microbiota of the preen gland and body feathers of adult birds from 16 breeding groups were tested at a long-term study site in southwestern Puerto Rico. As predicted, individuals from the same breeding group shared more similar microbiota than non-group members and preen gland and body feathers harbored distinct microbial communities. E-mail: [grievel@mcmaster.ca](mailto:grievel@mcmaster.ca).

Jean-Pierre, A., G. Loranger-Merciris, L.J. Saint-Louis, and F. Cézilly. 2023. Factors affecting spatial occupancy and local abundance of the Forest Thrush, *Turdus lherminieri*, in Guadeloupe forests. *European Journal of Wildlife Research* 69:76.—E-mail: [aureliej-p@hotmail.fr](mailto:aureliej-p@hotmail.fr).

Jeffery, M., W. Golder, J. Rock, C. Gratto-Trevor, S. Maddock, E. Elliott-Smith, C. Spiegel, and D.L. Triana. 2023. Multi-year monitoring of Piping Plovers (*Charadrius melodus*) and other shorebirds in The Bahamas. *Biodiversity Data Journal* 11: e96962.—E-mail: [matthewjeffery@me.com](mailto:matthewjeffery@me.com).

Kingwill, C. 2023. Timing of diversification, dispersal, and biogeography of parrots in the genus *Amazona* (Psittaciformes: Psittacidae) throughout the Caribbean, visualized in GIS. *Master's Thesis, Ft. Hays State University*.—E-mail: unavailable.

Kirwan, G.M., and A. Kirkconnell. 2022. *Cymindis wilsonii* Cassin, 1847 (= Cuban Kite *Chondrohierax wilsonii*): original description, types, collector, and type locality. *Ornitología Neotropical* 33:161–165.—E-mail: [GMKirwan@aol.com](mailto:GMKirwan@aol.com).

Klicka, J., K. Epperly, B.T. Smith, G.M. Spellman, J.A. Chaves, P. Escalante, C.C. Witt, R. Canales del Castillo, and R.M. Zink. 2023. Lineage diversity in a widely distributed New World passerine bird, the House Wren, *Ornithology* 140:ukado18.—E-mail: [rzink2@unl.edu](mailto:rzink2@unl.edu).

LaPergola, J. 2023. Life-stage and sex influence *Philornis* ectoparasitism in a Neotropical woodpecker *Melanerpes striatus* with essential male parental care. *Ibis* 165:1235–1250.—The presence of current or recent subcutaneous *Philornis* infestations on adult and nestling Hispaniolan Woodpeckers, from the same population in the central Dominican Republic, was documented 2012–2017. Results raise questions about the degree of host life-stage specialization and whether adult parasitism is incidental or part of an alternative parasitic strategy for *Philornis*. E-mail: [jlapblca@gmail.com](mailto:jlapblca@gmail.com).

Lewis, W.B., R.J. Cooper, M.T. Hallworth, A.R. Brunner, and T.S. Sillett. 2023. Light-level geolocation reveals moderate levels of migratory connectivity for declining and stable populations of Black-throated Blue Warblers (*Setophaga caerulescens*). *Avian Conservation and Ecology*, 18:12.—Light-level geolocators were used to identify the fall migratory routes and non-breeding distributions of adults breeding at the southern edge of the range in North Carolina ( $n = 5$ ), and at the core of the range in New Hampshire ( $n = 8$ ). New Hampshire birds used non-breeding areas broadly distributed across the Caribbean, whereas North

Carolina birds used a restricted non-breeding area largely in the Dominican Republic. Birds from the two study populations also exhibited differing migratory routes. E-mail: [wblewis7@gmail.com](mailto:wblewis7@gmail.com).

Madden, H., H. Boehm, and L. Mielke. 2023. Foraging ecology of Red-Billed Tropicbirds on Saba, Caribbean Netherlands, during early chick-rearing. *Ardea* 111:463–475.—Diet samples were dominated by flying fish (Exocoetidae: 70.7%), but prey items from the squid family (Loliginidae: 9.8%) and the families of flying gurnards (Dactylopteridae: 2.4%) and the ray-finned fish (Carangidae: 2.4%) were also identified. E-mail: [hannah.madden@wur.nl](mailto:hannah.madden@wur.nl).

McCully, F.R., and P.E. Rose. 2023. Individual personality predicts social network assemblages in a colonial bird. *Scientific Reports* 13:2258.—This research aimed to document how personality traits (aggressive, exploratory, submissive) influenced the social network structure of highly social animals in a captive environment. Data were collected from separate flocks of captive Caribbean (*Phoenicopus ruber*) and Chilean Flamingos (*Phoenicopus chilensis*) to identify relationships between birds and examine opportunities for social support. E-mail: [p.rose@exeter.ac.uk](mailto:p.rose@exeter.ac.uk).

Mejias, M.A., and D.R. Wilson. 2023. Breeding biology and nesting behavior of the endemic subspecies of White-eyed Vireo (*Vireo griseus bermudianus*) on the Bermuda archipelago. *Journal of Field Ornithology* 94:1.—E-mail: [miguelmejias.birds@gmail.com](mailto:miguelmejias.birds@gmail.com).

Morales-Pérez, A.L. 2023. First documented predation event on White-tailed Tropicbird, *Phaethon lepturus*, by the Puerto Rican boa, *Chilabothrus inornatus*, in Puerto Rico. *Caribbean Naturalist* 94:1–5.—E-mail: [alcidesl.morales@yahoo.com](mailto:alcidesl.morales@yahoo.com).

Nemes, C.E., P.P. Marra, T.J. Zenzal, Jr., S.A. Collins, B.C. Dossman, A.R. Gerson, C. Gómez, A.M. González, M. Gutierrez Ramirez, S.A. Hamer, and J. Marty. 2023. Springing forward: Migrating songbirds catch up with the start of spring in North America. *Journal of Animal Ecology* 00:1–13.—Four species of ground-foraging songbirds in eastern North America—two warblers and two thrushes—were hypothesized to time their spring migrations to coincide with later phases of vegetation phenology, corresponding to increased arthropod prey, and that they would match their migration rate to the green wave but trail behind it rather than surf its leading edge. While surfing of resource waves is a well-documented migration strategy for herbivorous waterfowl and ungulates, individual songbirds in this study migrated faster than the green wave and increasingly caught up to its leading edge en route. Consequently, songbirds experienced a range of vegetation phenophases while migrating through North America, suggesting flexibility in their capacity to exploit variable resources in spring. E-mail: [claire.nemes@umces.edu](mailto:claire.nemes@umces.edu).

Oswald, J.A., B.T. Smith, J.M. Allen, R.P. Guralnick, D.W. Steadman, and M.J. LeFebvre. 2023. Changes in parrot diversity after human arrival to the Caribbean. *Proceedings of the National Academy of Sciences* 120:e2301128120.—Fossil and archaeological records reveal a striking loss of parrot diversity in the Caribbean, much of which took place during human occupation of the islands. The most widespread species, the Cuban Parrot, exhibits inter-island divergences throughout the Pleistocene. Within this radiation, an extinct, genetically distinct lineage survived on

the Turks and Caicos until Indigenous human settlement of the islands. The narrowly distributed Hispaniolan Parrot had a natural range that once included The Bahamas; it thus became “endemic” to Hispaniola during the late Holocene. The Hispaniolan Parrot also likely was introduced by Indigenous people to Grand Turk and Montserrat, two islands where it is now also extirpated. This research demonstrates that genetic information spanning paleontological, archaeological, and modern contexts is essential to understand the role of humans in altering the diversity and distribution of biota. E-mail: [oswaldj3@gmail.com](mailto:oswaldj3@gmail.com).

Pereira, D.J., M.A. Gardner, M. Geary, D.J. Bell, and N.J. Colar. 2023. Distribution and habitat requirements of the Bahama Warbler *Setophaga flavescens* on Grand Bahama in 2018. *Bird Conservation International* 33:e46.—Findings suggest that this species is adapted to a climax pine forest habitat maintained under a standard fire regime. However, the distribution of the warbler may have radically changed following Hurricane Dorian’s devastation of the island in 2019, and the species may now only survive on Abaco. Ecological insights from Grand Bahama seem likely to help conservation management on Abaco, but both islands now need to be surveyed. E-mail: [david\\_pereira8@hotmail.com](mailto:david_pereira8@hotmail.com).

Peters, C., M. Geary, H.P. Nelson, B.L. Rusk, A. Von Hardenberg, and A. Muir. 2023. Phylogenetic placement and life history trait imputation for Grenada Dove *Leptotila wellsi*. *Bird Conservation International* 33:e11.—Data identify the Gray-chested Dove *Leptotila cassinii* as the species which shares both a most recent common ancestor, with an estimated divergence of approximately 2.53 million years ago, and the smallest genetic distance ( $P = 0.0303$ ) with the Grenada Dove. Life history characteristics are inferred from this relationship. E-mail: [c.peters@chester.ac.uk](mailto:c.peters@chester.ac.uk).

Borroto-Paez, R., Y.P. Ríos, and D.R. Perez. 2020. A Cuban treefrog (*Osteopilus septentrionalis*, Hylidae) preying on a caged Yellow-faced Grassquit (*Tiaris olivaceus*) in Cuba. *Revista Latinoamericana de Herpetología* 3:139–142.—E-mail: [rborroto@geotech.cu](mailto:rborroto@geotech.cu).

Rhyne, G. 2023. Range-wide migratory connectivity and migration ecology in Swainson's Warblers (*Limnothlypis swainsonii*) derived from multisensor geolocators. *Louisiana State University, Master's Theses* 5853.—E-mail: [pstouffer@lsu.edu](mailto:pstouffer@lsu.edu).

Rokitnicki, P. 2023. Age and sex differences in stopover behaviours and flight performance in Black-throated Blue Warblers. University of Western Ontario, Canada. *Electronic Thesis and Dissertation Repository* 9307.—Movement data obtained by the Motus Wildlife Tracking System, and meteorological data from the NCEP/NCAR Reanalysis II project, are used to test whether migratory stopover duration and nocturnal flight speeds differed between age and sex classes in 89 Black-throated Blue Warblers (*Setophaga caerulescens*). E-mail: [ymorbey@uwo.ca](mailto:ymorbey@uwo.ca).

Rueda-Hernández, R., C.M. Bossu, T.B. Smith, A. Contina, R. Canales del Castillo, K. Ruegg, and B.E. Hernández-Baños. 2023. Winter connectivity and leapfrog migration in a migratory passerine. *Ecology and Evolution* 13:e9769.—Migration patterns in the Painted Bunting (*Passerina ciris*) were analyzed using a genetic-based approach. Data exhibit a leapfrog migration pattern and demonstrate the utility of a genoscape-based approach

for identifying range-wide patterns of migratory connectivity. E-mail: [behb@ciencias.unam.mx](mailto:behb@ciencias.unam.mx).

Salter, J.F., R.T. Brumfield, and B.C. Faircloth. 2023. An island 'endemic' born out of hybridization between introduced lineages. *Molecular Ecology* 00:1–15.—Genomic DNA from historical museum specimens, and historical records, are used to evaluate three hypotheses regarding the timing and origin of Northern Bobwhites (*Colinus virginianus*) in Cuba, whose status as an endemic or introduced population has long been debated. Data indicate that bobwhites from southern Mexico arrived in Cuba between the 12th and 16th centuries, followed by the subsequent introduction of bobwhites from the southeastern USA to Cuba between the 18th and 20th centuries. These dates suggest the introduction of bobwhites to Cuba was human-mediated and concomitant with Spanish colonial shipping routes between Veracruz, Mexico and Havana, Cuba during this period. Results identify endemic Cuban bobwhites as a genetically distinct population born of hybridization between divergent, introduced lineages. E-mail: [jessie.salter@gmail.com](mailto:jessie.salter@gmail.com).

Satgé, Y.G., B.S. Keitt, C.P. Gaskin, J.B. Patteson, and P.G.R. Jodice. 2023. Spatial segregation between phenotypes of the diabolite Black-capped Petrel *Pterodroma hasitata* during the non-breeding period. *Endangered Species Research* 51:183–201.—In the endangered Black-capped Petrel, two phenotypes have been described: a smaller dark form, and a heavier light form, which are genetically distinct. Five adult black-capped petrels of each phenotype were captured at sea in the western North Atlantic and equipped with satellite transmitters to assess possible differences in the marine distributions of phenotypes. Petrels were tracked for 11 to 255 days. Phenotypes had significantly distinct non-breeding distributions, independent of time of year. The dark form used waters of the Carolinian marine ecoregion, and the light form used pelagic waters of the Virginian ecoregion, to the north. The dark form was more exposed to marine

threats than the light form, in particular to mercury, microplastics, and marine traffic. The light form overlapped with proposed wind energy areas off the central US coast. These differences in exposure suggest possible differences in vulnerability, which can have repercussions on the viability of this imperiled species. E-mail: [ysatge@clmson.edu](mailto:ysatge@clmson.edu).

Schaffner, F.C., M.T. Hallworth, M.F. Jimenez, I. Rodríguez-Colón, and N.E. Seavy. 2023. Light-level tracking of Northern Waterthrush (*Parkesia noveboracensis*): Lessons learned from wintering ground deployments. *Journal of Field Ornithology* 94:5.—Among Northern Waterthrushes wintering in Puerto Rico, birds stopped in the northern Greater Antilles before migrating along the Atlantic coast to their breeding sites as far north as Quebec, Canada. E-mail: [schaffner825@gmail.com](mailto:schaffner825@gmail.com).

Vilella, F.J., and R. González. 2023. Multi-resolution habitat models of the Puerto Rican Nightjar *Antrostomus noctitherus*. *Bird Conservation International*, 33:e74.—E-mail: [fvilella@usgs.gov](mailto:fvilella@usgs.gov).

Wunderle, J.M., Jr., P.K. Lebow, D.N. Ewert, J.D. White, and D. Currie. 2023. The effects of rainfall on foliage and ground arthropod availability for Kirtland's Warblers and other gleaning insectivores in the late dry season in The Bahamas. *Caribbean Naturalist* 93:1–26.—Late dry-season (March–April) arthropods were sampled over 9 years in an early succession dry forest on Eleuthera, The Bahamas. Arthropod taxa differed in availability in the late dry season depending on rainfall measure and duration of the prior period with little congruence in rainfall responses between foliage and ground arthropods. These diverse arthropod responses to rainfall are expected to change with increased frequency of heavy downpours and droughts associated with global climate change, resulting in unknown consequences for the Kirtland's Warbler (*Setophaga kirtlandii*) and other gleaning insectivores. E-mail: [jmwunderle@gmail.com](mailto:jmwunderle@gmail.com).