

Natalie A. Wright

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EDUCATION

- Ph.D. Biology, University of New Mexico, 2015
Advisor: Christopher C. Witt
- M.S. Zoology, University of Florida, 2009
Advisor: David W. Steadman
- B.S. Zoology, University of Florida, 2005
Summa cum laude in Zoology; minor in English

RESEARCH AND MUSEUM EXPERIENCE

University of Montana Flight Lab, Missoula, MT

Drollinger-Dial Postdoctoral Fellow in Functional Ecology 2015-present

Museum of Southwestern Biology (MSB), Albuquerque, NM

Ornithology Curatorial Assistant; Ph.D. research 2009-2015

Specimen collection, preparation, and curation in the lab and field.

I have prepared over 1180 bird specimens, spent six months on field expeditions in Peru and Trinidad and Tobago, trained undergraduate students, and introduced new data collection methods to MSB.

Herpetology Curatorial Assistant 2009

Specimen preparation and curation; data entry.

Florida Museum of Natural History (FLMNH), Gainesville, FL

2004-2009

Ornithology Collection Lab Assistant; M.S. research

Bird specimen collection, preparation, and cataloging; fossil excavation, preparation, and cataloging; dermestid beetle colony maintenance. I spent five months on field expeditions throughout the West Indies and trained students.

PEER-REVIEWED PUBLICATIONS (* indicates undergraduate co-author)

- Wright, N.A.**, D.W. Steadman, and C.C. Witt. A new island rule: evolution toward flightlessness in island birds. *in prep (manuscript available upon request)*
- Smiley, A.*, G. Williams*, **N.A. Wright**, and C.C. Witt. Right ventricular hypertrophy in high elevation House Wrens. *in prep (manuscript available upon request)*
- Grady, J.M., B.J. Enquist, E. Dettweiler-Robinson, **N.A. Wright**, and F.A. Smith. 2015. Response to comments on "Evidence for mesothermy in dinosaurs." *Science* 348:982-982.
- Grady, J.M., B.J. Enquist, E. Dettweiler-Robinson, **N.A. Wright**, and F.A. Smith. 2014. Evidence for mesothermy in dinosaurs. *Science* 344:1268-1272.
- Wright, N.A.**, T.R. Gregory, and C.C. Witt. 2014. Metabolic 'engines' of flight drive genome size reduction in birds. *Proceedings of the Royal Society B* 281:20132780.
- Steadman, D.W., J.R. Morris*, and **N.A. Wright**. 2013. A new species of late Pleistocene rail (Aves: Rallidae) from Abaco, The Bahamas. *Paleontological Journal* 47:1355-1364.
- Wright, N.A.**, and D.W. Steadman. 2012. Insular avian adaptations on two Neotropical continental islands. *Journal of Biogeography* 39:1891-1899.

- Sibly, R.M., C.C. Witt, **N.A. Wright**, C. Venditti, W. Jetz, and J.H. Brown. 2012. Energetics, ecology, and reproduction in birds. *Proceedings of the National Academy of Sciences* 109:10937-10941.
- Benham, P. M., E. J. Beckman, S. G. DuBay, M. Flores, A. B. Johnson, M. J. Lelevier, C. J. Schmitt*, **N.A. Wright**, and C. C. Witt. 2011. Satellite imagery reveals new critical habitat for endangered bird species in the high Andes of Peru. *Endangered Species Research* 13:145-157.
- Steadman, D.W., J.R. Montambault, S.K. Robinson, S.N. Oswalt, T.J. Brandeis, G.A. Londoño, M.J. Reetz, W.M. Schelsky, **N.A. Wright**, J.P. Hoover, J. Jankowski, A.W. Kratter, A.E. Martínez, and J. Smith. 2009. Relative Abundance and Habitat Use of Wintering Neotropical Migrants and Resident Landbirds on St. John, U.S. Virgin Islands. *The Wilson Journal of Ornithology* 121:41-53.

OTHER PUBLICATIONS

- Wright, N.A.** 2009. Gene Flow, Divergence, and Morphological Differentiation in Birds on the Islands of Trinidad and Tobago. M.S. Thesis, University of Florida.
- Wright, N.A.**, S.A. Hilber, and R. Darner. 2009. Vertebrate Zoology Laboratory Manual for the University of Florida, Gainesville, FL.

GRANTS AND AWARDS (TOTAL: \$28,592)

- Outstanding Graduate Student of the Year Award, Department of Biology, UNM. **\$500**. 2014-2015
- Hamilton Award Finalist for Society for the Study of Evolution best student talk. Evolution 2014
- Gordon Research Conference Unifying Ecology Across Scales Young Scientist Mentoring Program. **\$1300**. 2014
- Student Enrichment Opportunity, PiBBs, UNM. **\$1600**. 2014
- Grove Summer Research Scholarship Award, Department of Biology, UNM: The effects of ecology and evolution of avian flight morphology. **\$2000**. 2014
- Best Graduate Student Oral Presentation, 23rd UNM Biology Department Research Day. **\$100**. 2014
- NSF Doctoral Dissertation Improvement Grant: The effects of ecology and evolution of avian flight morphology. **\$14,742**. 2013
- Department of Biology Scholarship Award, UNM: Linking geographic variation with function: flight biomechanics in island birds. **\$1500**. 2013
- Graduate Student Poster Presentation, Honorable Mention, Department of Biology Research Day, UNM. 2013
- Student Enrichment Opportunity, PiBBs, UNM. **\$550**. 2012
- Caughran Memorial Scholarship, Department of Biology, UNM: Towards a new island rule for birds. **\$2500**. 2012
- Program in Interdisciplinary Biological and Biomedical Sciences Fellowship. Fully funded tuition and graduate assistantship stipend for two years. 2011-2013
- American Ornithologists' Union Research Award: Towards a new island rule for birds. **\$1500**. 2010
- Caughran Memorial Scholarship, Department of Biology, UNM: Towards a new island rule for birds. **\$1000**. 2010
- American Ornithologists' Union Student Travel Award. **\$250**. 2009
- AMNH Frank M. Chapman Grant: Dispersal in bird populations of Trinidad, Tobago, and Venezuela. **\$1660**. 2009
- University of Florida Graduate Student Teaching Award. **\$500**. 2009

American Ornithologists' Union Student Travel Award. **\$200**. 2008
Riewald Memorial Research Grant, Department of Zoology, UF: Overwater dispersal in bird populations of Trinidad, Tobago, and Venezuela. **\$350**. 2007

FIELDWORK

MSB collecting expedition and dissertation research: Trinidad and Tobago 2013

Six weeks studying flight biomechanics and collecting and preparing bird specimens on both islands. I was solely responsible for organizing, obtaining funding, recruiting field assistants, and securing permits for the project.

MSB collecting expeditions: Peru 2009-2010, 2011

Three months in two expeditions collecting and preparing bird specimens in the Andes and Amazonia.

MSB & University of Alaska research and collecting expedition: Peru 2010

Five weeks banding and collecting blood samples from torrent ducks and collecting and preparing bird specimens in the Andes.

MSB bird surveys: New Mexico 2009-2010

Morning and evening surveys of birds along the Rio Grande to determine optimal placement of a high-tension power line.

FLMNH research expedition: Abaco, Bahamas 2009

One week collecting and sorting fossils and surveying birds and bats.

FLMNH collecting expedition: Trinidad and Tobago 2007, 2008

One month each summer collecting and preparing bird specimens on both islands.

FLMNH research expedition: St. John, U.S. Virgin Islands 2005, 2006

Three weeks each December conducting point count surveys to understand habitat usage by wintering migratory and resident birds.

Cerulean Warbler research project field assistant: Kentucky 2006

Three months nest searching, spot mapping, and conducting point count surveys and vegetation plot surveys as part of a study on the effects of logging on Cerulean Warbler populations and breeding success.

UF field school: Tobago 2005

One month conducting archeological excavations and vertebrate fauna surveys.

TEACHING (14 SEMESTERS TOTAL)

Humans and the Environment, UNM: I designed and taught an interdisciplinary upper-level undergraduate course with a graduate student co-instructor; Spring 2014

Ornithology teaching assistant, UNM, Fall 2013

Ecology and Evolution Lab teaching assistant, UNM, Spring 2011

Human Anatomy and Physiology Lab teaching assistant, UNM, Spring 2010, Fall 2014

Avian Biology teaching assistant, UF, Spring 2009

Vertebrate Zoology Lab teaching assistant, UF: In addition to teaching responsibilities, I trained other TAs, redesigned the laboratory to focus on active learning of concepts and skills, and co-authored a laboratory manual for the course. Fall 2006, 2007, and 2008

Functional Vertebrate Anatomy Lab teaching assistant, UF: In addition to teaching responsibilities, I revised the course lab manual to better include evolutionary concepts, created teaching models of vertebrate organs, and trained other TAs. Spring and Summer 2007 and 2008; Summer 2009

MENTORING

Ashley Smiley (Navajo Native American): physiological adaptation and maladaptation to high elevation in widespread Neotropical species. 2010-2014

Jonathan Morris: describing a new species of flightless rail from a fossil site in the Bahamas. 2009

Oona Takano: human-mediated extinctions of birds from a fossil site in Haiti. 2008-2009

Arinn Bolin: patterns of morphological evolution in Pacific island parrots. 2008-2009

EricaRose Egan (first generation college student); senior thesis: Genetic divergence between populations of birds on the islands of Trinidad and Tobago. 2007-2008

PRESENTATIONS (* indicates undergraduate co-author)

Wright, N.A., T.R. Gregory, and C.C. Witt. Metabolic 'engines' of flight drive genome size reduction in birds. Gordon Research Conference: Unifying Ecology Across Scales. Biddeford, ME. July 2014.

Wright, N.A., T.R. Gregory, and C.C. Witt. Metabolic 'engines' of flight drive genome size reduction in birds. Gordon Research Seminar: Unifying Ecology Across Scales. Biddeford, ME. July 2014.

Wright, N.A., and C.C. Witt. A new island rule for birds: evolution towards flightlessness. Evolution. Raleigh, NC. June 2014.

Wright, N.A., and C.C. Witt. A new island rule for birds: evolution towards flightlessness. 23rd UNM Biology Department Research Day. Albuquerque, NM. April 2014.

Grady, J., B. Enquist, E. Dettweiler-Robinson, **N.A. Wright**, and F.A. Smith. Untangling the energetics of fossil animals: evidence for mesothermy in dinosaurs. 23rd UNM Biology Department Research Day. Albuquerque, NM. April 2014.

Smiley, A.*, G. Williams*, **N.A. Wright**, and C.C. Witt. House Wrens at high elevation have enlarged hearts, thicker blood, and larger right ventricles. 23rd UNM Biology Department Research Day. Albuquerque, NM. April 2014.

Wright, N.A., T.R. Gregory, and C.C. Witt. Flight ability drives genome size reduction in birds. 131st Meeting of the American Ornithologists' Union & 83rd Meeting of the Cooper Ornithological Society, Chicago, IL. August 2013.

Smiley, A.*, G. Williams*, **N.A. Wright**, and C.C. Witt. Assessing hypoxic stress in high-Andean birds using right ventricular morphology. 131st Meeting of the American Ornithologists' Union & 83rd Meeting of the Cooper Ornithological Society, Chicago, IL. August 2013.

Wright, N.A., T.R. Gregory, and C.C. Witt. Genome size evolution and flight ability in birds. 22nd UNM Biology Department Research Day. Albuquerque, NM. March 2013.

Smiley, A.*, G. Williams*, **N.A. Wright**, and C.C. Witt. Avian cardiac morphology: right ventricular hypertrophy in high-Andean house wrens. Society for Advancement of Chicanos and Native Americans in Science. Seattle, WA. October 2012.

Wright, N.A., A.W. Kratter, D.W. Steadman, and C.C. Witt. Ecological determinants of flight muscle size across birds. 5th North American Ornithological Conference. Vancouver, British Columbia. August 2012.

Gunning, C., S. McNew, M. O'Donnell, and **N.A. Wright**. Spatiotemporal patterns of bird counts in Puerto Rico: A presentation of the UNM R Programming Group. 21st UNM Biology Department Research Day. Albuquerque, NM. March 2012.

- Smiley, A.*, G. Williams*, **N.A. Wright**, and C.C. Witt. Assessing hypoxic stress in high-Andean birds based on right ventricular morphology. 21st UNM Biology Department Research Day. Albuquerque, NM. March 2012.
- Wright, N.A.** An island rule for avian flight muscles. 129th Meeting of the American Ornithologists' Union. Jacksonville, FL. July 2011.
- Smiley, A.*, G. Williams*, **N.A. Wright**, and C.C. Witt. Cardiac morphology as an indicator of hypoxic stress in high-Andean birds. 129th Meeting of the American Ornithologists' Union. Jacksonville, FL. July 2011.
- Smiley, A.*, G. Williams*, **N.A. Wright**, and C.C. Witt. Effects of high-altitude hypoxia on cardiac morphology in Andean birds. 20th UNM Biology Department Research Day. Albuquerque, NM. April 2011.
- Wright, N.A.**, and D.W. Steadman. Gene flow and divergence in birds on the islands of Trinidad and Tobago. 127th Meeting of the American Ornithologists' Union, Philadelphia, PA. August 2009.
- Takano, O.*, D.W. Steadman, and **N.A. Wright**. Late Quaternary non-passerine bird species on Hispaniola. UF Department of Biology Undergraduate Research Symposium. April 2009.
- Green, R.*, R.T. Kimball, and **N.A. Wright**. Analysis of RUNX2 gene's influence on bill length within select avian groups. UF Department of Biology Undergraduate Research Symposium. April 2009.
- Wright, N.A.**, D.W. Steadman, and E.A. Egan*. Morphological and genetic differences between the populations of birds on the islands of Trinidad and Tobago. 126th Meeting of the American Ornithologists' Union, Portland, OR. August 2008.
- Egan, E.A.* and **N.A. Wright**. Genetic divergence between populations of birds on the islands of Trinidad and Tobago. UF Department of Zoology Undergraduate Research Symposium. April 2008.
- Wright, N.A.** and D.W. Steadman. Flight muscle sizes of columbids and rails. 125th Meeting of the American Ornithologists' Union, Laramie, WY. August 2007.

MEMBERSHIP IN PROFESSIONAL SOCIETIES

American Ornithologists' Union, Society for Integrative and Comparative Biology, Society for the Study of Evolution

PROFESSIONAL SERVICE

American Ornithologists' Union Committee on Bird Collections. 2008-2013
Reviewer for *The Auk*, *Evolution*, and *Ibis*.

DEPARTMENTAL SERVICE

Graduate student representative on the Biology department undergraduate policy committee. 2013-2014
Graduate student representative on the Biology department graduate selection committee. 2012-2014
Graduate student representative on the BUGS-BGSA mentoring program. 2012-2013

OUTREACH

I write blog posts on evolution, ecology, fieldwork, and being a woman in science for the UNM BioBlog (<http://unm-bioblog.blogspot.com/>). Several of my essays are being used in high school biology classrooms in Albuquerque.

Advised a high school student on his science fair project. Fall 2012

Visited Rio Grande High School biology classes with museum specimens to teach about birds, ecology, and evolution. May 2012

Kindergarten tour of the Museum of Southwestern Biology. Nov 2011

Albuquerque BioPark International Migratory Bird Day Celebration: taught visitors at the zoological park and botanical gardens about local birds and museum bird collections. May 2010

FLMNH Hummingbird Challenge Fossil Dig at Thomas Farm: presented my research and taught citizen scientists about paleontology. Each April 2006-2010

FLMNH Darwin Day Celebration: taught museum visitors about adaptive radiation using specimens of tropical birds. Feb 2009

FLMNH Open House: spoke with museum visitors about FLMNH ornithology department's research projects and collections. Sep 2007