

## Natalie A. Wright

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<http://wrightlab.org/>

### EDUCATION

- 2015 Ph.D. *with distinction*, Biology, concentration in Interdisciplinary Biology  
University of New Mexico  
Advisor: Christopher C. Witt  
Committee: James Brown, Jeffrey Long, Blair Wolf
- 2009 M.S. Zoology, University of Florida  
Advisor: David W. Steadman  
Committee: Rebecca Kimball, Scott Robinson
- 2005 B.S. Zoology, University of Florida  
*Summa cum laude* in Zoology; minor in English

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### RESEARCH AND MUSEUM APPOINTMENTS

<b>University of Montana Division of Biological Sciences</b> , Missoula, MT	
Drollinger-Dial Postdoctoral Fellow in Functional Ecology	2015-present
<b>Museum of Southwestern Biology (MSB)</b> , Albuquerque, NM	
Ornithology Curatorial Assistant; Ph.D. research	2009-2015
Herpetology Curatorial Assistant	2009
<b>Florida Museum of Natural History (FLMNH)</b> , Gainesville, FL	2004-2009
Ornithology Collections Assistant	

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### PUBLICATIONS

IN PEER-REVIEWED JOURNALS (\* indicates undergraduate co-author)

- Wright, N. A.**, D. W. Steadman, and C. C. Witt. 2016. Predictable evolution toward flightlessness in volant island birds. *Proceedings of the National Academy of Sciences* 113:4765-4770.
- 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.

#### BOOK CHAPTERS AND OTHER PUBLICATIONS

- Claramunt, S., and **N. A. Wright**. In press. Using museum specimens to study flight and dispersal. *Studies in Avian Biology: Emerging Frontiers in Collections-based Ornithological research: the Extended Specimen*. Ed. Michael S. Webster. CRC Press.
- Wright, N. A.** 2015. The Effects of Ecology and Evolution on Avian Flight Morphology. Ph.D. Dissertation, University of New Mexico.
- 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.

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#### AWARDS, FELLOWSHIPS, AND GRANTS

##### AWARDS AND FELLOWSHIPS

- Huey Award for Best Student Presentation, Society for Integrative and Comparative Biology, Division of Ecology and Evolution. 2016
- Outstanding Graduate Student of the Year Award, Department of Biology, UNM. 2014-2015
- Best Graduate Student Oral Presentation, 23<sup>rd</sup> UNM Biology Research Day. 2014
- Honorable Mention, Graduate Student Poster Presentation, 22<sup>nd</sup> UNM Biology Research Day. 2013
- Program in Interdisciplinary Biological and Biomedical Sciences Fellowship. Fully funded tuition and graduate assistantship stipend for two years. 2011-2013

##### GRANTS (TOTAL: \$36,652)

###### 2016

Animal Welfare Institute Refinement Grant: Enriching habitat to ameliorate 3D use of space in aviaries (co-PI with Bret Tobalske). **\$7500**

###### 2014

Gordon Research Conference Unifying Ecology Across Scales Young Scientist Mentoring Program. **\$1300**

Student Enrichment Opportunity, PiBBs, UNM. **\$1600**

Grove Summer Research Scholarship Award, Department of Biology, UNM: The effects of ecology and evolution of avian flight morphology. **\$2000**

2013

NSF Doctoral Dissertation Improvement Grant: The effects of ecology and evolution of avian flight morphology. **\$14,742**

Department of Biology Scholarship Award, UNM: Linking geographic variation with function: flight biomechanics in island birds. **\$1500**

2012

Student Enrichment Opportunity, PiBBs, UNM. **\$550**

Caughran Memorial Scholarship, Department of Biology, UNM: Toward a new island rule for birds. **\$2500**

2010

American Ornithologists' Union Research Award: Toward a new island rule for birds. **\$1500**

Caughran Memorial Scholarship, Department of Biology, UNM: Towards a new island rule for birds. **\$1000**

2009

American Ornithologists' Union Student Travel Award. **\$250**

AMNH Frank M. Chapman Grant: Dispersal in bird populations of Trinidad, Tobago, and Venezuela. **\$1660**

2008

American Ornithologists' Union Student Travel Award. **\$200**

2007

Riewald Memorial Research Grant, Department of Zoology, UF: Overwater dispersal in bird populations of Trinidad, Tobago, and Venezuela. **\$350**

**TEACHING****AWARDS**

University of Florida Graduate Student Teaching Award. 2009

**INSTRUCTOR**

Humans and the Environment, University of New Mexico (Spring 2014): I designed and taught this interdisciplinary upper-level undergraduate course in collaboration with a fellow graduate student, Louis Alvarado.

**TEACHING ASSISTANT (13 SEMESTERS)**

Ornithology, University of New Mexico (Fall 2013)

Ecology and Evolution Lab, University of New Mexico (Spring 2011)

Human Anatomy and Physiology Lab, University of New Mexico (Spring 2010, Fall 2014)

Avian Biology, University of Florida (Spring 2009)

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

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

**GUEST LECTURER**

Ornithology, University of New Mexico (Fall 2013): Island Evolution  
 Ornithology, University of New Mexico (Fall 2013): Adaptive Radiations  
 Avian Biology, University of Florida (Spring 2009): Flightlessness and Flightless Locomotion  
 Functional Vertebrate Anatomy, University of Florida (Summer 2009): Biomechanics of Flight  
 Vertebrate Zoology, University of Florida (Fall 2007, Fall 2008): Avian Diversity

**TEXTS**

**Wright, N. A.**, S. A. Hilber, and R. Darner. 2008. Vertebrate Zoology Laboratory Manual for the University of Florida, Gainesville, FL.

**EDUCATION TRAINING**

Integrative Inventories: a semester course on designing specimen-based, active learning teaching modules for undergraduate biology classes (Fall 2010)  
 Life Science Instruction at the University Level: a semester course on inquiry-based and active learning teaching techniques (Spring 2008)

**MENTORING**

Christine Peterson: ontogeny of flight in songbirds (2016-present)  
 Ashley Smiley (Navajo Native American), senior thesis: physiological adaptation and maladaptation to high elevation in widespread Neotropical species (2010-2014)  
 Jonathan Morris: described 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)

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**PRESENTATIONS**
**INVITED PRESENTATIONS**Upcoming

**Wright, N.A.** The effects of predation on bird flight. Department of Biological Sciences, Universidad de los Andes, Bogotá, Colombia (November 2016)

**Wright, N.A.**, D.W. Steadman, B.W. Tobalske, and C.C. Witt. Evolution toward flightlessness in volant island birds. Symposium: Ornitología evolutiva, Congreso Colombiano de Ornitología, Medellín, Colombia (November 2016)

2016

**Wright, N.A.**, D.W. Steadman, B.W. Tobalske, and C.C. Witt. A new island rule for birds: evolution toward flightlessness. Symposium: Huey Award Competition, Society for Integrative and Comparative Biology meeting, Portland, OR (**winner of the Huey Award**)

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, Maine

2013

**Wright, N.A.**, T.R. Gregory, and C.C. Witt. Flight ability drives genome size reduction in birds. Symposium: Emerging Frontiers in Collections-based Ornithological research: the Extended Specimen. American Ornithologists' Union & Cooper Ornithological Society meetings, Chicago, IL (presented by C.C. Witt due to injury)

**CONTRIBUTED PRESENTATIONS** (\* indicates undergraduate co-author)2016

**Wright, N.A.**, C.C. Witt, and B.W. Tobalske. Take-off mechanics in island birds: Functional consequences of evolution toward flightlessness. Society for Integrative and Comparative Biology meeting, Portland, OR

2014

**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

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

**Wright, N.A.**, and C.C. Witt. A new island rule for birds: evolution towards flightlessness. 23<sup>rd</sup> UNM Biology Department Research Day, Albuquerque, NM

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. 23<sup>rd</sup> UNM Biology Department Research Day, Albuquerque, NM

2013

Smiley, A.\*, G. Williams\*, **N.A. Wright**, and C.C. Witt. Assessing hypoxic stress in high-Andean birds using right ventricular morphology. American Ornithologists' Union & Cooper Ornithological Society meetings, Chicago, IL

**Wright, N.A.**, T.R. Gregory, and C.C. Witt. Genome size evolution and flight ability in birds. 22<sup>nd</sup> UNM Biology Department Research Day, Albuquerque, NM

2012

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 meeting, Seattle, WA

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

Smiley, A.\*, G. Williams\*, **N.A. Wright**, and C.C. Witt. Assessing hypoxic stress in high-Andean birds based on right ventricular morphology. UNM Biology Department Research Day, Albuquerque, NM

2011

**Wright, N.A.** An island rule for avian flight muscles. American Ornithologists' Union meeting, Jacksonville, FL

Smiley, A.\*, G. Williams\*, **N.A. Wright**, and C.C. Witt. Cardiac morphology as an indicator of hypoxic stress in high-Andean birds. American Ornithologists' Union meeting, Jacksonville, FL

Smiley, A.\*, G. Williams\*, **N.A. Wright**, and C.C. Witt. Effects of high-altitude hypoxia on cardiac morphology in Andean birds. UNM Biology Department Research Day, Albuquerque, NM

2009

**Wright, N.A.**, and D.W. Steadman. Gene flow and divergence in birds on the islands of Trinidad and Tobago. American Ornithologists' Union meeting, Philadelphia, PA

Takano, O.\*, D.W. Steadman, and **N.A. Wright**. Late Quaternary non-passerine bird species on Hispaniola. UF Department of Biology Undergraduate Research Symposium, Gainesville, FL

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, Gainesville, FL

2008

**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. American Ornithologists' Union meeting, Portland, OR

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, Gainesville, FL

2007

**Wright, N.A.** and D.W. Steadman. Flight muscle sizes of columbids and rails. American Ornithologists' Union meeting, Laramie, WY

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**MEMBERSHIP IN PROFESSIONAL SOCIETIES**

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

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**PROFESSIONAL SERVICE**

**GRANT REFEREE**

The Marsden Fund, The Royal Society of New Zealand

**JOURNAL REFEREE**

*The Auk*

*Molecular Phylogenetics and Evolution*

*Proceedings of the National Academy of Sciences*

*Evolution*

*Ibis*

*Canadian Journal of Zoology*

**SOCIETAL AND DEPARTMENTAL SERVICE**

American Ornithologists' Union Committee on Bird Collections. 2008-2013

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

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**FIELDWORK EXPERIENCE**2016

Postdoctoral research: University of Montana flight biomechanics of developing juvenile and adult altricial birds, Arizona

Postdoctoral research: University of Montana flight biomechanics of developing juvenile and adult altricial birds, Kinabalu Park, Malaysia

2013

Expedition leader and dissertation research: Museum of Southwestern Biology bird collecting expedition and biomechanics research, Trinidad and Tobago

2011

Field assistant and dissertation research: Museum of Southwestern Biology bird collecting expedition, Peru (throughout the Andes and Amazonia)

Field assistant: Museum of Southwestern Biology migrating and wintering bird surveys, Rio Grande, New Mexico

2010

Field assistant and dissertation research: Museum of Southwestern Biology bird collecting expedition, Apurímac, Peru

Expedition co-leader and dissertation research: University of Alaska torrent duck sampling and Museum of Southwestern Biology bird collecting expedition, Apurímac, Peru

Field assistant and dissertation research: Centro de Ornitología y Biodiversidad bird collecting expedition, Tumbes, Peru

Field assistant: Museum of Southwestern Biology migrating and wintering bird surveys, Rio Grande, New Mexico

2009

Field assistant: Florida Museum of Natural History paleontological excavation and avifauna surveys, Abaco, Bahamas

2008

M.S. research: Florida Museum of Natural History bird collecting expedition, Trinidad and Tobago

2007

M.S. research: Florida Museum of Natural History bird collecting expedition, Trinidad and Tobago

2006

Field assistant: University of Kentucky Cerulean Warbler nest monitoring and avifauna surveys, Kentucky

Field assistant: Florida Museum of Natural History avifauna surveys, St. John, U.S. Virgin Islands

2005

Field assistant: Florida Museum of Natural History avifauna surveys, St. John, U.S. Virgin Islands

Student: University of Florida archeology and zoology field school, Trinidad and Tobago

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**OUTREACH**

Action group facilitator for the GUTS! (Girls Understanding Their Strengths) program through the Missoula YWCA. 2016-present

Social Media manager for University of Montana Flight Lab. This includes updating the Facebook page, which educates via photos, videos, and descriptions of ongoing research. 2016-present  
Host tours of the University of Montana Flight Lab for school groups. 2015-present  
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.  
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  
Host tours of the Museum of Southwestern Biology. 2009-2015  
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  
Florida Museum of Natural History Hummingbird Challenge Fossil Dig at Thomas Farm: presented my research and taught citizen scientists about paleontology. Each April 2006-2010  
Florida Museum of Natural History Darwin Day Celebration: taught museum visitors about adaptive radiation using specimens of tropical birds. Feb 2009  
Florida Museum of Natural History Open House: spoke with museum visitors about FLMNH ornithology department's research projects and collections. Sep 2007

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#### REFERENCES

Bret Tobalske, Associate Professor and Director of Field Research Station | Division of Biological Sciences | University of Montana  
bret.tobalske@mso.umt.edu  
Postdoc advisor

Christopher Witt, Associate Professor and Curator of Birds | Department of Biology and Museum of Southwestern Biology | University of New Mexico  
cwitt@unm.edu  
Ph.D. advisor

Jeffrey Long, Professor | Department of Anthropology | University of New Mexico  
jlo@unm.edu  
Ph.D. committee member

Louis Alvarado, Assistant Professor | Department of Anthropology | SUNY-Albany  
lalvarado@albany.edu  
Teaching collaborator

David Steadman, Curator of Birds | Florida Museum of Natural History | University of Florida  
dws@flmnh.ufl.edu  
M.S. advisor