

Shawn M. Billerman, Ph.D.
Cornell Lab of Ornithology
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Education

University of Wyoming, Laramie, WY
Ph.D., Ecology, Department of Zoology and Physiology and Program in Ecology, August 2016
Advisor: Matthew D. Carling, PhD

Cornell University, Ithaca, NY
B.S., Biological Sciences, Conc. Ecology and Evolutionary Biology, *Cum Laude*, with High Honors
in Research, May 2009

Employment

Research Assistant – Irby J. Lovette and David W. Winkler [September 2009 – December 2010]
Cornell Lab of Ornithology, Ithaca, NY

Worked to compile information and to write accounts on the bird families and orders of the world, including evolution, systematics, ecology, and behavior, which is part of a forthcoming book on the bird families of the world.

Field Assistant – Nathan R. Senner [January 2010]

Cornell University, Ithaca, NY

Winter field assistant position that involved fieldwork on Isle de Chiloe, Chile. I was part of a field crew that was studying population demography of Whimbrels (*Numenius phaeopus*) and Hudsonian Godwits (*Limosa haemastica*), which involved cannon netting and banding birds, and field surveys to detect banded birds. This is part of a larger project to determine survivorship of large shorebirds.

Field Assistant – Nathan R. Senner [Summer 2009 and Summer 2010]

Cornell University, Ithaca, NY

Summer field assistant position that involved fieldwork in Churchill, Manitoba. I was part of a field crew that was studying Hudsonian Godwits (*Limosa haemastica*), which involved nest searching, banding, habitat surveys, and insect surveys. This is part of a larger project to investigate how global climate change may affect the Hudsonian Godwit. Demography of Whimbrels (*Numenius phaeopus*) was also studied.

Research Intern – Irby J. Lovette [Summer 2008]

Cornell University, Ithaca, NY

Summer research position in the Fuller Evolutionary Biology Laboratory; studied the population genetics of a recent colonization event of Barn Swallows

Hughes Research Scholar [Summer 2007]

Cornell University, Ithaca, NY

Summer program to offer research experience to undergraduates, while receiving a stipend; studied the population genetics of a recent colonization event of Barn Swallows (*Hirundo rustica*) in Argentina.

Teaching Experience

Teaching Assistant – John Willford [Fall 2014]

University of Wyoming, Laramie, WY

Graduate teaching assistant for lab portion of University of Wyoming's introductory Biology course for Biology majors (LIFE program)

Teaching Assistant – Matthew D. Carling [Spring 2011]

University of Wyoming, Laramie, WY

Graduate teaching assistant for lab portion of the University of Wyoming's Ornithology course.

Teaching Assistant – Harry W. Greene [Spring 2009]

Cornell University, Ithaca, NY

Undergraduate teaching assistant involved with teaching students in Cornell's Herpetology course. This course includes both a lecture and lab component.

Teaching Assistant – David W. Winkler [Spring 2008]

Cornell University, Ithaca, NY

Undergraduate teaching assistant involved with teaching students in Cornell's Ornithology course. This includes both a lecture and lab component.

Publications

Billerman, S. M., B. R. Jesmer, A. G. Watts, P. Schlichting, S. Micheletti, R. Bergamini, M-J Fortin, W. C. Funk, P. Hapeman, E. L. Muths, and M. A. Murphy. Testing metapopulation conditions in boreal chorus frogs (*Pseudacris maculata*) using spatial genotypic data. To be submitted to *American Naturalist* – *in preparation*

1. **Billerman, S. M.**, G. H. Huber, D. W. Winkler, R. J. Safran, and I. J. Lovette (2011) Population genetics of the recent transcontinental colonization of South America by breeding Barn Swallows. *The Auk*, 128(3) 506-513
2. Dor, R., I. J. Lovette, R. J. Safran, **S. M. Billerman**, G. H. Huber, Y. Vortman, A. Lotem, A. McGowan, M. R. Evans, and C. B. Cooper (2011) Low variation in the polymorphic *Clock* gene poly-Q region across Barn Swallow (*Hirundo rustica*) populations. *PLoS ONE*, 6(12) e28843
3. Watts, A. G., P. Schlichting, **S. M. Billerman**, B. Jesmer, S. Micheletti, M-J Fortin, W. C. Funk, P. Hapeman, E. L. Muths, and M. A. Murphy (2015) How spatio-temporal habitat connectivity affects amphibian population structure. *Frontiers in Genetics*, 6(275)
4. Winkler, D. W., **S. M. Billerman**, and I. J. Lovette (2015) *Bird Families of the World: An Invitation to the Spectacular Diversity of Birds*. Lynx Edicions, Barcelona, and Cornell Lab of Ornithology, Ithaca
5. **Billerman, S. M.**, M. A. Murphy, and M. D. Carling (2016) Changing climate mediates sapsucker (*Aves: Sphyrapicus*) hybrid zone movement. *Ecology and Evolution*, 6(22) 7976-7990
6. **Billerman, S. M.** and M. D. Carling (2017) Differences in aggressive responses do not contribute to shifts in a sapsucker hybrid zone. *The Auk: Ornithological Advances* 134(1) 202-214

Collections-Based Experience

Organization – Expeditions [2012]

Helped organize and coordinate field collecting expedition to sample the Red-naped and Red-breasted Sapsucker hybrid zone, with additional general collecting, in California, Oregon, and Washington

Specimen Preparation [2006-Present]

Prepared sapsucker series of round-skins for morphometric and color analysis.
Experience with preparing round-skins, skeletons, and fluid-specimens of birds

Curatorial Assistant [Spring 2015]

University of Wyoming, Laramie, WY

Helped maintain collections, including fluid specimens of the herpetology collection. Also helped inventory and catalogue specimens, including updating the ARCTOS database for the University of Wyoming Museum of Vertebrates.

Grants and Awards

- 2016 Postdoctoral Research Fellowship in Biology, National Science Foundation [2016-2018]
- 2015 Frank M. Chapman Memorial Fund, American Museum of Natural History
Student Travel Award, American Ornithologists' Union
AOU Council Award for Outstanding Student Presentation, American Ornithologists' Union
- 2014 A. Brazier Howell Award for Outstanding Student Presentation, Cooper Ornithological Society
George E. Menkens Memorial Scholarship, University of Wyoming Dept. Zoo/Phys [2015-2016]
- 2013 Student Research Award, American Ornithologists' Union
L. Floyd Clarke Graduate Scholar Award, University of Wyoming Dept. Zoo/Phys
- 2012 South Shore Audubon Scholarship
Sigma Xi Grant-in-Aid of Research
Frank M. Chapman Memorial Fund, American Museum of Natural History
L. Floyd Clarke Graduate Scholar Award, University of Wyoming Dept. Zoo/Phys
- 2011 Graduate Research Fellowship, National Science Foundation [2011-2014]
- 2007 Dextra Undergraduate Research Endowment
Marcia Brady Tucker Student Travel Award, American Ornithologists' Union

Presentations

- 2016 **Billerman, S. M.** and M. D. Carling. *An Integrative Approach to Understanding Hybrid Zone Movement and Introgression in Sphyrapicus Woodpeckers*, North American Ornithological Conference, Washington, D.C.
- Billerman, S. M.** and M. D. Carling. *An Integrative Approach to Understanding Hybrid Zone Movement and Introgression in Sphyrapicus Woodpeckers*, Annual meeting of SSE/SSB/ASN, Austin, TX
- 2015 **Billerman, S. M.** and M. D. Carling. *Genetic Structure of a Sapsucker Hybrid Zone*, Annual meeting of the AOU/COS, Norman, OK
- 2014 **Billerman, S. M.** and M. D. Carling. *Behavioral Influences on a Sapsucker Hybrid Zone*, Annual meeting of the AOU/COS, Estes Park, CO
- 2013 **Billerman, S. M.**, M. A. Murphy, and M. D. Carling. *Spatial Change in a Sapsucker Hybrid Zone*. Annual meeting of the AOU/COS, Chicago, IL

- Billerman, S. M.**, B. R. Jesmer, A. G. Watts, P. Schlichting, S. Micheletti, R. Bergamini, M-J. Fortin, W. C. Funk, P. Hapeman, E. L. Muths, and M. A. Murphy. *Testing Metapopulation Conditions with Genotypic Data: A Case Study using Boreal Chorus Frogs*. Annual Meeting of US Regional Association of the International Association for Landscape Ecology, Austin, TX
- 2012 **Billerman, S. M.** and M. D. Carling. *Spatial Change in the Red-naped/Red-breasted Sapsucker Hybrid Zone*. North American Ornithological Conference, Vancouver, BC
- 2011 **Billerman, S. M.** *Bird Biology and Field Work: A Day in the Life of a Field Researcher*. Queens County Bird Club, NY
Public Lecture
- 2009 **Billerman, S. M.**, G. H. Huber, R. J. Safran, and I. J. Lovette. *Population Genetics of the Recent Transcontinental Colonization of South America by Breeding Barn Swallows*. Annual meeting of the AOU, Philadelphia, PA
- 2008 **Billerman, S. M.**, G. H. Huber, R. J. Safran, and I. J. Lovette. *Population Genetics of a Recent Colonization Event of Barn Swallows in Argentina*. Annual meeting of the AOU/COS, Portland, OR – *Poster*
- 2007 **Billerman, S. M.**, G. H. Huber, R. J. Safran, and I. J. Lovette. *Population Genetics of a Recent Colonization Event of Barn Swallows in Argentina*. Annual meeting of the AOU, Laramie, WY – *Poster*

Professional Service and Outreach

Member: American Ornithologists Union Student Affairs Committee, 2014-2016; Program in Ecology Student Symposium Committee, 2014; Program in Ecology Student Co-President, 2012-2013; Laramie Audubon Society Board, 2011-2016

Outreach: Wyoming eBird editor, 2010-Present; Laramie Audubon Society field trip leader, 2011-2016; Cornell Herpetology Club Education Outreach Programs, 2006-2010; Cayuga Bird Club Field Trip Leader, 2007-2010; Christmas Bird Counter, 2000-Present; Bird banding study on Fire Island, NY, investigating the role of migratory songbirds in carrying ticks that may carry Lyme's Disease, 1998-2004

Professional Societies: American Ornithologists' Union, 2007-2016; Wilson Ornithological Society, 2009-Present; Society for the Study of Evolution, 2012-Present; Society of Systematic Biologists, 2012-Present; US Regional Association of the International Association for Landscape Ecology, 2013-Present; American Ornithological Society, 2016-Present