

# Sean T. Giery

Department of Biology  
Pennsylvania State University  
313 Mueller Lab  
University Park, PA 16802  
(845) 527-4501  
stgiery@gmail.com

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## Education

- 2016 **Ph.D., Applied Ecology**, *North Carolina State University*, Raleigh, NC.
- 2009 **M.S., Botany**, *University of Hawaii at Manoa*, Honolulu, HI.
- 2002 **B.S., Environmental and Forest Biology**, *State University of New York College of Environmental Science and Forestry*, Syracuse, NY.

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## Professional Experience

- 2019-present **Eberly Research Fellow**, *Pennsylvania State University*, State College, PA.
- 2017-2019 **Postdoctoral Researcher**, *University of Connecticut*, Storrs, CT.
- 2015-2016 **Climate Science Fellow**, *USGS Southeast Climate Science Center*, Raleigh, NC.
- 2004-2007 **Endangered Species & Wetland Specialist**, *Environmental Resource Specialists*, NY.
- 2002-2004 **Research Assistant**, *Institute of Ecosystem Studies*, Millbrook, NY.

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## Publications (Published & in press: 29, First author: 12, In review: 2)

(† undergraduate authors)

- In Press Reynolds, R.G., and **S.T. Giery**. Amphibians of The Bahamas and Turks & Caicos Islands. in H. Heatwole & N. Rios-Lopez, eds. *Amphibian Biology* Volume 9(4).
- 2019 **Giery, S.T.**, and C.A. Layman. Ecological consequences of sexual selection: An eco-evolutionary perspective. *The Quarterly Review of Biology* 94(1):1-46.
- 2019 Stroud, J.T., **S.T. Giery**, M.O. Outerbridge, and K.J. Feeley. Priority effects influence asymmetrical assembly patterns of novel ecological communities. *Ecology* 100(8): e02727.
- 2019 **Giery, S.T.**, Pita-Aquino, J.N., Kolbe, J. and J. Piovio-Scott. Mourning Geckos (*Lepidodactylus lugubris*) established on Abaco Island, The Bahamas. *Reptiles & Amphibians, Conservation and Natural History* 26(2):161-162.
- 2019 Simpson, S., Stroud, J.T., **Giery S.T.**, and C.J. Thawley. *Anolis sagrei* (Brown Anole). Predation. *Herpetological Review* 50(2):362-363
- 2019 Maurer, A.S., C. Thawley, A.F. Fireman†, **S.T. Giery**, and J.T. Stroud. Nocturnal activity of Antiguan lizards under artificial light. *Herpetological Conservation & Biology* 14(1):105-110.
- 2019 **Giery, S.T.**, and J.T. Stroud. Geographic variation in trophic ecology of the Brown anole (*Anolis sagrei*): species-rich communities are composed of more diverse populations. *Anolis Newsletter VII*, p. 76-100. Eds. Stroud, J.T., Geneva, A.J., Losos, J.B. Washington University, St. Louis MO.

- 2018 **Giery, S.T.** Evolutionary community ecology: from coexistence to coevolution. Book Review: McPeck, M. 2017. Evolutionary Community Ecology. Princeton University Press. *Ecology* 99(5):1247-1249.
- 2017 **Giery, S.T.**, and C.A. Layman. Dissolved organic carbon and unimodal variation in sexual signal coloration in mosquitofish: a role for light limitation? *Proceedings of the Royal Society London B* 284:20170163.
- 2017 **Giery, S.T.**, E. Vezzanni†, S. Zona, and J.T. Stroud. Frugivory and seed dispersal by the invasive knight anole (*Anolis equestris*) in Florida, USA. *Food Webs* 11:13-16.
- 2017 Rossi, R.E., **S.T. Giery**, E.W. Bonnema†, A.L. Todd†, and C.A. Layman. Characterizing trophic ecology of the checkered puffer (*Sphoeroides testudineus*). *Latin American Journal of Aquatic Research* 45(5):1075-1078.
- 2017 Stroud, J.T., **S.T. Giery**, and M. Outerbridge. Brown anoles (*Anolis sagrei*) on Bermuda: a novel ecological threat to the endangered Bermudian skink. *Biological Invasions* 19(6):1723–1731.
- 2017 **Giery, S.T.**, D. Richard†, and J.T. Stroud. Introduction of eastern narrow-mouthed frog to Abaco Island, The Bahamas, and notes on their current distribution in the Greater Caribbean. *Reptiles & Amphibians, Conservation and Natural History* 24(2):139-141.
- 2016 Reynolds, R.G., **S.T. Giery**, W.A.M. Jesse†, and Q.N. Quach. A preliminary analysis of road mortality in the Northern Bahamas Boa, *Chilabothrus exsul*. *Caribbean Naturalist* 34:1-9.
- 2016 Stroud, J.T., M. Outerbridge, and **S.T. Giery**. 2016. First specimen of an American Green Anole (*Anolis carolinensis*) on the oceanic island of Bermuda, with a review of the species' current global distribution. *Reptiles & Amphibians, Conservation and Natural History* 23(3):188-190.
- 2016 Stroud, J.T., and **S.T. Giery**. Nesting behavior of introduced brown basilisks (*Basiliscus vittatus*) in South Florida. *Reptiles & Amphibians, Conservation and Natural History* 23(2):104–107.
- 2015 **Giery, S.T.**, and C.A. Layman. Interpopulation variation in condition dependent signaling: predator regime affects signal information. *The American Naturalist* 186:187-195.
- 2015 **Giery, S.T.**, C.A. Layman, and R.B. Langerhans. Anthropogenic ecosystem fragmentation drives shared and unique patterns of sexual signal divergence among three species of Bahamian mosquitofish. *Evolutionary Applications* 8:679-691.
- 2015 Layman, C.A., **S.T. Giery**, S. Buhler, R. Rossi, T. Penland, M. Henson, A. Bogdanoff, M. Cove, A. Irizarry, C. Schalk, and S. Archer. A primer on the history of food web ecology: fundamental contributions of thirteen researchers. *Food Webs* 4:14-24.
- 2015 Chacin, D.H.†, **S.T. Giery**, L. Yeager, C.A. Layman, and R.B. Langerhans. Does hydrological fragmentation affect coastal bird communities? A study from Abaco Island, The Bahamas. *Wetland Ecology and Management* 23:551–557.
- 2014 Araújo, M.S., R.B. Langerhans, **S.T. Giery**, and C.A. Layman. Ecosystem fragmentation drives increased diet variation in an endemic live-bearing fish of The Bahamas. *Ecology and Evolution* 4:3298-3308.
- 2014 Lemoine, N., **S.T. Giery**, and D. Burkepile. Body size and diet constraints on arthropod stoichiometry at local and global scales. *Oecologia* 174:1367-1376.
- 2014 Gallagher, A.J., D.S. Shiffman, **S.T. Giery**, and N. Hammerschlag. Evolved for extinction? The price of specialization in apex marine predators. *BioScience* 64(7):619-624.

- 2013 **Giery, S.T.**, N.P. Lemoine, C.M. Hammerschlag-Peyer, R.N. Abbey-Lee, and C.A. Layman. Bidirectional trophic linkages couple canopy and understorey food webs. *Functional Ecology* 27:1436–1441.
- 2013 Stroud, J.T., and **S.T. Giery**. *Anolis equestris* (Cuban Knight Anole). Nocturnal activity. *Herpetological Review* 44(4):660-661.
- 2012 **Giery, S.T.** First records of the red corn snake (*Pantherophis guttata*) from Abaco Island, The Bahamas, and notes their current distribution in the greater Caribbean region. *Reptiles & Amphibians, Conservation and Natural History* 20(1):36-39.
- 2011 Luzar, J.B., K.M. Silvius, H. Overman, **S.T. Giery**, J.M. Read, and J.M.V. Fragoso. Large-scale environmental monitoring by indigenous peoples. *BioScience* 61:771-781.
- 2010 Read, J.M., J.M.V. Fragoso, K.M. Silvius, J. Luzar, H. Overman, A. Cummings, **S.T. Giery**, and L.F. de Oliveira. Space place and hunting patterns among indigenous peoples of the Guyanese Rupununi region. *Journal of Latin American Geography* 9:213-243.
- 2007 **Giery, S.T.**, and R.S. Ostfeld. The role of lizards in the ecology of Lyme disease in two endemic zones of the northeastern United States. *Journal of Parasitology* 93:511-517.

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### Grants and Fellowships

- 2019 **Eberly Research Fellowship**, *Pennsylvania State University. Eberly College of Science, Department of Biology*. Ecological consequences of evolving fitness.
- 2017 **Center for Environmental Science & Engineering**, *University of Connecticut* \$7,000.  
Does nutrient limitation regulate the strength of predation-prey relationships in vernal ponds?
- 2015 **United States Geological Survey**, *Southeast Climate Science Center* \$12,000.  
Global Change Fellowship.
- 2015 **Bermuda Department of Conservation**, *Bermuda Zoological Society* \$3,000.  
Ecological overlap between invasive brown anoles (*Anolis sagrei*) and Bermuda skinks.
- 2014 **Bermuda Department of Conservation**, *Bermuda Zoological Society* \$3,000.  
Mapping the distribution of invasive brown anoles (*Anolis sagrei*) on Bermuda.
- 2014 **National Science Foundation**, *Doctoral Dissertation Improvement Grant* \$16,322.  
Divergent sexual selection and behavioral isolation due to anthropogenic ecosystem fragmentation.
- 2014 **NCSU CNR & CALS Cross-College Enrichment Program**, *not funded*.  
Sustainable land use in an increasingly urbanized world.
- 2012 **American Society of Ichthyologists and Herpetologists**, *Raney Award* \$1000.  
Effects of fragmentation-mediated predator extirpation on sexual selection in Bahamian mosquitofish.
- 2012 **Florida International University**, *Dissertation Evidence Acquisition Grant* \$8,500  
Effects of fragmentation-mediated predator extirpation on sexual selection in Bahamian mosquitofish.
- 2011 **Florida International University**, *SEEDS Grant* \$25,000.  
Evolutionary change in Bahamian mosquitofish: anthropogenic drivers of divergent selection environments.

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### Invited Seminars

- 2019 **Pennsylvania State University, State College, PA.**  
Understanding the causes of phenotypic diversification.
- 2019 **Southeastern Missouri State University, Cape Girardeau, MO.**  
From carbon to competition: Understanding the causes of phenotypic diversity.
- 2018 **Brown University, Providence, RI.**  
Ecological interference and niche variation in a generalist lizard, *Anolis sagrei*.
- 2017 **McGill University, Redpath Museum, Montreal, Quebec.**  
*Eco-evolutionary dynamics of sexual selection.*
- 2017 **University of Connecticut, Storrs, CT.**  
Evolutionary ecology of sexual selected traits: evaluating the effects of predators.
- 2016 **Center for Marine Sciences and Technology (CMAST), Beaufort, NC.**  
The evolutionary ecology of communication: sexual signal variation in Bahamian mosquitofish.
- 2015 **Eastern Carolina University, Greenville, NC.**  
Evolutionary ecology of sexual communication in Bahamian mosquitofish.
- 2014 **State University of New York at Oneonta, Oneonta, NY.**  
Evolutionary ecology of sexual communication in Bahamian mosquitofish.

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## Presentations

- 2018 **Joint Meeting of Ichthyologists and Herpetologists, Rochester, NY.**  
*Interpopulation variation in metabolic rate of Spotted Salamander Larvae: evidence of microgeographic adaptation.*
- 2018 **Joint Meeting of Ichthyologists and Herpetologists, Rochester, NY.**  
*Geographic niche variation in Anolis sagrei: evidence for niche compression.*
- 2018 **Anolis Symposium VII. South Miami, FL.**  
*Geographic niche variation in Anolis sagrei: evidence for niche compression.*
- 2017 **Society for the Study of Evolution, Portland, OR.**  
Ecological consequences of sexually selected traits: populations to ecosystems.
- 2017 **Society for the Study of Evolution, Portland, OR.**  
Evolutionary ecology of sexual communication in mosquitofish.
- 2016 **Bahamas Natural History Conference, Nassau, The Bahamas.**  
Interpopulation variation in a colorful sexual signal: the role of predators & water color.
- 2015 **Ecological Society of America, Baltimore, MD.**  
Anthropogenic fragmentation drives shared and unique divergence in a sexual signal among three species of Bahamian mosquitofish.
- 2015 **North Carolina State University Graduate Zoology Symposium, Raleigh, NC.**  
Anthropogenic fragmentation drives shared and unique divergence in a sexual signal among three species of Bahamian mosquitofish.
- 2014 **Ecological Society of America, Sacramento, CA.**  
Diverse trophic linkages generated by a lizard community couples canopy and understory food webs.
- 2014 **Society for the Study of Evolution, Raleigh, NC.**  
The evolutionary ecology of sexual communication: predation costs and signal reliability.
- 2014 **Joint Meeting of Ichthyologists and Herpetologists, Chattanooga, TN.**

Interpopulation variation in condition-dependent signaling: predation regime affects signal information.

- 2015 **Abaco Science Alliance Conference**, Marsh Harbour, The Bahamas.  
Evolutionary ecology of sexual communication in Bahamian mosquitofish.
- 2015 **Abaco Science Alliance Conference**, Marsh Harbour, The Bahamas.  
Characterizing the trophic ecology of an intertidal consumer: the checkered pufferfish.
- 2014 **Bahamas Natural History Conference**, Nassau, The Bahamas.  
Interpopulation variation in condition-dependent signaling: predation cost affects signal reliability.
- 2014 **Keck Center for Behavioral Biology**, Raleigh, NC.  
Interpopulation variation in condition-dependent signaling: predation regime affects signal information.
- 2013 **Florida International University Graduate Student Symposium**, Miami, FL.  
Tidal creek fragmentation and fin coloration in the Bahamas mosquitofish.
- 2012 **Ecological Society of America**, Portland, OR.  
Cross-habitat trophic coupling by arboreal predators: Allochthonous flows follow diverse routes between distinct food webs.
- 2012 **Abaco Science Alliance Conference**, Marsh Harbour, The Bahamas.  
Tidal creek fragmentation and fin coloration in the Bahamas mosquitofish.
- 2011 **Society for Study of Evolution**, Norman, OK.  
Effects of anthropogenic estuarine fragmentation on a colorful sexual trait in Bahamas mosquitofish (*Gambusia* spp.).
- 2011 **American Society of Ichthyologists and Herpetologists**, Minneapolis, MN.  
Effects of anthropogenic estuarine fragmentation on a colorful sexual trait in Bahamas mosquitofish (*Gambusia* spp.).
- 2006 **Northeastern Natural History Conference**, Albany, NY.  
Life history of the fence lizard (*Sceloporus undulatus*) in New York State.
- 2005 **Black Rock Forest Consortium Research Symposium**, Cornwall, NY.  
The role of lizards in Lyme disease ecology: tick burdens, reservoir competence and population density.
- 2005 **Ecological Society of America**, Montreal, Canada.  
The role of lizards in Lyme disease ecology: tick burdens, reservoir competence and population density.
- 2004 **Institute of Ecosystem Studies**, Millbrook, NY.  
The role of lizards in Lyme disease ecology: tick burdens, reservoir competence and population density.

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#### Teaching (Lab Courses: 5, Co-taught Seminars: 2)

- 2016 **BIO181: General Biology Lab**, North Carolina State University.
- 2015 **BIO106: General Biology Lab**, North Carolina State University.
- 2014 **AEC593: Food Web Ecology, Graduate Seminar**, North Carolina State University.
- 2013 **BIO360: Ecology Lab**, North Carolina State University.
- 2011 **PBO570: Isotope Ecology, Graduate Seminar**, Florida International University.
- 2009-2012 **PBO480: Ecology Lab**, Florida International University.

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## Outreach

- 2014-2018 **Anole Annals**, Contributing author for Anole-focused research summaries.
- 2012-2018 **Abaco Scientist**, Contributing author for Bahamas-focused research summaries.
- 2017 **BioBlitz**, *Greenwich, Connecticut*  
Greenwich Point Park, Herpetology & Mammal teams.
- 2015 **Forest Heights Academy**, *Marsh Harbour, The Bahamas*.  
Sexual Selection.
- 2014 **Wake County Science Fair**, *Raleigh, North Carolina*.
- 2013 **Friends of the Environment**, *Marsh Harbour, The Bahamas*.  
Summer Course: Bats, Birds, and Blueholes, <http://www.friendsoftheenvironment.org/kenyonresearchcentre/field-courses/>.
- 2012 **Miami-Dade Science Fair**, *North Miami, Florida*.
- 2011 **Forest Heights Academy**, *Marsh Harbour, The Bahamas*.  
Evolution in Action.

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## Media & Press Coverage

- 2017 **The Royal Gazette**, *Fears over lizard arrival*,  
<http://mobile.royalgazette.com/news/article/20170928/fears-over-lizard-arrival&template=mobileart>.
- 2015 **The Royal Gazette**, *New species of lizard found on Island*,  
<http://www.royalgazette.com/article/20150924/NEWS07/150929861>.
- 2015 **Reptiles Magazine**, *Invasive Cuban Brown Anole Found on Bermuda*,  
<http://www.reptilesmagazine.com/invasive-cuban-brown-anole-found-on-bermuda-island-trending/>.
- 2015 **FIU News**, *Invasive lizard takes up residence in Bermuda*,  
<https://news.fiu.edu/2015/12/invasive-lizard-takes-up-residence-in-bermuda/94984>
- 2014 **Conservation Magazine**, *Hammerhead Sharks' Unique Traits May Doom Them*,  
<http://www.conservationmagazine.org/2014/06/hammerhead-sharks-unique-traits-may-doom-them/>.
- 2014 **Oceana**, *Hammerhead Shark Management Should Reflect Unique Evolutionary Traits, Scientists Say*, <http://usa.oceana.org/blog/hammerhead-shark-management-should-reflect-unique-evolutionary-traits-scientists-say>.
- 2011 **Stanford News**, *Gathering Data in The Amazon Basin*, <http://news.stanford.edu/news/2011/october/videos/991.html>.
- 2011 **Stanford News**, *Can indigenous peoples be relied on to gather reliable environmental data that meet the standards of science?* <http://news.stanford.edu/news/2011/october/amazon-indigenous-technicians-111311.html>.

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## Professional Service

### Peer Review

*Food Webs (6), Current Zoology (4), Proceedings of the Royal Society B (3), Oecologia (2), Oikos (2), BMC Ecology (2), PLoS One (2), Behavioral Ecology (1), Behavioral Ecology and*

*Sociobiology (1), Acta Oecologia (1), EcoHealth (1), Ecology and Evolution (1), Evolutionary Ecology (1), Frontiers in Ecology and Evolution (1), Freshwater Science (1), International Conservation of Reptiles and Amphibians (1), Latin American Journal of Aquatic Research (1), Methods in Ecology and Evolution (1), Zoology (1), National Science Foundation: DEB (1)*

#### Editorial duties

*Food Webs* (Associate Editor)

#### Society Memberships

The American Society of Naturalists (ASN)

Society for the Study of Evolution (SSE)

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#### Mentoring (Undergraduate Co-authors<sup>†</sup>)

- 2014-2016 **Jillian Tucker**, *North Carolina State University*, Undergraduate Intern  
Currently: Field Technician, The Jumbo Bay Hawksbill Turtle Project.
- 2016 **Donte Richard<sup>†</sup>**, *Forest Heights Academy*, High School Intern  
Currently: Sophomore, Michigan State University.
- 2016 **Billy Moore**, *University of Florida*, Lab Volunteer  
Currently: M.S. student, Virginia Tech.
- 2014-2105 **Olivia Phillips**, *North Carolina State University*, Undergraduate Intern  
Currently: Ph.D. Student, Virginia Institute of Marine Science.
- 2013-2015 **Allison Todd<sup>†</sup>**, *North Carolina State University*, Undergraduate Intern  
Currently: Caretaker, North Carolina Zoo.
- 2015 **Rikki Bonema<sup>†</sup>**, *North Carolina State University*, Undergraduate Intern  
Currently: Research Assistant, Florida International University.
- 2015 **Brooke Blosser**, *North Carolina State University*, Undergraduate Intern  
Currently: Junior, Research Assistant, North Carolina State University.
- 2015 **Cameron Luck**, *North Carolina State University*, Undergraduate Intern  
Currently: Graduated and went west.
- 2011-2012 **Tricia Callahan**, *Florida International University*, Undergraduate Intern  
Currently: Biologist, Ecology and Environment, Inc.
- 2010-2011 **Dinorah Chacin<sup>†</sup>**, *Florida International University*, Undergraduate Intern & REU  
Currently: Ph.D. student, University of South Florida.
- 2011 **Alcindor McIntosh Jr.**, *Abaco Central High*, High School Intern  
Currently: Conservation Educator, Baker's Bay Golf and Ocean Club.