

CAITLIN C. MOTHES

Ph.D. Candidate, Department of Biology
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EDUCATION

- 2016-Present **University of Miami**
Ph.D. Candidate, Department of Biology, Christopher Searcy Lab
- 2016-2018 **University of Miami**
Graduate Certificate in Geospatial Technology
- 2012-2016 **North Carolina State University, Summa Cum Laude**
B.S. Zoology
B.S. Fisheries, Wildlife and Conservation Biology; Concentration in Conservation Biology

Professional Development Courses

- 2019 Managing Ecological Data in R, Smithsonian-Mason School of Conservation
- 2018 Software Carpentry Python Workshop, University of Miami
- 2017 Conservation Genomics Workshop, UCLA La Kretz Center for California Conservation Science

TECHNICAL SKILLS

Programming: R (*Advanced*), Git, Matlab, Python

Software: ArcGIS (*Advanced*), IDRISI, JMP

PUBLICATIONS († = Joint First Author, * = Undergraduate Mentee)

- 2020 Stephanie L. Clements, Emily A. Powell, **Caitlin C. Mothes**, Christopher A. Searcy. *Assessing the conservation risk of the U.S. herpetofaunal species most vulnerable to sea level rise*. Biodiversity and Conservation (*In Revision*).
- 2020 James T. Stroud†, **Caitlin C. Mothes**†, Winter Beckles, Robert J. P. Heathcote, Colin M. Donihue, Jonathan B. Losos. *Community-wide convergence in cold tolerance following an extreme cold selection event*. Biology Letters (*In Press*).
- 2020 **Caitlin C. Mothes**, Leyna R. Stemle, Theresa N. Fonseca*, Stephanie L. Clements, Hunter J. Howell, Christopher A. Searcy. *Protect or perish: quantitative analysis of state-level protection supports preservation of the Endangered Species Act*. Conservation Letters, e12761.
- 2020 **Caitlin C. Mothes**, Hunter J. Howell, Christopher A. Searcy. *Habitat suitability models for the imperiled Wood Turtle (*Glyptemys insculpta*) raise concerns for the species' persistence under future climate change*. Global Ecology and Conservation, 24: e01247.
- 2020 **Caitlin C. Mothes**. *Anolis cristatellus (Puerto Rican crested anole) and Hemidactylus mabouia (Tropical house gecko). Diet and Predation*. Herpetological Review, 51(2): 325.
- 2019 **Caitlin C. Mothes**, Stephanie L. Clements, Dishane K. Hewavithana, Hunter J. Howell, Aaron S. David, Nicole D. Leventhal*, Christopher A. Searcy. *Use of standardized methods to improve extinction-risk classification*. Conservation Biology, 34(3): 754-761.

- 2019 Hunter J. Howell, **Caitlin C. Mothes**, Stephanie L. Clements, Shantel V. Catania, Betsie B. Rothermel, Christopher A. Searcy. (2019). *Amphibian responses to livestock use of wetlands: new empirical data and a global review*. Ecological Applications, 29(8): e01976.
- 2019 **Caitlin C. Mothes**, James T. Stroud, Stephanie L. Clements, Christopher A. Searcy. *Evaluating ecological niche model accuracy in predicting biotic invasions using South Florida's exotic lizard community*. Journal of Biogeography, 46(2): 432-441.
- 2019 **Caitlin C. Mothes**, James T. Stroud, Stephanie L. Clements, Christopher A. Searcy. *Predicting the invasion dynamics of anoles (and other lizards) using ecological niche modeling*. Anolis Newsletter VII, p. 194-205. Eds. Stroud, J.T., Geneva, A.J., Losos, J.B. Washington University, St. Louis MO

ORAL PRESENTATIONS (* = Invited Presentation)

- 2020 *Quantitative review of U.S. state imperiled species acts: assessing state-level coverage of the IUCN Red List and the Endangered Species Act*. UM Biology Graduate Student Symposium, Coral Gables, FL
****Awarded Best Talk**
- 2019 *Using iNaturalist in the Classroom: results from the University of Miami Ecology Lab*. UM Biology Department Seminar
- 2019 *Amphibian responses to livestock use of wetlands: new empirical data and a global review*. Florida Herpetology Conference, Gainesville, FL
- 2018 *Investigating the impacts of cattle on amphibian communities*. UM Biology Department Seminar
- 2018 *Evaluating Maxent's ability to accurately predict biotic invasions using South Florida's exotic lizard community*. Florida Herpetology Conference, Gainesville, FL
- 2018 *Using South Florida's exotic lizard community to evaluate the use of ecological niche models in predicting biotic invasions*. Anolis Symposium*, Coral Gables, FL
- 2018 *Evaluating invasion predictions using South Florida's exotic lizard community*. UM Biology Graduate Student Symposium, Coral Gables, FL
- 2017 *Evaluating Invasion Predictions with Physiological Data*. UM Biology Department Seminar

Invited Lectures and Workshops

- 2019 *Talks: The Do's and Don'ts for giving a great presentation*, BIL 675 – First Year Graduate Student Professional Skills Course, University of Miami
- 2018 *Climates and Ecological Niche Model Applications*, BIL 330 – Ecology, University of Miami
- 2018 *Applying Ecological Niche Models to Invasive Species Management*, Biological Invasions and Modern Applications Workshop, Southeastern Ecology and Evolution Conference, Miami, FL
- 2018 *Biogeochemical Cycles*, BIL 330 - Ecology, University of Miami

POSTER PRESENTATIONS

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- 2019 *California's imperiled herpetofauna illustrate the importance of standardized methods for classifying extinction risk.* Florida Herpetology Conference, Gainesville, FL
- 2019 *The importance of standardized methods for classifying extinction risk in imperiled species: a case study of California's threatened herpetofauna.* UM Biology Graduate Student Symposium, Coral Gables, FL
- 2018 *Historic and future impacts of urbanization and climate change on suitable habitat for the imperiled Wood Turtle, *Glyptemys insculpta*.* Southeastern Ecology and Evolution Conference, Miami, FL
****Awarded Honorable Mention**
- 2017 *Climate Change Impacts on Reptile and Amphibian Distributions.* GIS Day, Miami, FL
****Awarded Best Poster**
- 2017 *Evaluating Invasion Predictions with Florida's Exotic Lizard Community.* International Urban Wildlife Conference, San Diego, CA
- 2017 *Validation of Ecological Niche Models.* UM Biology Graduate Student Symposium, Fairchild Tropical Botanical Gardens, Coral Gables, FL

FELLOWSHIPS, GRANTS, AND AWARDS

- 2020 Best Talk, Biology Graduate Student Symposium, University of Miami; \$100
- 2019 Outstanding Teaching Assistant, University of Miami Department of Biology
- 2018-19 Kushlan Fund; \$1900
- 2018 Honorable Mention Poster Award, Southeastern Ecology and Evolution Conference
- 2016-18 Holmes Fellowship; \$10,000
- 2017 First Place Poster Award, GIS Day, University of Miami; \$300
- 2017 GAFAC Travel Award; \$375
- 2017 Kriloff Travel Fund; \$250

LEADERSHIP POSITIONS

- 2019-20 Executive Board Member, UM Biology Graduate Student Organization
- 2018 Faculty Search Committee (Graduate Representative), UM Department of Biology
- 2018 Graduate Activity Fee Allocations Committee, UM College of Arts and Sciences Representative
- 2017-18 Organization Committee Member, Southeastern Ecology and Evolution Conference
- 2017-18 Graduate Academic Admissions Committee (Graduate Representative), UM Department of Biology

TEACHING POSITIONS

- Spring 2017-Fall 2020 BIL 331-Ecology Lab, *Lead TA Fall 2018-Fall 2020*, University of Miami
****Awarded 2019 Outstanding Teaching Assistant** by the Department of Biology
- Spring 2020 BIL 163-HHMI Integrated Biology and Chemistry Lab, University of Miami
- Fall 2016 BIL 151-General Biological Laboratory, University of Miami

RESEARCH POSITIONS

- 2017 **Research Assistant**, Impacts of livestock on amphibian communities
MacArthur Agro-ecology Research Center, Lake Placid, FL, PI: Dr. Christopher Searcy
- 2016 **Research Assistant**, Dispersal patterns of pond-breeding amphibians
Koffler Scientific Reserve, Toronto, ON, PI: Dr. Christopher Searcy
- 2015-16 **Undergraduate Independent Research**, Comparative genomics of southern flounder populations

- 2014-16 *North Carolina State University, Raleigh, NC, PI: Dr. Martha Burford Reiskind*
Research Assistant, Various mammal tracking projects
- 2014 *North Carolina Museum of Natural Sciences, Raleigh, NC, PI: Dr. Roland Kays*
Research Internship, Captive Japanese Macaque behavioral research
Minnesota Zoo, Apple Valley, MN

REVIEWER FOR:

Biological Invasions
Hydrobiologica

OUTREACH AND MENTORSHIP

- 2019-20 Undergraduate Research Assistant- Theresa Fonseca (University of Chicago)
- 2017-19 BioReach Youth Education Program, University of Miami, Miami, FL
- 2018 BioBlitz Reptile and Amphibian Educator, Deering Estate, Miami, FL
- 2017-18 BioBlitz Reptile and Amphibian Educator, Vizcaya Museum and Gardens, Miami, FL
- 2017 Graduate Student Peer Mentorship Program
- 2017 Undergraduate Research Assistant-Giacomo Delgado (University of Miami)
- 2016-17 Undergraduate Research Assistant-Jessica Cothorn (University of Miami)