

ALEXA R. WARWICK

BEACON Center for the Study of Evolution in Action • Michigan State University (MSU) • 567 Wilson Rd
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EDUCATION

2009–2016	Florida State University (FSU)	Ph.D. in Biological Sciences
2005–2009	University of Northern Iowa (UNI)	B.S. in Biology, Honors Research B.A. in Dual Lang.: Portuguese/Spanish
Spring 2015	Universidad de los Andes, Bogotá, Colombia:	Fellowship Semester Abroad
Fall 2008	Universidade de Brasília, Brasília, DF, Brazil:	Semester Abroad
Spring 2007	Universidad de Oviedo, Oviedo, Asturias, Spain:	Semester Abroad

PROFESSIONAL EXPERIENCE

2016– <i>present</i>	Postdoctoral Scholar, Evolution Education and Outreach, BEACON Center. Advisors: Dr. Louise Mead and Dr. Peter White
2009–2016	Graduate Student. Department of Biological Science, FSU. Advisors: Dr. Emily Moriarty Lemmon and Dr. Joseph Travis
Spring 2015	Visiting Graduate Student Fellow. Dept. of Biological Sciences, Universidad de los Andes. Host: Dr. Andrew J. Crawford
2005–2009	Senior Thesis Research and Lab Assistant. Biology Dept., UNI. Advisors: Dr. Peter B.-Z. Berendzen and Dr. Carl L. Thurman

TEACHING EXPERIENCE

Fall 2017	Co-instructor, “Evolution.” Integrative Biology, MSU.
Spring 2017	Guest lecturer, “Integrating Biology: From DNA to Populations.” MSU.
Spring 2013, Fall 2015	Teaching Assistant (TA). “Evolution.” Dept. of Biological Science, FSU.
Fall 2014	TA. “Conservation Biology.” Dept. of Biological Science, FSU.
Spring 2014	TA. “Ecology.” Dept. of Biological Science, FSU.
Fall 2013	TA. “Experimental Biology.” Dept. of Biological Science, FSU.
Fall 2013	Guest lecturer, “Herpetology.” Dept. of Biological Science, FSU.
Spring 2012	TA. “Animal Diversity.” Two sections, Dept. of Biological Science, FSU.
Spring 2006	TA. “General Chemistry I.” Chemistry Dept., UNI.

NATIONAL AWARDS

Spring 2014	NSF GROW with USAID International Fellowship (\$15,000)
2010–2013	NSF Graduate Research Three-Year Fellowship (\$122,500)
2008–2009	Barry M. Goldwater Scholar (\$7,500)

OTHER HONORS & AWARDS (ABBREVIATED LIST)

Summer 2018	Society for the Study of Evolution Travel Stipend (\$500)
Fall 2015	FSU Margaret Y. Menzel Award, Dept. Biological Science (\$1,000)
Summer 2015	Henri Seibert Award Best Oral Presentation (Honorable Mention)
Spring 2014	University of Texas Travel Stipend to Phylogenomics Software School (\$250)
Spring 2014	FSU Outstanding Teaching Assistant Award (\$650)
Spring 2013	Herpetology Conference Best Poster Award (\$100)
Fall 2011	FSU Robert B. Short Scholarship in Zoology, Dept. Biological Science (\$200)
Spring 2011	Southeastern Ecology and Evolution Conference Travel Award (\$100)

2009–2013	FSU Presidential University Four-Year Fellowship (\$118,713)
2009–2010	FSU Graduate Tuition Scholarship (\$1,000)
2009–2010	UNI Merchant Scholarship for Graduate Education (\$3,585)
May 2009	UNI Purple and Old Gold Award for Meritorious Scholarship in Biology
April 2009	UNI Chapter of Sigma Xi Best Undergraduate Poster Award (\$25)
Fall 2008	UNI College of Natural Sciences (CNS) McKay Study Abroad Award (\$1,000)
2007–2009	UNI CNS C.W. Lantz Scholar Fund (\$4,000)
2005–2006	State of Iowa Scholar (\$400)
2005–2009	UNI Science Symposium Four-Year Tuition Scholarship in Biology (\$20,672)

GRANTS

Spring 2018	BEACON Budget Request: YEvolution: teaching eukaryotic genetics and evolution using yeast (\$49,600)
Spring 2018	BEACON Budget Request: Evaluating curriculum goals in undergraduate evolution education (\$16,548)
Spring 2018	BEACON Budget Request: A MOOC for the adaptive learning of evolutionary data analysis to grow our nationwide talent pool in computation for STEM disciplines (\$32,758)
Spring 2017	BEACON Budget Request: BEACON and beyond: broadening participation and the scope of public engagement (\$56,730)
Fall 2016	COACH Workshop Travel Assistance to SACNAS 2016 (\$800)
Spring 2016	BEACON Budget Request: Evaluating career choices and the efficacy of a conference travel award program to increase diversity (\$18,874)
Spring 2016	BEACON Budget Request: Writing through STE(A)M: engaging evolution in creative spaces (\$26,191)
Spring 2016	BEACON Budget Request: An evidence-based framework for transforming scientific communication and engagement with the public (\$60,709)
Fall 2015	Leon County Tourist Development Council Special Event Grant (\$1,808)
Spring 2015	FSU Dissertation Research Grant (\$750)
2010–2015	FSU Congress of Graduate Students Travel Grants (\$1,700)
2012–2015	FSU Dept. of Biological Science Travel Grant (\$3,015)
Spring 2013	New Jersey Dept. of Environ. Protection Conserve Wildlife Grant (\$3,500)
Spring 2011	Society for the Study of Evolution Rosemary Grant Award (\$2,500)
Spring 2011	Am. Museum of Nat. History Theodore Roosevelt Memorial Grant (\$2,000)
Spring 2011	Sigma Xi Grant-in-Aid of Research (\$1,000)
Summer 2008	UNI Intercollegiate Academics Travel Fund (\$1,825)
Fall 2007	UNI Dr. Alan Orr Research Grant (\$500)
Fall 2007	UNI Intercollegiate Academics Research Grant (\$500)
Fall 2007	UNI CNS Student Opportunities for Academic Research Grant (\$500)
Fall 2006, 2007	UNI Dr. Swanson Research Grant (\$750)

PEER-REVIEWED PUBLICATIONS

- Mead, L. S., M. Kjelvik, E. H. Schultheis, M. Stuhlsatz, **A. Warwick**, A. Mohan, J. Morris, P. Strode, R. Mayes. *Under Review*. Improving Scientific Literacy: Quantitative Reasoning in the Context of Science Education. *BioScience*.
- Bonner, K., D. Piechnik, J. Kovacs, **A. Warwick**, and P. White. *Accepted*. Clam Spawning and Red Tide: Helping Students Learn the Hardy-Weinberg Equilibrium. *American Biology Teacher*.

- Heidemann, M., M. Taylor, A. Power, **A. Warwick**, C. Dresser-Briggs, P. J. T. White. *Accepted*. A Confluence of Immunology and Phylogeny: Oral Allergy Syndrome (aka Pollen-Food Allergy Syndrome). National Center for Case Study Teaching in Science, University of Buffalo, NY.
- Relyea, R., P. Stephens, J. Hammond, J. Collins, O. Hyman, S. Price, E. M. Lemmon, L. Barrow, **A. Warwick**, *et al.* 2018 Phylogenetic patterns of trait and trait plasticity evolution: Insights from amphibian embryos. *Evolution*. DOI: 10.1111/evo.13428
- Barrow, L. N., J. A. Soto-Centeno, **A. R. Warwick**, A. R. Lemmon, and E.M. Lemmon. 2017. Evaluating hypotheses of expansion from refugia through comparative phylogeography of south-eastern Coastal Plain amphibians. *Journal of Biogeography*. DOI: 10.1111/jbi.13069
- Warwick, A. R.**, J. Travis, and E. M. Lemmon. 2015. Geographic variation of the Pine Barrens treefrog (*Hyla andersonii*): concordance of morphometric, acoustic signal, and genetic data. *Molecular Ecology*. 24, 3281–3298.
- Warwick, A. R.** and E. M. Lemmon. 2014. Development and characterization of 21 microsatellite loci for the Pine Barrens treefrog (*Hyla andersonii*). *Conservation Genetics Resources*. 6, 719–721.

EDUCATIONAL RESOURCES

- Warwick, A.**, Mead, L., Fisher-Reid, M. C., Grant, E., Sutherland, C., Wills, A., Perry, E. 2018. Claymander field experiment. SPARCnet: Educational Resources. QUBES. doi:10.25334/Q46Q4Z
- Mead, L., Grayson, K., **Warwick, A.**, Miller, D., Sutherland, C., Grant, E. 2017. How Many Salamanders are in the forest? Testing capture-recapture. QUBES. doi:10.25334/Q4637W

MANUSCRIPTS IN PREPARATION

- Warwick, A. R.**, D. B. Means, L. N. Barrow, A. R. Lemmon, and E. M. Lemmon. *In prep.* A phylogeographic analysis across the disjunct distribution of the Pine Barrens Treefrog.
- Mead, L. S., K. L. Schwartz, Kohn, C., **A. R. Warwick**, R. H. Nehm. *In prep.* The best instrument may not be the most fit: applying measurement standards to evolution education assessments.
- Warwick, A. R.**, H. Heape, J. Brown Clarke, S. Edwards, J. Graves, Jr., R. Kliman, L. Mead, J. Weintraub. *In prep.* Evaluating career choices and the efficacy of a conference travel award program to increase diversity in evolutionary science.

SELECTED CONFERENCE PRESENTATIONS

- Warwick, A.** * 2018. Evaluating student prior knowledge of Evo-Ed Cases to connect biology across the curriculum. II Joint Congress on Evolutionary Biology, Montpellier, France.
- Warwick, A.** *, P. White, F. Reichsman, L. Mead, P. Horowitz, J. Smith, J. Krajcik, K. McElroy-Brown. 2018. ConnectedBio: revealing student ideas and explanations of evolutionary phenomena. Poster presentation, BEACON Congress, East Lansing, MI.
- White P. *, F. Reichsman, L. Mead, P. Horowitz, J. Smith, J. Krajcik, **A. Warwick**, K. McElroy-Brown. 2018. Connected biology: three-dimensional learning from molecules to populations. Poster presentation, NSF DRK-12 PI Meeting. Washington, DC.
- Warwick, A.** *, C. Bartholomew*. 2018. Evo-Ed Cases: Connecting Biology Across the Curriculum. Oral Presentation, Michigan Science Teachers Association, Lansing, MI.
- Heape, H. *, J. B. Clarke, S. Edwards, J. Graves, R. Kliman, L. S. Mead, J. Weintraub, **A. Warwick**. 2018. Efficacy of a Travel Award Program to Increase Diversity in Evolutionary Science. Oral presentation, MSU UURAF, East Lansing, MI.

- Warwick, A.***. 2018. ConnectedBio: revealing student ideas and explanations of evolutionary phenomena. Oral presentation, BEACON Seminar, Michigan State University, East Lansing, MI.
- Heape, H. *, **A. Warwick***. 2018. Efficacy of the UDE travel award program to increase diversity in evolutionary science. Oral presentation, BEACON Seminar, Michigan State University, East Lansing, MI.
- Hagey, T. *, **A. Warwick**, L. Mead. 2017. A classroom activity simulating population-level evolution by hand. Poster presentation, NABT 2017, St. Louis, MO.
- Warwick, A***, P. White, L. Mead., J. Smith. 2017. Evaluating the use of integrative Evo-Ed cases for evolution education. Poster presentation, Evolution Meetings, Portland, OR.
- Heape, H. *, J. B. Clarke, S. Edwards, J. Graves, R. Kliman, L. S. Mead, J. Weintraub, **A. Warwick**. 2017. Efficacy of a Travel Award Program to Increase Diversity in Evolutionary Science. Poster presentation, Evolution Meetings, Portland, OR.
- Solomon-Lane, T. K*, T. J. Hagey, **A. R. Warwick**, H. A. Hofmann. Using evidence to broaden participation and the scope of public engagement. Poster presentation, Society for Behavioral Neuroendocrinology Meeting, Long Beach, CA.
- Hagey, T*, **A. Warwick**, L. Mead, E. Goodman. 2017. Broader Impacts at BEACON. Poster presentation, National Alliance for Broader Impacts Summit 2017, Stevenson, WA.
- White, P., **A. Warwick***, L. Mead, J. Smith. 2017 Evo-Ed: an integrative case-based approach to evolution education. Poster presentation, EvoKE, Porto, Portugal.
- Warwick, A. R.*** 2016. Treefrog tales: incorporating evolutionary biology in research, conservation, and education. Oral presentation, AISES, Minneapolis, MN.
- Warwick, A. R.***, and L. S. Mead. 2016. Outreach opportunities through BEACON. Poster presentation, BEACON Congress, East Lansing, MI.
- Mead, L.S. *, E. H. Schultheis, M. Kjolvik, **A. Warwick**. 2016. NSF DRK-12 PI Meeting, Scientific Data in Schools: Measuring the efficacy of an innovative approach to integrating quantitative reasoning in secondary science.
- Warwick, A. R.*** and L. S. Mead. 2016. Tri-society outreach opportunities through BEACON. Oral presentation, Evolution Meetings, Austin, TX.
- Warwick, A. R.***, D. B. Means, and E. M. Lemmon. 2015. Jumping frog, hidden history: a phylogeographic analysis across the disjunct distribution of the Pine Barrens Treefrog. Oral presentation, Evolution Meetings, Guarujá, SP, Brazil.
- Warwick, A. R.** 2014. Natural replication for testing the influence of landscape processes on genetic structure across the disjunct range of the Pine Barrens treefrog. Poster presentation, Evolution Meetings, Raleigh, NC.

*Presenter

INVITED TALKS AND WORKSHOPS

- Warwick, A., X. Sá Pinto, H. Dufour. 2018. Undergraduate Evolution Education Workshop: Improving Your Fitness in the Classroom. II Joint Congress on Evolutionary Biology, Montpellier, France.
- Warwick, A., L. Mead. 2018. Teaching Evolution Seminar and Data Nuggets Workshop. Johannes Gutenberg University, Mainz, Germany.
- Warwick, A. R. 2018. Revealing student ideas and explanations of evolutionary phenomena. Invited talk, Department of Biology Special Seminar, Utah State University, Logan, UT.
- Kjolvik, M, A. Warwick, E. Schultheis. 2017. Data Nuggets Workshop. Van Andel Institute, Grand Rapids, MI.

- Warwick, A. R., M. Kjølvik. 2016. Data Nuggets: increase your broader impacts while improving science education. Invited talk, Physics Education Research Seminar, Michigan State University, East Lansing, MI.
- Warwick, A. R. 2016. Jumping frog, hidden history: understanding species distributions using the Pine Barrens Treefrog. BEACON Seminar, Michigan State University, East Lansing, MI.
- Warwick, A. R. 2015. Understanding species distributions using the Pine Barrens Treefrog. Invited talk, Colloquium, Dept. of Biological Science, FSU, Tallahassee, FL.
- Warwick, A. R. 2015. A tale of two frogs: concordance of morphometric, acoustic signal, and genetic data in *Hyla andersonii* and comparative phylogeography in *Hypsiboas*. Invited talk, Grupo Herpetológico, Universidad de Antioquia, Medellín, Colombia.
- Warwick, A. R. 2015. Geographic variation in Pine Barrens treefrog (*Hyla andersonii*): concordance of morphometric, acoustic signal, and genetic data. Invited talk, Seminar, Dept. of Biological Science, Universidad de los Andes, Bogotá, Colombia.
- Warwick, A. R. 2014. Down by the pond. Invited talk, FSU Fellows Society, January Research Sharing, FSU, Tallahassee, FL.
- Warwick, A. R. 2013 Geographic variation in Pine Barrens treefrog (*Hyla andersonii*): concordance of genetic, morphometric, and acoustic signal data. Invited talk, Pinelands Research Series, New Jersey Pinelands Commission, New Lisbon, NJ.
- Warwick, A. R. 2013 Geographic variation in Pine Barrens treefrog (*Hyla andersonii*): evidence from morphometric, acoustic signal, and genetic data. Invited talk, Graduate Colloquium, Dept. of Biology, University of Northern Iowa, Cedar Falls, IA.
- Warwick, A. R. 2008. Comparison of larval distribution patterns, geographic range, and genetic variability in North American fiddler crabs (*Uca*: Ocypodidae). Invited talk, College of Natural Sciences, University of Northern Iowa, Cedar Falls, IA.

SELECTED PROFESSIONAL DEVELOPMENT ACTIVITIES

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| September 2018 | Interactive Workshop on Quantitative Ethnography: Open Source Tools for Analyzing Large Sets of Discourse Data with Dr. David Shaffer. |
| Spring 2018 | Science Policy Webinar Series with Dr. Sally Otto, University of British Columbia. Sponsored by the Society for the Study of Evolution. |
| Fall 2017 | CIRTL Webinar Series – What to do on the First and Last Day of Classes. |
| November 2017 | STEM Teaching Essentials Workshop: Putting It All Together: Learning Outcomes and Assessments that Blend Core Ideas with Science and Engineering Practices, MSU. |
| Spring 2017 | Planning Workshop for INCLUDES proposal: Understanding and Overcoming Challenges to Increasing Diversity in Ecology and Evolutionary Biology. |
| March 2017 | Communicating Beyond Journals and Peers: A Communications Workshop for Academics, MSU. |
| Fall 2016 | Completed the “Pathways to Scientific Teaching” seminar with Dr. Diane Ebert-May, MSU. |
| October 2016 | STEM Teaching Essentials Workshop: Strategies for Effective Creation, Implementation and Assessment of Student Teams, MSU. |
| 2013–2014 | Completed “Teaching Science to Maximize Learning and Retention” and “Assessment in Math and Science Education” education courses at FSU. |
| Summer 2013 | Attended the FSU Program for Instructional Excellence’s (PIE) Teaching Workshop (August 2013) and earned a PIE Certificate. |

PROFESSIONAL SOCIETY MEMBERSHIPS

Society for the Study of Evolution	American Society of Naturalists
Society for the Study of Amphibians and Reptiles	Sigma Xi Scientific Research Society
American Indian Science and Engineering Society	FSU Graduate Fellows Society
National Science Teacher Association	National Association of Biology Teachers
Society for the Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS)	

OTHER PROFESSIONAL SERVICE

2018	Postdoctoral co-representative for the MSU Department Integrative Biology
2016–2018	Co-organizer, Ecology/Evolution Events at SACNAS National Conference
2017–2018	Co-organizer, Public Engagement Workshop Series at UT Austin
2016–2017	Co-organizer, Undergraduate Diversity at Evolution Program
April 2017	Judge, University Undergraduate Research and Arts Forum 2017, MSU
February 2017	Organizer, Darwin Day Roadshow 2017
November 2016	Judge, Student oral presentations, AISES 2016
July 2016	Judge, Mid-Michigan Symposium for Undergraduate Research Experiences.
March 2016	Judge, Southeastern Ecology and Evolution Conference 2016 at FSU
Spring 2016	Reviewer, FSU Research and Creativity Awards, Tallahassee, FL
2015–2016	Co-organizer, Southeastern Ecology and Evolution Conference 2016 at FSU
2014–2015	Reviewer for <i>Hydrobiologia</i> and <i>Bioacoustics</i> journals
2011–2014	Panelist, NSF Graduate Research Fellowship Workshop at FSU
Spring 2012	Co-organizer, FSU Fellows Forum 2012

SELECTED PUBLIC ENGAGEMENT ACTIVITIES

Spring 2018	Volunteer, Skype a Scientist, Hillside Elementary, West Des Moines, IA
Spring 2018	Volunteer, Darwin Day Roadshow, Howell High School, Howell, MI
Spring 2017, 2018	Volunteer, Darwin Discovery Day, MSU Museum, East Lansing, MI
Summer 2017	Presenter, Great Lakes Science Boot Camp, East Lansing, MI
Spring 2017	Volunteer, Hiawatha Elementary School Science Night, Okemos, MI
Spring 2017	Volunteer, Lansing Charter Academy Science Night, Lansing, MI
Fall 2016	Volunteer, Glencairn School Science Night, East Lansing, MI
Spring 2016	Volunteer, Beagle Elementary Science Fair Night, Grand Ledge, MI
Spring 2016	Volunteer, Murphy Elementary Science Fair Night, Haslett, MI
Fall 2015	Volunteer, Middle School Physical Science, Sacred Heart Home Educators, FL
Fall 2014	Educator, Party with Animals, Central Panhandle Fairground, Panama City, FL
2012–2014	Volunteer and Guest Presenter, E.O. Wilson Biophilia Center, Freeport, FL
Spring 2014	Educator, Science Night, School of Arts and Sciences, Tallahassee, FL
2010–2014	Judge, Capital Regional Science Fair, Tallahassee, FL