

CURRICULUM VITAE

EMILY C. MORIARTY LEMMON

CONTACT INFORMATION:

Email: chorusfrog@bio.fsu.edu

Phone: 402-651-2499

Mailing Address: Department of Biological Science, Florida State University, Tallahassee, FL 32306

EDUCATION / RESEARCH POSITIONS:

B.S. in Biology, Saint Mary's College at Notre Dame, *summa cum laude*, May 2000.

Senior thesis: Microbial communities of salamander (*Ambystoma talpoideum*) integument at different life history stages

Ph.D. in Ecology, Evolution, and Behavior, University of Texas, August 2007.

Dissertation: Patterns and Processes of Speciation in North American Chorus Frogs

Postdoctoral Research Associate, Shaffer Laboratory, Department of Ecology and Evolution

University of California, Davis, September 2007–2008.

Assistant Professor, Florida State University, 2009–present.

GRANTS, AWARDS, AND FELLOWSHIPS:

1996 Howard K. Gloyd/Edward H. Taylor Scholarship, Kansas Herpetological Society (\$200)

1996 Frances B. Lyons Award, Saint Mary's College (\$12,000)

1996 Saint Mary's College Grant (\$12,000)

1996-00 Saint Mary's College Presidential Scholarship (\$20,000)

1998 Highlands Biological Station Foundation Scholarship (\$250)

1998-00 Barry M. Goldwater Scholarship for Students in the Sciences (\$15,000)

1999 Theodore Roosevelt Research Grant, American Museum of Natural History (\$520)

2000 George and Juanda Bick Award for Environmental Biology, Saint Mary's College

2000 Sigma Xi Award for Outstanding Research, Saint Mary's Chapter of Sigma Xi

2000 Dean's Recruitment Award, Biological Sciences, University of Texas (\$2000)

2000 Bruton Fellowship, University of Texas (\$1000)

2000 Suzanne L. and Joseph T. Collins Award for Excellence in Kansas Herpetology (\$1000)

2000 Zoology Scholarship Endowment for Excellence, University of Texas (\$800)

2000-04 **NSF Graduate Research Fellowship** (approx. \$60,000)

2001 Dorothea Bennett Memorial Research Fellowship, University of Texas, (\$1000)

2001 Explorer's Club Research Grant; declined (\$1200)

2001 **Best Student Presentation in Systematics (Henri Seibert Award)**, Society for the Study of Amphibians and Reptiles (\$200)

2001 Zoology Departmental Fellowship, University of Texas, Austin (\$800)

2002 EEB Departmental Fellowship, University of Texas, Austin (\$1000)

2003 EEB Departmental Fellowship, University of Texas, Austin (\$1000)

2003-05 **NSF Dissertation Improvement Grant** (\$12,000)

2003 University of Texas Continuing Fellowship (tuition scholarship, \$5000)

2003 Hamilton Memorial Research Fellowship, University of Texas, Austin (\$1200)

2003 Dorothea Bennett Memorial Graduate Fellowship, University of Texas, Austin (\$1100)

- 2005 University of Texas Travel Award (\$500)
- 2005 University of Texas Continuing Fellowship (full scholarship, \$22,135)
- 2005 **Best Student Paper in Systematic Biology, Publisher's Award for 2004** (\$500)
- 2007 Summer Merit Stipend, University of Texas, Austin (\$2250)
- 2007 University of Texas Travel Award (\$1000)
- 2007 **NSF IGERT Fellowship in Computational Phylogenetics** (\$13,500)
- 2007 **NSF NESCent Postdoctoral Fellowship** (declined)
- 2009 First Year Assistant Professor Award, Florida State University
- 2009 **Best Student Paper in Systematic Biology, Publisher's Award for 2008** (\$500)
- 2011 **NSF 3-year research grant** to study chorus frog speciation (\$699,319)

PUBLICATIONS / SUBMITTED MANUSCRIPTS:

- D. R. Rokyta, K. P. Wray, A. R. Lemmon, **E. Moriarty Lemmon**, S. B. Caudle. 2011. A high-throughput venom-gland transcriptome for the Eastern Diamondback Rattlesnake (*Crotalus adamanteus*) and evidence for pervasive positive selection across toxin classes. **TOXICON** 57:657–671.
- E. Moriarty Lemmon**, M. Murphy, and T. E. Juenger. 2011. Identification and characterization of nuclear microsatellite loci for multiple species of chorus frogs (*Pseudacris*) for population genetic analyses. **CONSERVATION GENETICS RESOURCES** 3:233–237.
- E. Moriarty Lemmon**, and A. R. Lemmon. 2010. Reinforcement in chorus frogs: lifetime fitness estimates including intrinsic natural selection and sexual selection against hybrids. **EVOLUTION** 64:1748–1761.
- J. M. Brown, A. R. Lemmon, S. M. Hedke, **E. Moriarty Lemmon**. 2010. When trees grow too long: investigating the causes of highly inaccurate Bayesian branch length estimates. **SYSTEMATIC BIOLOGY** 59:145–161.
- A. R. Lemmon, J. M. Brown, K. Stanger-Hall, and **E. Moriarty Lemmon**. 2009. The effect of missing data on phylogenetic estimates obtained by maximum likelihood and Bayesian inference. **SYSTEMATIC BIOLOGY** 58:130–145.
- E. Moriarty Lemmon**. 2009. Diversification of conspecific signals in sympatry: geographic overlap drives multi-dimensional reproductive character displacement in frogs. **EVOLUTION** 63:1155–1170.
- A. R. Lemmon and **E. Moriarty Lemmon**. 2008. A likelihood framework for estimating phylogeographic history on a continuous landscape. **SYSTEMATIC BIOLOGY** 57:544–561.
- E. Moriarty Lemmon**, A. R. Lemmon, J. T. Collins, and D. C. Cannatella. 2008. A new North American chorus frog species (Amphibia: Hylidae: *Pseudacris*) from the south-central United States. **ZOOTAXA** 1675:1–30.

- E. Moriarty Lemmon**, A. R. Lemmon, and D. C. Cannatella. 2007. Geological and climatic forces driving speciation in the continentally distributed trilling chorus frogs (*Pseudacris*). **EVOLUTION** 61:2086–2103.
- E. Moriarty Lemmon**, A. R. Lemmon, J. A. Lee-Yaw, J. T. Collins, and D. C. Cannatella. 2007. Phylogeny-based delimitation of species boundaries and contact zones in the trilling chorus frogs (*Pseudacris*). **MOLECULAR PHYLOGENETICS AND EVOLUTION** 44:1068–1082.
- E. C. Moriarty**. 2005. *Pseudacris triseriata* species complex. In: Lannoo, M. (Ed.). Amphibian Declines: The Conservation Status of United States Species. University of California Press, Berkley, California.
- E. C. Moriarty** and D. C. Cannatella. 2004. Phylogenetic relationships of North American chorus frogs (*Pseudacris*). **MOLECULAR PHYLOGENETICS AND EVOLUTION** 30:409–420.
- A. R. Lemmon and **E. C. Moriarty**. 2004. The importance of proper model assumption in Bayesian phylogenetics. **SYSTEMATIC BIOLOGY** 53:265–277.
- D. M. Sever, T. R. Halliday, **E. C. Moriarty**, and B. Arano. 2001. Sperm storage in the smooth newt (*Triturus v. vulgaris*) II. Ultrastructure of the spermathecae after the breeding season. **ACTA ZOOLOGICA** 82:49–56.
- D. M. Sever, **E. C. Moriarty**, L.C. Rania, and W.C. Hamlett. 2001. Sperm storage in the oviduct of an internally fertilizing frog, *Ascaphus truei*. **JOURNAL OF MORPHOLOGY** 248:1–21.
- D. M. Sever, T. R. Halliday, V. Waights, J. Brown, H. Davies, and **E. C. Moriarty**. 1998. Sperm storage in females of the Smooth Newt (*Triturus v. vulgaris*) I. Ultrastructure of the spermathecae during the breeding season. **JOURNAL OF EXPERIMENTAL ZOOLOGY** 283:51–70.

OTHER PUBLICATIONS:

- E. C. Moriarty Lemmon**. 2008. *Pseudacris feriarum*, *P. crucifer*, *P. brimleyi*, and *P. brachyphona* species accounts. In Field Guide to Georgia Amphibians and Reptiles. J. B. Jensen, C. D. Camp, W. Gibbons, and M. J. Elliot, Eds. University of Georgia Press, Athens.
- C. S. Hobson, and **E. C. Moriarty**. 2003. *Pseudacris nigrata nigrata* geographic distribution record. **HERPETOLOGICAL REVIEW** 34:259–260.
- E. C. Moriarty**. 1996. A preliminary report on the number, seasonal and daily activity, and growth rate of a population of painted turtles (*Chrysemys picta*) in northeastern Kansas: a three year study. **KANSAS HERPETOLOGICAL SOCIETY NEWSLETTER** 105:5–15.
- E. C. Moriarty**, and J. T. Collins. 1995. First known occurrence of amphibian species in Kansas. **KANSAS HERPETOLOGICAL SOCIETY NEWSLETTER**. 100:28–30.

E. C. Moriarty, and J. T. Collins. 1995. An estimate of Plains Leopard Frogs (*Rana blairi*) at a site in northeastern Kansas. **KANSAS HERPETOLOGICAL SOCIETY NEWSLETTER**. 102:14–15.

COURSES TAUGHT:

Herpetology

Experimental Biology: Behavior and Ecology of Amphibians

PROFESSIONAL EXPERIENCE:

Reviewer for scientific journals: *Proceedings of the Royal Society of London B*, *Systematic Biology*, *Evolution*, *Molecular Ecology*, *Molecular Phylogenetics and Evolution*, *Biological Journal of the Linnean Society*, *Ethology*, *Behaviour*, *Copeia*, *Herpetologica*, *Journal of Herpetology*, *Journal of Zoology*, *Southeastern Naturalist*, *Behaviour*

NSF ADVANCE Workshop, Women Evolving Biological Sciences. Selected participant. (October 2008).

Council Member, Society of Systematic Biologists (2009-2011).

Co-organizer of Society of Systematic Biologists Symposium: Promises and Pitfalls of Incorporating Next-Generation Sequencing Data in Phylogeography. Evolution Meetings in Norman, Oklahoma (June 2011).

Associate Editor, Society of Systematic Biologists (2011-2012)

PRESENTATIONS AT SCIENTIFIC MEETINGS OR OTHER INSTITUTIONS:

A molecular and morphometric study of *Pseudacris triseriata* and *Pseudacris maculata* from sympatric populations in Douglas County, Kansas. (poster). Society for the Study of Amphibians and Reptiles—Herpetologists' League—American Society of Ichthyologists and Herpetologists meeting. Seattle, Washington. June 1997.

Phylogenetic relationships of North American chorus frogs (*Pseudacris*). Society for the Study of Evolution/Society of Systematic Biologists annual meeting. Knoxville, Tennessee. June 2001.

Phylogenetic relationships of North American chorus frogs (*Pseudacris*). Society for the Study of Amphibians and Reptiles annual meeting. Indianapolis, Indiana. July 2001.

Phylogenetic relationships of North American chorus frogs (*Pseudacris*). Population Biology Seminar, University of Texas, Austin. October 2001.

Speciation in chorus frogs (*Pseudacris*). Invited seminar, Southern Institute of Forest Genetics. February 2003.

Phylogeography and systematics of the trilling chorus frogs (*Pseudacris*): new range borders and a new North American species. Society for the Study of Amphibians and Reptiles annual meeting. Norman, Oklahoma. May 2004.

Speciation in chorus frogs (*Pseudacris*). Invited seminar, Auburn University. March 2004.

Patterns and processes of speciation in North American chorus frogs. Population Biology Seminar, University of Texas, Austin. September 20, 2004.

Patterns and processes of speciation in North American chorus frogs. Invited seminar, Old Dominion University. March 2005.

Evolution of North American chorus frogs. Invited public education talk, Audubon Society and Florida Department of Environmental Protection. April 2005.

Speciation in chorus frogs (*Pseudacris*). Invited seminar, Southeastern Louisiana State University. April 2005.

Phylogeography and systematics of the trilling chorus frogs (*Pseudacris*). Society for the Study of Evolution annual meeting, Fairbanks, Alaska. June 2005.

Patterns and processes of speciation in North American chorus frogs. University of California, Berkeley. April 2006.

Acoustic niche partitioning and call evolution in chorus frogs (*Pseudacris*). Society for the Study of Evolution annual meeting, Stony Brook, New York. June 2006.

Acoustic niche partitioning and call evolution in chorus frogs (*Pseudacris*). Society for the Study of Amphibians and Reptiles annual meeting, New Orleans, Louisiana. July 2006.

Geological and climatic forces driving speciation in the continentally distributed trilling chorus frogs (*Pseudacris*). Society for the Study of Evolution annual meeting, Christchurch, New Zealand. June 2007.

Speciation in the North American chorus frogs (*Pseudacris*). Keynote speaker, Kansas Herpetological Society, Lawrence, Kansas. October 2007.

Speciation in the North American chorus frogs (*Pseudacris*). Invited seminar, Saint Mary's College, Notre Dame, Indiana. April 2008.

How new species form: Studying speciation in the chorus frogs of the Apalachicola National Estuarine Research Reserve. Invited public education talk, Apalachicola National Estuarine Research Reserve, Apalachicola, Florida. February 2009.

How new species form: Studying speciation in chorus frogs (*Pseudacris*). Invited public education talk, Caw Caw Interpretive Center County Park, Charleston, South Carolina. March 2009.

Reinforcement in chorus frogs (*Pseudacris*): Lifetime fitness estimates including intrinsic natural selection and sexual selection against hybrids. Society for the Study of Evolution annual meeting, Portland, Oregon. June 2010.

Behavioral, phylogenetic, and genomic approaches to studying speciation in chorus frogs. Invited seminar speaker, University of Florida. April 2010.

Behavioral, phylogenetic, and genomic approaches to studying speciation in chorus frogs. Invited seminar speaker, Louisiana State University. October 2010.

Behavioral, phylogenetic, and genomic approaches to studying speciation in chorus frogs. Invited seminar speaker, Jones Ecological Center at Ichauway, Georgia. April 2011.

Introduction to promises and pitfalls of incorporating next-generation sequencing data in phylogeography. Co-organizer of symposium sponsored by Society of Systematic Biologists at Evolution Meetings in Norman, Oklahoma. June 2011.