

Curriculum Vita
Stephen Carroll Richter

Contact Information

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Education

Ph.D. in Zoology: University of Oklahoma, December 2004. Dissertation: Genetic studies in a demographic framework: effects of isolation and reduction in a rare group of amphibians. Co-advisors: Richard E. Broughton; Janalee P. Caldwell.
 M.S. in Biological Sciences: Southeastern Louisiana University, December 1998. Thesis: Demography and reproductive biology of dusky gopher frogs, *Rana sevosa*, in Mississippi. Advisor: Richard A. Seigel.
 B.S. in Biology: Berry College, December 1995. Advisor: Steven S. Schwartz.

Teaching Positions Held

University Level

1/05-pres Assistant Professor at Eastern Kentucky University (Comparative Vertebrate Anatomy, Molecular Applications in Ecology and Evolution, Genetics, Speciation Biology, Biogeography, Land Use and Conservation)
 8/98-12/00 Graduate Teaching Assistant (Comparative Vertebrate Anatomy, Introduction to Zoology, and Principles of Ecology Laboratories) for the University of Oklahoma
 8/96-12/97 Graduate Teaching Assistant (Introduction to Biology Laboratory) for Southeastern Louisiana University
 8/95-12/95 Undergraduate Teaching Assistant (Principles of Biology and Principles of Ecology Laboratories) for Berry College

Secondary to Middle School Level

1/01-8/04 Contract Teacher (Frog Biology and Dissection Course; Natural History of Oklahoma Course) for the Norman, Oklahoma Public Schools Gifted & Talented Enrichment Program and for the Oklahoma City Public School's "Gear Up" Program (Inner-city, at-risk students) through the University of Oklahoma Precollegiate Programs.
 7/02-8/04 Contract Teacher (Natural History of Oklahoma) for the Horizons Unlimited Program (Accelerated 6-8th graders) through the University of Oklahoma Precollegiate Programs.
 8/00 Contract Teacher (Aquatic Ecology; Herpetology) for the Sam Noble Oklahoma Museum of Natural History

Research Interests

Ecology, conservation, and evolution of amphibians and reptiles; Natural history of amphibians and reptiles; Conservation biology of ecosystems; Historical and comparative biology of vertebrates

Publications (*=student coauthor)

Manuscripts in Print

- Richter, S.C.**, R.E. Broughton, and B.I. Crother. 2009. Genetic consequences of population reduction and geographic isolation in the critically endangered frog, *Rana sevosa*. *Copeia* 2009:801-808.
- Means, D.B., and **S.C. Richter**. 2007. Genetic verification of possible gigantism in a southern toad, *Bufo terrestris*. *Herpetological Review* 38:297-298.
- McIntosh, A.V.*, and **S.C. Richter**. 2007. DIGITAL DAISY: an inquiry-based approach to investigating floral morphology and dissection. *Science Activities* 43:15-21.
- Seigel, R.A., A. Dinsmore, and **S.C. Richter**. 2006. Using well water to increase hydroperiod as a management option for pond-breeding amphibians. *Wildlife Society Bulletin* 34:1022-1027.
- Graham, C., **S.C. Richter**, S. McClean, E. O'Kane, P.R. Flatt, C. Shaw. 2006. Histamine-releasing and antibacterial peptides from the skin secretions of the dusky gopher frog, *Rana sevosa*. *Peptides* 27:1313-131.
- Richter, S.C.**, and R.E. Broughton. 2005. Development and characterization of polymorphic microsatellite DNA loci for the endangered Dusky Gopher Frog (*Rana sevosa*) and two closely related species, *Rana capito* and *Rana areolata* *Molecular Ecology Notes* 5:436-438.
- Graham, C., A.E. Irvine, S. McClean, **S.C. Richter**, P.R. Flatt, C. Shaw, C. 2005. Peptide Tyrosine Arginine, a potent immunomodulatory peptide isolated and structurally characterized from the skin secretions of the dusky gopher frog, *Rana sevosa*. *Peptides* 26:737-743.
- Renken, R.B., W.K. Gram, D.K. Fantz, **S.C. Richter**, T.J. Miller, K.B. Ricke, B. Russell, and X. Wang. 2004. Effects of forest management on amphibians and reptiles in Missouri Ozark forests. *Conservation Biology* 18:174-188.
- Richter, S.C.**, and D.B. Shepard. 2004. Geographic distribution. *Rana areolata*. *Herpetological Review* 35:283.
- Richter, S.C.**, J.E. Young, G.N. Johnson, R.A. Seigel. 2003. Stochastic variation in reproductive success of a rare frog, *Rana sevosa*: implications for conservation and for monitoring amphibian populations. *Biol. Conservation* 111:171-177.

Manuscripts in Print (cont.)

- Gram, W.K., P.A. Porneluzi, R.L. Clawson, J. Faaborg, and **S.C. Richter**. 2003. Effects of experimental forest management on density and nesting success of bird species in Missouri Ozark forests. *Conservation Biology* 17:1324-1337.
- Richter, S.C.**, and L.A. Richter. 2002. Rearing larval anurans in the field: maintenance of equal volumes and ease of multiple sampling using a two-component enclosure. *Herpetological Review* 33:179-180.
- Richter, S.C.**, and R.A. Seigel. 2002. Annual variation in the population ecology of the endangered gopher frog, *Rana sevosa* Goin and Netting. *Copeia* 2002:962-972.
- Richter, S.C.**, J.E. Young, R.A. Seigel, and G.N. Johnson. 2001. Post-breeding movements of the dark gopher frog, *Rana sevosa* Goin and Netting: Implications for conservation and management. *Journal of Herpetology* 35:316-321.
- Richter, S.C.** 2000. Larval caddisfly predation on the eggs and embryos of *Rana capito* and *Rana sphenoccephala*. *Journal of Herpetology* 34:590-593.

Manuscripts in Review

- Downey, C.M., and **S.C. Richter**. Impact of Stream Degradation on Health and Abundance of Stream Salamanders in an Eastern Kentucky Watershed. Submitted to *Southeastern Naturalist*.
- McAllister, C.T., C.R. Bursey, and **S.C. Richter**. Natural History Note: *Pseudotriton montanus diastictus* (Midland Mud Salamander) Parasites. Submitted to *Herpetological Review*.

Manuscripts in Preparation

- Richter, S.C.**, J.R. Alexander*, S.J. Price, and M.E. Dorcas. Effects of urbanization on salamander populations in the Charlotte, North Carolina metropolitan area. Intended for *Biological Conservation*.
- Richter, S.C.**, J.A. Jackson*, M. Hinderlitter, D. Epperson, C. Theodorakis, and S.M. Adams. Conservation genetics of the largest populations of federally threatened Gopher Tortoises (*Gopherus polyphemus*). Intended for *Conservation Genetics*.
- Williams, J.*, C.M. Buker*, and **S.C. Richter**. Evolutionary pattern of mitochondrial genome order in amphibians. Intended for *Journal of Evolutionary Biology*.
- Broughton, R.E., **S.C. Richter**, R.L. Mayden, and J.R. Gold. Molecular phylogeny of cyprinid fishes (genus *Cyprinella*) from southwestern North America. Intended for *Copeia*.
- Walls, S.C., **S.C. Richter**, and W.J. Barichivich. Ephemeral wetland ecosystems in the face of climate change: an amphibian perspective. Intended for *Freshwater Biology*.

Species Accounts and Popular Articles

- Angulo, A., A.C.O.Q. Carnaval, **S.C. Richter**. 2005. Symposium highlights from "A new generation of research on amphibian declines". *Froglog* 71:2-3.
- Richter, S.C.** 2005. *Rana grylio*, Pig frogs. Pp. 555-557. In: M.J. Lannoo (ed.) *Amphibian Declines: The Conservation \ Status of United States Species*. University of California Press, Berkeley.
- Richter, S.C.**, and J.B. Jensen. 2005. *Rana sevosa*, Dusky gopher frogs. Pp. 584-586. In: M.J. Lannoo (ed.) *Amphibian Declines: The Conservation Status of United States Species*. University of California Press, Berkeley.
- Jensen, J.B., and **S.C. Richter**. 2005. *Rana capito*, Gopher frogs. Pp. 536-538. In: M.J. Lannoo (ed.) *Amphibian Declines: The Conservation Status of United States Species*. University of California Press, Berkeley.
- Richter, S.C.** 2004. Conservation of amphibians and a peculiar frog of eastern Oklahoma. *Newsletter of the Oklahoma Biological Survey*. Spring 2004:3.
- Richter, S.C.** and R.A. Doubledee. 2003. *Rana sevosa* species account. *AmphibiaWeb: Information on amphibian biology and conservation*. [web application]. Berkeley, California. Available: <http://amphibiaweb.org/>.

Reports to Granting Agencies

- Adams, S.M., M.G. Hinderlitter, M.J. Peterson, **S.C. Richter**. 2009. Development and Application of a Physiological-based Framework for Assessing the Biological Significance of Military Activities on Threatened and Endangered Animal Species. Report to the Strategic Environmental Research and Development Program. SI-1395, 88 pp.
- Carnaval, A.C.O.Q., and S.C. Richter. 2005. Workshop: A new generation of research on amphibian declines. Report to the National Science Foundation.
- Richter, S. C.**, and B.I. Crother. 2005. Population genetics of gopher frogs in Mississippi. Unpubl. Report to the U.S. Fish and Wildlife Service.
- Seigel, R. A., A. Dinsmore, and **S. C. Richter**. 2001. Demography and reproduction of gopher frogs (*Rana sevosa*) in Mississippi. Unpubl. Report to the U.S. Fish and Wildlife Service and the U.S. Forest Service.
- Richter, S. C.**, and R. A. Seigel. 1999. Demography and reproduction of gopher frogs in Mississippi. Unpubl. Report to the U.S. Fish and Wildlife Service and the U.S. Forest Service.
- Richter, S. C.**, and R. A. Seigel. 1998. Demography and reproduction of gopher frogs in Mississippi. Unpubl. Report to the U.S. Fish and Wildlife Service and the U.S. Forest Service.
- Richter, S. C.**, and R. A. Seigel. 1997. Demography and reproduction of gopher frogs in Mississippi. Unpubl. Report to the U.S. Fish and Wildlife Service and the U.S. Forest Service.

Grants

- \$3450 2008 Memphis Zoo Conservation Action Network Grant “Genetic profiling of captive populations of endangered dusky gopher frogs”
- \$10000 2007 Eastern Kentucky University Research Committee “Species integrity and hybridization between two closely related amphibian species.”
- \$45000 2006-08 Oak Ridge National Laboratories. “Genetic assessment of the effects of military activity on federally threatened gopher tortoises.
- \$32000 2006 U.S. Fish and Wildlife Service Grant. “Phylogeography and conservation genetics of gopher frogs with implications for management.”
- \$11000 2006 Eastern Kentucky Environmental Research Institute (with William Staddon, Charles Elliott, and Michael Foster) “Genetic associations of environmental degradation: prokaryotic and eukaryotic communities as indicators.”
- \$10200 2006 Eastern Kentucky University Research Committee “Genetic variation and identity of gopher frogs.”
- \$18000 2005 U.S. National Science Foundation (with Ana Carnaval; DEB-0508224). “Workshop: A new generation of research on amphibian declines.”
- \$5000 2004 U.S. Fish and Wildlife Service Grant (with Brian Crother). “Conservation genetics of natural and captive populations of dusky gopher frogs, *R. sevosa*.”
- \$8000 2003 U.S. Fish and Wildlife Service Grant (with Brian Crother). “Conservation genetics of natural populations of gopher frogs (*Rana capito* and *R. sevosa*) and crawfish frogs (*Rana areolata*) and captive populations of *R. sevosa*.”
- \$1720 2003 Declining Amphibian Population Task Force (DAPTF) Seed Grant. “Inbreeding history, effective population size, and genetic structure of an isolated population of endangered frogs.”
- \$15000 2002 U.S. Fish and Wildlife Service Grant (with Brian Crother). “Phylogeographic patterns of gopher frogs (*Rana capito* and *R. sevosa*) inferred from three mitochondrial and one nuclear gene.”

Prior Research Positions Held

- 8/03-8/04 Graduate Research Assistant, Department of Zoology, University of Oklahoma under Dr. Richard E. Broughton. Project title: “Comparative studies of vertebrate mitochondrial genomes and phylogeny of actinopterygian fishes.”
- 1/01-8/03 Graduate Research Assistant, Department of Zoology, University of Oklahoma under Dr. Wendy Gram. Project title: “Long-term effects of landscape management on animal distribution and abundance in the Missouri Ozarks.”
- 8/04-12/04 Research Technician, Savannah River Ecology Laboratory, University of Georgia under Dr. Michael E. Dorcas. Project title: “Differential pond use by frogs on the Savannah River Site determined via frogloggers.”
- 12/95-8/98 Graduate Research Assistant, Department of Biological Sciences, Southeastern Louisiana University under Dr. Richard A. Seigel. Project title: “Conservation ecology of gopher frogs in Mississippi.”
- 8/95-12/95 Undergraduate Independent Research, Department of Biology, Berry College under Dr. John H. Graham. Project title: “Reverse scalation and fluctuating asymmetry in the Alabama hogsucker in a disturbed habitat.”
- 8/95-12/95 Undergraduate Research Assistant, Department of Biology, Berry College under Dr. Laura J. Fielden. Project title: “Lyme Disease, Rocky Mountain spotted fever, and human granulocytic ehrlichiosis: a preliminary survey of vector ticks on the Berry College campus.”
- 5/95-8/95 Field Research Assistant, Southern Ecosystems Research and U.S. Forest Service under Edward E. Wester: Project title: “Determination of population size of gopher tortoises on Desoto National Forest lands.”
- 1/95-5/95 Undergraduate Research Assistant, Department of Biology, Berry College under Dr. John H. Graham. Project title: “Developmental stability of fishes in northwestern Georgia river drainages.”
- 1/94-7/94 Field Assistant/Consultant, Southern Ecosystems Research under Edward E. Wester. Project title: “Effects of temporary displacement on gopher tortoises from construction zones in the Phase III Expansion Project of Florida Gas Transmissions.”
- 8/93-12/93 Undergraduate Research Assistant, Department of Biology, Berry College under Dr. Sherri L. DeFauw. Project title: “Herpetofaunal survey of Berry College Property via drift fence monitoring and field surveys.”
- 3/93-5/93 Volunteer Field Assistant, Department of Biology, Berry College under Dr. Roger A. Anderson. Project title: “Microhabitat preference and population dynamics of the Florida scrub lizard in timber-managed portions of the Ocala National Forest, Florida.”

Service

School Related (EKU only)

Department of Biological Sciences: Student Research Coordinator; Serve on departmental committees

College of Arts and Sciences: New Science Building Committee (2005-2007)

University: Eastern Committee on Responsible Environmental Stewardship; University Representative to the Council on Undergraduate Research; Board of Directors for the Division of Natural Areas; focus group of PRIDE environmental education center development; Faculty Participant of Inquiry-Based Science and Math in Appalachian Middle Schools program

Society Related

2007-pres Member of the Board of Directors for the Society for the Study of Amphibians and Reptiles (SSAR)

2005-pres Member of American Society of Ichthyologists and Herpetologists (ASIH) Conservation Committee

Service (cont.)

Society Related (cont.)

- 2003-pres Member of the Conservation Committee of SSAR
2005-2008 Judge of the student oral and poster presentations for SSAR and Association of Southeastern Biologists
2003-2008 Chair of the Conservation Committee of SSAR
2004-2005 Symposium Co-chair, "A new generation of research on amphibian declines," ASIH, Tampa, Florida.
2003 Member of local planning committee 2004 Joint Meeting of ASIH, Herpetologists' League, & SSAR, Norman, OK.
2003-pres Guest Editor for the Southeastern Naturalist
1997-pres Reviewer for National Science Foundation, American Midland Naturalist, Amphibia-Reptilia, Biological Conservation, Copeia, Ecological Applications, Forest Ecology and Management, Genetica, Herpetologica, The Herpetological Journal, Herpetological Review, Journal of Herpetology, National Fish and Wildlife Foundation, National Geographic, and Southeastern Naturalist
2000-2001 Member of the Sherman A. Minton Student Travel Awards Committee through SSAR
1999-2000 Chair of the SSAR Graduate Student Travel Awards Committee
1999-2000 Organizer of the Silent Auction at the 2000 Annual Meeting of SSAR

Conservation Related

- Co-Chair of SSAR Conservation Committee and member of ASIH Conservation Committee
Reviewer, Global Amphibian Assessment & Red List of International Union for Conservation of Nature & Natural Resources
Participant in the "Advanced Training in Amphibian Population Decline Research," which occurred at La Selva Biological Station in Costa Rica in Jan. 2004 and was funded by the US Department of Energy and National Science Foundation. The training course was designed to bring together senior graduate level and post-doctoral students and leading scientists who study causes and consequences of declining amphibian populations to foster future research collaborations in this area.
Member of the Berry College Longleaf Pine Network created to develop a longleaf management plan on Berry College property.
Member of the Mississippi Gopher Frog Recovery Team (includes USFWS, USFS, USGS, MS DWFP, and university-associated scientists) created to develop a management action plan for the endangered dusky gopher frog.

Society Memberships

- Sigma Xi; Phi Kappa Phi; American Association for the Advancement of Science; American Society of Ichthyologists and Herpetologists; Association of Southeastern Biologists; Gopher Tortoise Council; Herpetologists' League; Kentucky Academy of Science; Society for the Study of Amphibians and Reptiles

Professional Meeting Abstracts (* = student coauthor)

- 2009 **Richter, S.C.**, N. Henry*, N. Hensley*, and E. Madeen Conservation genetics of captive and natural populations of the critically endangered Dusky Gopher Frog, *Rana sevosa*. Annual Meeting of the Kentucky Academy of Science (KAS), Covington, KY.
2009 Guidugli, M.L.*, and **S.C. Richter**. Factors influencing timing and orientation of breeding migrations of a pond-breeding amphibian community. Annual Meeting of the KAS, Covington, KY.
2009 Drayer, A.N.*, and **S.C. Richter**. Comparison of amphibian communities in artificial and natural ponds in forested ecosystems. Annual Meeting of the KAS, Covington, KY.
2009 **Richter, S.C.**, N. Henry*, and E. Madeen*. Conservation Genetics of the Critically Endangered Dusky Gopher Frog, *Rana sevosa*. Joint Meeting of American Society of Ichthyologists and Herpetologists (ASIH), Herpetologists' League (HL), and Society for the Study of Amphibians and Reptiles (SSAR), Portland, OR.
2009 Walls, S.C., **S.C. Richter**, and W.J. Barichivich. Ephemeral wetland ecosystems in the face of climate change: an amphibian perspective. Joint Meeting ASIH, HL, SSAR, Portland, OR.
2008 Alexander, J.R.*, **S.C. Richter**, S.J. Price, and M. E. Dorcas. The genetic effects of urbanization and habitat fragmentation on spotted salamander populations. Posters on the Hill, Washington, D.C.
2008 Jackson, J.A*, and **S.C. Richter**. Genetic variation and viability of gopher tortoise populations at a military installation in southern Mississippi. Annual Meeting of Association of Southeastern Biologists (ASB). Spartanburg, SC.
2008 Williams, J.S.*, C.M. Buker*, A.H. Kokwaro*, and **S.C. Richter**. Evolutionary pattern of mitochondrial genome order in amphibians. Annual Meeting of ASB, Spartanburg, SC.
2008 Downey, C.M., and **S.C. Richter**. The impact of mining and residential pollutants on stream salamanders in eastern Kentucky. Annual Meeting of the KAS, Lexington, KY.
2008 Gustin, E.S.*, and **S.C. Richter**. Genetic Analysis of the Distribution of *Rana pipiens* and *Rana sphenoccephala* Across a Zone of Sympatry. Annual Meeting of the KAS, Lexington, KY.
2008 Jackson, J.A., and **S.C. Richter**. Population Genetic Analysis of Gopher Tortoises (*Gopherus polyphemus*) Across the Landscape of a Military Training Facility. Annual Meeting of the KAS, Lexington, KY.
2008 Williams, J.S.*, C.M. Buker*, and **S.C. Richter**. Evolutionary Pattern of Mitochondrial Genome Order in Amphibians. Annual Meeting of the KAS, Lexington, KY.

Professional Meeting Abstracts (cont.)

- 2007 Alexander, J.R.* , M. Pierce, and **S.C. Richter**. Modernizing the Science Classroom: An Introduction to RNA interference. Annual Meeting of the KAS, Louisville, KY.
- 2007 Gustin, E.S.* , and **S.C. Richter**. Genetic analysis of the distribution of *Rana pipiens* and *Rana sphenocephala* across a zone of sympatry. Joint Meeting ASIH, HL, SSAR, St. Louis, MO.
- 2007 Alexander, J.R.* , **S.C. Richter**, S.J. Price, and M. E. Dorcas. The genetic effects of urbanization and habitat fragmentation on spotted salamander populations. Annual Meeting of ASB, Columbia, SC.
- 2007 Hensley, N.M.* , and **S.C. Richter**. Population status and genetic variability of two remaining populations of endangered Dusky Gopher Frogs. Annual Meeting of ASB, Columbia, SC.
- 2006 Alexander, J.R.* , **S.C. Richter**, S.J. Price, and M. E. Dorcas. Molecular genetic assessment of the effects of urbanization on salamander populations in the greater Charlotte, North Carolina area. Joint Meeting ASIH, HL, SSAR, New Orleans.
- 2006 Alexander, J.R.* , **S.C. Richter**, S.J. Price, and M.E. Dorcas. Molecular genetic assessment of the effects of urbanization on salamander populations in the greater Charlotte, North Carolina area. Annual Meeting of the KAS, Morehead, KY.
- 2006 **Richter, S.C.**, and N.M. Hensley*. Population history and genetic affinity of two populations of the US Endangered Dusky Gopher Frog. Joint Meeting ASIH, HL, and SSAR, New Orleans, LA.
- 2005 **Richter, S.C.** Detection of historic population declines using contemporary genetic data: case study of an endangered frog. Annual Meeting of the KAS, Richmond, KY.
- 2005 Best, K.L.* , and **S.C. Richter**. A survey of the amphibians and reptiles of Muddy Creek, Madison County, Kentucky. Annual Meeting of the KAS, Richmond, KY.
- 2005 **Richter, S.C.** Detection of historic population declines using contemporary genetic data. Joint Meeting ASIH, HL, and SSAR, Tampa, FL.
- 2004 **Richter, S.C.**, and R.E. Broughton. Genetic, demographic, and ecological consequences of population reduction in an endangered frog. Joint Meeting of American Society of Ichthyologists and Herpetologists (ASIH), Herpetologists' League (HL), and Society for the Study of Amphibians and Reptiles (SSAR), Norman, OK.
- 2004 Broughton, R.E., Reneau, P.C., and **S.C. Richter**. The view of fish phylogeny from a mountain of mitochondrial sequence data. Joint Meeting of ASIH, HL, and SSAR, Norman, OK.
- 2002 Renken, R.B., **S.C. Richter**, and W.K. Gram. Landscape and local scale effects of forest management on amphibians and reptiles in Missouri Ozark forests. Joint Meeting of ASIH, HL, and SSAR, Kansas City, MO.
- 1999 Seigel, R.A., and **S.C. Richter**. Temporal variation in the population demography of the endangered gopher frog. Annual Meeting of the Society for Conservation Biology. College Park, MD.
- 1999 Seigel, R.A., C.A. Koenings, G.N. Johnson, and **S.C. Richter**. Two tropical storms, a hurricane, and a frog: effects of unusual weather patterns on winter-breeding anurans. Joint Meeting of ASIH, HL, and SSAR, College Park, PA.
- 1998 **Richter, S.C.**, and R.A. Seigel. Intra-population variation in demographic patterns and reproductive traits of gopher frogs (*Rana capito*) in Mississippi. Joint Meeting of ASIH, HL, and SSAR, Guelph, Ontario.
- 1997 **Richter, S.C.**, J.E. Young, J.S. Doody, G.N. Johnson, R.A. Seigel. Variation in breeding and survival of gopher frogs, *Rana capito*, in southern Mississippi. Joint meeting of ASIH, HL, and SSAR, Seattle, WA.
- 1996 **Richter, S.C.**, J.E. Young, J.S. Doody, G.N. Johnson, R.A. Seigel. The status and ecology of gopher frogs: Implications for monitoring and surveying for anuran populations. Tennessee Herpetology Conference, Murfreesboro, TN.
- 1996 **Richter, S.C.**, J.E. Young, J.S. Doody, G.N. Johnson, R.A. Seigel. Implications of differential breeding of the gopher frog, *Rana capito*, in southern Mississippi. Annual meeting of SSAR, Lawrence, KS.

Invited Seminars

- 2009 "Landscape alteration and persistence of pond-breeding amphibians: barriers, resistance, and opportunities" for the Department of Biological Sciences, University of South Carolina Upstate.
- 2009 "Landscape alteration and persistence of pond-breeding amphibians: barriers, resistance, and opportunities" for the Department of Biological Sciences, Southern Illinois University Edwardsville.
- 2006 "Genetic and demographic consequences of landscape alteration on rare amphibians" for the Conservation Biology Program, University of Missouri.
- 2006 "Effects of habitat fragmentation on population genetics and demography of rare amphibians" for Department of Biology, Davidson College.
- 2006 "Use of molecular genetic data to address ecological and conservation-oriented research questions" for the Amphibian and Reptile Conservation Course, Davidson College.
- 2006 "Genetic and demographic consequences of landscape alteration on rare amphibians" for Department of Biological Sciences, Eastern Kentucky University.
- 2005 "Effects of habitat fragmentation on population genetics and demography of rare gopher frogs" for the Ecolunch Series, Department of Biology, University of Kentucky.
- 2005 "Effects of habitat fragmentation on population genetics and demography of rare gopher frogs" for the Environmental Sciences Division of Oak Ridge National Laboratory.
- 2005 "The use of genetic data to address questions in wildlife biology" for Eastern Kentucky University, Wildlife Society
- 2005 "Use of ecological and genetic data to study the consequences of human-induced landscape change on rare amphibians" for Department of Biology, Berry College.

Invited Seminars (cont.)

- 2005 “Use of ecological and genetic data to study the consequences of human-induced landscape change on rare amphibians” for Department of Biology, Shorter College.
- 2004 “Genetic and ecological consequences of population reduction in a group of rare amphibians” for the Department of Biological Sciences, Eastern Kentucky University.
- 1998 “Variation in reproduction and population demography of gopher frogs, *Rana sevosia*” for the U.S. Forest Service, Southern Institute of Forest Genetics (USFS SIFG).
- 1997 “Conservation and ecology of gopher frogs in Mississippi” for the USFS SIFG.
- 1994 “Natural history and ecology of gopher tortoises, *Gopherus polyphemus*” for the Department of Biology, Berry College.

Other Presentations

- 2004 “Molecular tools to study ecological genetics and preparation for graduate school through research participation.” for undergraduate Zoological Society at the University of Oklahoma.
- 2003 “Effects of isolation on effective population size, inbreeding history, and genetic structure of an endangered frog” for the EEB research seminar series at the University of Oklahoma.
- 2003 “Poster: Inbreeding history, effective population size, and genetic structure of an isolated population of endangered frogs” for the Graduate Research Poster Session at the University of Oklahoma.
- 1998 “Demography and reproductive biology of gopher frogs in Mississippi” for the Department of Biological Sciences seminar series at Southeastern Louisiana University.