

CURRICULUM VITAE
JACOB F. SCHAEFER
September 2009

General -- Born: St. Louis, Missouri, 10 August 1970
Email: jake.schaefer@usm.edu
Homepage: <http://ichthyology.usm.edu>

Education and Professional Positions –

- Undergraduate Degree -
Stetson University
Deland Florida, 32720
May 1992 - B.S. in Biology, Minor in Chemistry
Undergraduate Research - Interactions between two poeciliid fishes (*Gambusia holbrookii* and *Heterandria formosa*) and their prey in a Florida marsh.
Copeia (1994):516-521.
- M.S. - December 1995
University of Oklahoma, Department of Zoology
Advisor: Loren G. Hill
Committee: Victor Hutchison, William J. Matthews
Stream microhabitat use by two centrarchids (*Lepomis megalotis* and *Lepomis macrochirus*). *Environmental Biology of Fishes* 1999(54):303-312.
- Ph. D. - May 1999
Modeling movement and dispersal by three stream dwelling cyprinids
(*Camptostoma anomalum*, *Cyprinella venusta* and *Notropis boops*).
Freshwater Biology 2001(46):379-388.
University of Oklahoma, Department of Zoology
Advisor: William J. Matthews
Committee: Victor Hutchison, William Shelton, Larry Toothaker, Gary Wellborn
- Postdoctoral - May 1999 - August 2000
Post Doctoral Research Associate
Sam Noble Oklahoma Museum of Natural History
Effects of barriers and thermal refugia on local movement of the threatened leopard darter (*Percina pantherina*), *Environmental Biology of Fishes*.
2003 (66):390-400.
- August 2000 - May 2004
Assistant Professor
Southern Illinois University Edwardsville (SIUE)
Department of Biological Sciences
Edwardsville, IL 62025
- August 2004 - May 2008
Assistant Professor
University of Southern Mississippi (USM)
Department of Biological Sciences
Hattiesburg, MS 39401
- August 2008 - Current

Associate Professor
University of Southern Mississippi
Department of Biological Sciences
Hattiesburg, MS 39401

Areas of Research Interests -

Ichthyology, Evolutionary Ecology, Physiological Ecology, Community Ecology, Applied Statistics

Teaching Experience -

Biology of Fishes, USM, 1 Semester
Ichthyology, USM, 2 Semesters
Population and Community Ecology, USM, 3 semesters
Physiological Ecology, SIUE and USM, 1 semester each
Environmental Biology, USM, 1 semester
Ecology of Color and Light (graduate only), USM, 1 semester
Multivariate Analyses in Ecology (graduate only), USM, 3 semesters
Honors Introductory Biology, USM, 5 semesters
Human Anatomy and Physiology (I and II), SIUE, 9 semesters.
Aquatic Ecosystems, SIUE, 1 semester
Comparative Vertebrate Anatomy, SIUE, 1 semester
Experimental Design in Ecology, Univ. of Oklahoma Biol. Station, 4 sessions
Introductory Biology for Non Majors, SIUE, 2 semesters
Advanced Community Ecology (graduate only), SIUE, 1 semester
Senior Assignment, Senior Research Seminar, SIUE, 1 semester
Human Anatomy (cadaver based), University of Oklahoma, 2 semesters

Publications -

31. Mickle, P., J.F. Schaefer, S.B. Adams and B.R. Kreiser. 2010. Habitat use of age 0 Alabama shad in the Pascagoula river drainage, USA. In press, *Ecology of Freshwater Fish*.
30. Matamoros, W.A., J.F. Schaefer and B. R. Kreiser. 2010. Annotated checklist of the freshwater fishes that occur in continental and insular Honduras. In press, *Zootaxa*.
29. Matamoros, W.A. and J.F. Schaefer. 2010. A new species of *Profundulus* (Cyprinodontiformes: Profundulidae) from the Honduran central highlands. In press, *Journal of Fish Biology*.
28. Feldheim, K.A., P.J. Sanchez, W.A. Matamoros, J.F. Schaefer, B.R. Kreiser. 2009. Isolation and Characterization of Microsatellite Loci for Mountain Mullet (*Agonostomus monticola*). In press, *Molecular Ecology Resources*
27. Gido, K.B., J.F. Schaefer and J.A. Falke. 2009. Convergence of littoral zone fish communities in reservoirs. *Freshwater Biology* **54**: 1163-1177.

26. Schaefer, J.F., B.K. Kresler, P. Mickle, C. Champagne and D. Duvernell. 2009. Patterns of co-existence and hybridization among two topminnows (*Fundulus euryzonus* and *F. olivaceus*) in a riverine contact zone. *Ecology of Freshwater Fish* 18: 360-368.
25. Matamoros, W.A., P. Mickle, J. Schaefer, W. Arthurs, J. Ikoma, R. Ragsdale. 2009. First record of *Agonostomus monticola* (Family: Mugilidae) in Mississippi freshwaters with notes of its distribution in the southern USA. *The Southeastern Naturalist* 8(1): 175-178.
24. Bowen, B.R., B. Kreiser, P. F. Mickle, J. Schaefer, and S. B. Adams. 2008. Phylogenetic relationships among North American *Alosa* species (Clupeidae). *Journal of Fish Biology* 72: 1188-1201.
23. Vigueira, P., Schaefer, J.F., Kreiser, B.R., Duvernell, D. 2008. Tests of reproductive isolation among species in the *Fundulus notatus* (Cyprinodontiformes: Fundulidae) species complex. *Evolutionary Ecology* 22(1): 55-70.
22. Zuber, B., and Schaefer, J.F. 2007. Fluctuating asymmetry and condition of fishes exposed to varying levels of environmental stressors. *Proceedings of the Mississippi Water Resources Board* 37:179-185.
21. Meadows, D., Adams, S.B. and Schaefer, J.F. 2007. Threatened Fishes of the World: *Alosa alabamae* Jordan and Evermann, 1896 (Clupeidae). *Environmental Biology of Fishes* 82(2):173-174.
20. Lutterschmidt, W.I, Schaefer J.F., and Furrillio, R. 2007. Relationships between parasite load and physiological performance (CTMax and endurance) of two Centrarchids (*Lepomis megalotis* and *Lepomis macrochirus*). *Journal of Comparative Parasitology* 74(2): 194-203.
19. Duvernell, D., Schaefer, J.F., Hancks, D., Fonoti, J., Ravanelli, A. 2007. Hybridization and Introgression Among Syntopic Populations of the Topminnows *Fundulus notatus* and *F. olivaceus* in Southern Illinois. *Journal of Evolutionary Biology*. 20: 152-164.
18. Matthews, W.J. K. B. Gido, G. P. Garrett, F. P. Gelwick, J. Stewart, and J. Schaefer. 2006. Modular experimental riffle-pool stream system. *Transactions of the American Fisheries Society* 135: 1559-1566.
17. Kerfoot, J.R. and Schaefer, J.F. 2006. Ecomorphology and habitat utilization of *Cottus* species. *Environmental Biology of Fishes* 76:1-13.
16. Schaefer, J.F.,and Ryan, A. 2006. Developmental plasticity in the thermal tolerance of zebrafish (*Danio rerio*). *Journal of Fish Biology* 69: 722-734.

15. Schaefer, J.F. 2006. A simple and economical method for precise, programmable thermal regimes in recirculating aquatic mesocosms. *North American Journal of Aquaculture* **68**: 240-244.
14. Schaefer, J.F., Mickle, P., Spaeth, J., Zuber, B., Matamoros, W., Adams, S., Kreiser, B., Vigueira, P. 2006. Effects of hurricane Katrina on the fish fauna of the Pascagoula drainage. *Proceedings of the Mississippi Water Resources Board* **36**:62-68.
13. Schaefer, J.F., Gido, K.G. and Smith, M. 2005. A test for community change using a null model approach. *Ecological Applications*. **15**(5): 1761-1771.
12. Schaefer, J.F., Gido, K. and Smith, M. 2005. Computer Program: A test for community change using a null model approach. *Ecological Archives* A015-052.
11. Gido, K.B., Schaefer, J.F. and Pigg, J. 2004. Patterns of fish invasions in the Great Plains of North America. *Biological Conservation*. **118**:121-131
10. Schaefer, J.F., Kerfoot, J.R. 2004. Fish assemblage change in an adventitious stream: Landscape perspectives. *American Midland Naturalist*. **151**(1):143-155.
9. Schaefer, J.F., Gido, K.B., Spooner, D. Marsh-Matthews, E. 2003. Effects of barriers and thermal refugia on local movement of the threatened leopard darter (*Percina pantherina*). *Environmental Biology of Fishes* **66**:391-400.
8. Schaefer, J.F. 2001. Riffles as barriers to inter-pool movement by three cyprinids (*Notropis boops*, *Campostoma anomalum* and *Cyprinella venusta*). *Freshwater Biology* **46**:379-388.
7. Lienesch, P., Lutterschmidt, W. I. and Schaefer, J. F. 2000. Assemblage changes in a small creek after isolation due to reservoir formation. *Southwestern Association of Naturalists* **45**(3):274-288.
6. Gido, K. B., Schaefer, J.F., Work, K.A., Lienesch, P.W., Matthews, W.J. and Marsh-Matthews, E. 1999. Effects of red shiner (*Cyprinella lutrensis*) on Red River pupfish (*Cyprinodon rubrofluvialtilis*). *Southwestern Association of Naturalists* **44**(3) 287-295.
5. Schaefer, J. F., Lutterschmidt, W. I., and Hill, L. G. 1999. Physiological performance and stream microhabitat use by two centrarchids (*Lepomis megalotis* and *Lepomis macrochirus*). *Environmental Biology of Fishes* **54**:303-312.
4. Schaefer, J.F. and Lutterschmidt, W.I. 1997. Predator/prey computer simulation (Option 2). Chapter 15, Section 3, Pp 199-202. In: P.M.

Hopkins and D.G. Smith (Eds.), *Introduction to Zoology: A Laboratory Manual* (3rd edition). Morton Publishing Co., Englewood, Colorado.

3. Lutterschmidt, W. I. and Schaefer, J. F. 1997. A computer simulation for demonstrating and modeling predator-prey oscillations. *Journal of Biological Education* **31**(3):221-227.
2. Lutterschmidt, W. I. and Schaefer, J. F. 1996. Mist netting for snakes: adapting a technique borrowed from ornithology for sampling semi-aquatic snake populations. *Herpetological Review* **27**(3):131-132.
1. Schaefer, J.F., Heulett, S.T. and Farrell, T.F. 1994. Interactions between two poeciliid fishes (*Gambusia holbrookii* and *Heterandria formosa*) and their prey in a Florida marsh. *Copeia* **1994**:516-521.

Published Book Reviews -

2005. Review of "Fishes of Oklahoma", *Quarterly Review of Biology*. 80(1):129.

Reports -

- Mickle, P., B. Bowen, J. Schaefer, S. Adams and B. Kreiser. 2006. Continued assessment of the status and viability of Alabama shad (*Alosa alabamae*) in the Pascagoula River drainage and range-wide population genetic structure. Unpublished report to the U.S. Fish and Wildlife Service.
- Bishop, J. and J. Schaefer. 2007. Movement, dispersal, survivorship and home range estimates of stocked young of year alligator gar (*Atractosteus spatula*) in the Upper Hatchie River. Unpublished report to the Tennessee Department of Wildlife Resource Agency.

Manuscripts in Preparation or Under Review -

- Schaefer, J.F. and Walters, A. Metabolic cold adaptation and developmental plasticity in metabolic rates among species in the *Fundulus notatus* (Fundulidae, Teleostei) species complex. In revision, *Functional Ecology*.
- Schaefer, J.F., Duvernell, D.D. and Kreiser, B.K. Hybrid zone structure in the *Fundulus notatus* species complex across four coastal contact zones. In preparation.

Invited Seminars -

- Southeastern Louisiana State University, Fall 2009
- Clemson University, Spring 2009
- USM Gulf Coast Research Laboratory, Spring 2009
- Kansas State University, Fall 2008
- Louisiana State University, Spring 2007

Sam Houston State University, Fall 2004
Tulane University, Fall 2004
Mississippi State University, Fall 2004
Northern Kentucky University, Spring 2004
Saint Louis University, Fall 2002
Central Missouri State University, Spring 2000.
California State University at Chico, Spring 2000.
Virginia Wesleyan University, Spring 2000.
Southern Illinois University Edwardsville, Spring 2000.

Papers Presented -

- Schaefer, J.F., D. Duvernell and B. Kreiser. Hybrid zone dynamics in the *Fundulus notatus* species complex. Southeastern Fishes Council. 2009.
- Schaefer, J.F., D. Duvernell and B. Kreiser. Hybrid zone dynamics in the *Fundulus notatus* species complex. American Fisheries Society. 2009.
- Duvernell, D., Schaefer, J and B. Kreiser. Contact Zone Dynamics in the *Fundulus notatus* complex. Society for the Study of Evolution, 2009.
- *Matamoros, W., Schaefer, J., Kresier, B., Borowsky, R., Bradic, M. And Scheid, P. Assessment of Honduran freshwater ichthyological provinces using microsatellite data from *Astyanax aeneus*. The Southwestern Association of Naturalists. 2009.
- Schaefer, J.F., Kresier, B.K., *Mickle, P., *Champagne, C. and D. Duvernell. Patterns of co-existence and hybridization among two topminnows (*Fundulus euryzonus* and *F. olivaceus*) in a riverine contact zone. Southeastern Fishes Council, 2008.
- *Zuber, B.C. and J. Schaefer. Fluctuating asymmetry and condition in fishes exposed to varying levels of environmental stressors. Southeastern Fishes Council, 2008.
- Schaefer, J. Metabolic cold adaptation and developmental plasticity in metabolic rates among species in the *Fundulus notatus* complex. Evolution, 2008.
- Schaefer, J. Metabolic cold adaptation and developmental plasticity in metabolic rates among species in the *Fundulus notatus* complex. The Southwestern Association of Naturalist, 2008.
- *Bishop, J., and Schaefer, J. Movement and habitat use of *Atractosteus spatula* in the Hatchie River, TN. Alligator Gar Working Group Meeting, 2008.
- Schaefer, J., *Mickle, P.F., *Spaeth, J., Adams, S.B., Kreiser, B.K., *Matamoros, W., *Zuber, B., *Bishop, J. Effects of hurricane Katrina on the fish fauna of the Pascagoula drainage. American Society of Ichthyologists and Herpetologists, 2007.
- *Zuber, B., Schaefer, J.F. Fluctuating asymmetry and condition in fishes exposed to varying levels of environmental stressors. Mississippi Water Resources Council, 2007.
- *Vigueira, P., Schaefer, J.F., Duvernell, D and Kreiser, B. Reproductive isolation among species in the *Fundulus notatus* species complex. American Society of Ichthyologists and Herpetologists, 2006.
- Schaefer, J.F., *Mickle, P., *Spaeth, J., *Zuber, B., *Matamoros, W., Adams, S.,

- Kreiser, B., *Vigueira, P. Effects of hurricane Katrina on the big river fish fauna of the Pascagoula drainage. Mississippi Water Resources Conference, 2006.
- Schaefer, J.F., *Vigueira, P., Duvernell, D., Kreiser, B. Reproductive isolation among species in the *Fundulus notatus* species complex. Southwestern Association of Naturalists, 2006.
- Retzlaff, W., A. Ringhausen, S. *Hu, J. Schaefer, N. *Satam, and P. *Bhattari. Calculating 150 years of land use change within a Midwestern watershed. Ecological Society of America, 2005.
- Duvernell, D., Schaefer, J. Hybridization and introgression between two killifish species, *Fundulus notatus* and *Fundulus olivaceus*. Evolution, 2005.
- Schaefer, J., K. Gido, J. Kerfoot, G. Reeck. Developmental plasticity in the thermal tolerance of zebrafish. American Society of Ichthyologists and Herpetologist, 2005.
- Spaeth, J., J. Schaefer, B. Kreiser and Ramirez, R. The effects of unfavorable habitat on the dispersal of *Camptostoma anomalum* (Cyprinidae) as measured by microsatellites. American Association of Ichthyologists and Herpetologist, 2005.
- Persons, K., J. Schaefer and D. Duvernell. *Fundulus* morphometrics Synclinal variance in morphology within the *Fundulus notatus* species complex. American Association of Ichthyologists and Herpetologist, 2005.
- *Ramirez, R. J. Schaefer and B. Meinardi. Effects of Flooding on Fish Community in an Ozark River Drainage. American Society of Ichthyologists and Herpetologist. 2004.
- *Foster, A., J. Schaefer, D. Duvernell, and A. Ravanelli. The effects of turbidity on the rate of hybridization between two topminnows. American Society of Ichthyologists and Herpetologist. 2004.
- *Ravanelli, A.M., A. Foster, J. Schaefer and D. Duvernell. Morphological and Molecular Analysis of Two Species of Killifish (genus *Fundulus*) in a Hybrid Zone. Evolution, 2004.
- Gido, K.B., J.F. Schaefer, A. Lickteig, D. Qixin, Z. Jepson, N. Mutti, G. Reeck. Heat Shock Proteins and Temperature Adaptation by Native Minnows of Kansas. 2004. Ecological Genomics Workshop.
- *Kasselbaum, B. and Schaefer, J.F. Thermal biology of darters from thermally contrasting streams in a Midwestern drainage. Illinois State Academy of Sciences 2004. Southwestern Association of Naturalists 2004.
- Mammoliti, C., Mulhern, D., Tabor, V., Schaefer, J., Shaw, M. Effects Of Gravel Mining On The Neosho Madtom (*Noturus placidus*). Midwest Fish and Wildlife Conference 2003.
- *Kerfoot, J. and Schaefer, J.F., Microhabitats and ecomorphologies of *Cottus* spp. Southwestern Association of Naturalists. Southwestern Association of Naturalists 2003, Illinois State Academy of Sciences 2003.
- *Meinardi, B. and Schaefer, J.F. Thermal stress and conservatiion of two darters , *Etheostoma caeruleum* (rainbow darter) and *Etheostoma flabellare* (fantail darter), in a small midwestern drainage, Southwestern Association of Naturalists 2003, Illinois State Academy of Sciences 2003
- *Love, E., Smith, M., and Schaefer, J. Illinois State Academy of Sciences 2003.

Effects of Inter- and Intraspecific Competition on *Boltonia decurrens*, an endangered Wetland species.

- Schaefer, J.F., Gido, K.B. and Kerfoot, J. A method for assessment of long term change in stream fish assemblages. American Society of Ichthyologists and Herpetologists. 2002.
- Gido, K.B. and Schaefer, J.F. Patterns of fish invasions in the Great Plains. American Society of Ichthyologists and Herpetologists. 2002.
- *Funderburg, C., Zacha, S. and Schaefer, Jacob F. The Influence Of Land Use On The Fish Community In A Midwestern Drainage. Illinois State Academy of Science. 2002.
- Kerfoot, J.R. and Schaefer, Jacob F. The Stability of Piasa Creek Fish Assemblage. Illinois State Academy of Science. 2002.
- Schaefer, J.F. and Gido, K. Use of deep water as a thermal refugia and observed piscivory by the threatened leopard darter (*Percina pantherina*). Oklahoma Chapter of the American Fisheries Society 2001.
- Schaefer, J.F. and Gido, K. Use of deep water as a thermal refugia and observed piscivory by the threatened leopard darter (*Percina pantherina*). Southwestern Association of Naturalists 2000.
- Gido, K.B., Schaefer, J.F. and Pigg, J. Hydrologic variability and susceptibility to invasion: testing some assumptions with a long term data set. Southwestern Association of Naturalists 2000.
- Schaefer, J. F. Modeling movement and dispersal of stream fish: A mark-resight study in Brier Creek (Oklahoma). American Society of Ichthyologists and Herpetologists 1999. Southwestern Association of Naturalists 1999.
- Schaefer, J.F. Modeling movement and dispersal of stream fish. Poster presentation. Southern Division American Fisheries Society 1999.
- Schaefer, J.F., Gido, K.B., Work, K.A., Lienesch, P.W., Matthews, W.J. and Marsh-Matthews, E. Effects of Red shiner (*Cyprinella lutrensis*) on Red River Pupfish (*Cyprinodon rubrofluviatilis*). Southwestern Association of Naturalists 1998.
- Schaefer, J.F. 1997. The influence of riffles on the movement rates of fish within streams. American Society of Ichthyologists and Herpetologists 1997. Southwestern Association of Naturalists 1997.
- Schaefer, J. F., Lutterschmidt, W. I., and Hill, L. G. 1996. Stream microhabitat use by two centrarchids (*Lepomis megalotis* and *Lepomis macrochirus*). American Society of Ichthyologists and Herpetologists 1996. Southwestern Naturalists 1996.
- Leinesch, P., Lutterschmidt, W. I. and Schaefer, J. F. Assemblage changes in a small creek after isolation due to reservoir formation. Southwestern Naturalists 1996.

* - Undergraduate or graduate student projects.

Grants and Contracts-

- * U.S. Fish and Wildlife Service. Survey of Little Bayou Pierre for *Etheostoma rubrum* populations. 2010-2011. \$10,000

- * U.S. Fish and Wildlife Service. Assessment of putative pearl darter populations in the upper Pearl River. 2009-2010. \$24,952
 - * National Science Foundation. Acquisition of instrumentation to strengthen ecological research and education at the University of Southern Mississippi. 2009-2010. \$284,368
 - * U.S. Forest Service. Reinventory of fish communities and fish habitats in Mississippi National Forests. 2009. \$14,835
 - * U.S. Environmental Protection Agency. National River and Stream Assessment Program. Mississippi sampling program subcontracted through Tetra Tech Inc. 2009. \$125,911
 - * U.S. Forest Service. Post Katrina water quality assessment of streams in the DeSoto National Forest. 2008-2009. \$10,939
 - * U.S. Fish and Wildlife Service. Population structure and trophic ecology of Alabama shad (*Alosa alabamae*) in the Pascagoula drainage, Mississippi. 2008. \$33,310
 - * National Science Foundation. Improvements to the USM/GCRL Ichthyological collection. \$256,211. 2008-2010.
 - * Critical Ecosystem Partnership Fund, Conservation International. Biogeographical patterns of northern mesoamerican (Honduras) freshwater fishes: Looking for “hotspots” and zones of endemism.. \$38,533. 2007-2008.
 - * National Science Foundation. Phylogeography, ecology and reproductive isolation in the *Fundulus notatus* species complex. \$408,455. 2007-2010.
 - * Tennessee Wildlife Resources Agency. Movement, dispersal, survivorship and home range estimates of stocked young of year alligator gar (*Atractosteus spatula*) in the Upper Hatchie River. \$10,000. 2007.
 - * N.O.A.A. - Status and viability of Alabama shad (*Alosa alabamae*) in the Pascagoula River drainage. \$18,000. 2005-2007.
 - * U.S.D.A. Forest Service - Status and viability of Alabama shad (*Alosa alabamae*) in the Pascagoula River drainage, and range wide population genetic structure. \$16,000. 2006-2008.
- SIUE Summer Research Fellowship. Fish dispersal through a riverine landscape: Effects of unfavorable habitat. \$6,000. 2003.
- * Analysis of gravel mining impacts on the Neosho Madtom. Kansas Department of

Wildlife and Parks. \$6,000. 2003.

SIUE Graduate School, Funded construction of artificial stream research park, \$10,000. 2003.

*Analysis of gravel mining impacts on the Neosho Madtom. Kansas Department of Parks and Wildlife. \$5,500. 2002.

*Brunkow, P. and Schaefer, J.F. U.S. Army Corps of Engineers. A complete faunal survey of Lake Wappapello. \$144,000. 2002-2005.

*Schaefer, J. Illinois Department of Natural Resources. A mark/recapture study to estimate movement and dispersal of nongame stream fish in Piasa Creek (Jersey county, IL), \$1,000. 2001-2002.

SIUE Excellence in undergraduate education. \$14,975, Fall 2002.

SIUE Excellence in undergraduate education. \$4,000, Fall 2001.

SIUE Summer Research Fellowship, 2002. Environmental degradation and the long-term change in the fish community of Piasa Creek. \$6,000.

SIUE Summer Research Fellowship. 2001. Detecting nonrandom long-term change in biological community data. \$6,000.

1995 and 1997 - Department of Zoology Summer Research Assistantship.

Durtsche, R., Schaefer, J.F., Lutterschmidt, W.I., Fuller, W., and Polivka, K.P. 1996. Instrument and Equipment grant. Hach Company, \$4,000.

*External Funding - \$1,295,087

Professional Service -

Seminar Coordinator, USM Department of Biological Sciences, August 2008 - Present

Webmaster, The Southeastern Fishes Council (www.sefishescouncil.org)

Treasurer, Southwestern Association of Naturalists, June 2003 - July 2008

Board of Governors, Southwestern Association of Naturalists, 2003 - 2008

Development Committee, Southwestern Association of Naturalists

President of USM Sigma Xi Chapter, 2003 - Present

NSF Panel Member Fall 2009

Reviewed Proposals - National Science Foundation (multiple), National Oceanic and Atmospheric Administration (multiple), Illinois State Academy of Sciences.

Served as Guest Editor - Southeastern Naturalist (multiple), Ecology of Freshwater Fishes

Reviewed Manuscripts for - Oecologia, Copeia, Fisheries, Journal of Animal Ecology, Biological Conservation, Conservation Biology, Transactions of the American Fisheries Society, Ecological Applications, Ecology of Freshwater Fishes, Ecology Research, American Midland Naturalists, North American Journal of Fisheries

Management, Marine and Freshwater Research, Southwestern Naturalist, Southeastern Naturalist, Northeastern Naturalist, Southeastern Fishes Council, Texas Journal of Science, Transaction of the Illinois Academy of Science, Journal of the Mississippi Academy of Sciences.

Graduate Students -

James Kerfoot, Summer 2003, Completed MS (SIUE).
Bethany Meinardi, Spring 2004, Completed MS (SIUE).
John Spaeth, Spring 2008, Completed MS (USM).
Brianna Zuber, Fall 2008, Completed MS (USM).
Justin Bishop, Spring 2009, Completed MS (USM)
Paul Mickle, Fall 2005 - present
Wilfredo Matamoros, co-chair with B. Kreiser, Fall 2005 - present
Charles Champagne, Fall 2007 - present
Scott Clark, Fall 2008 - present
Melissa Gutierrez, Spring 2009 - present
Bjorn Schmidt, Fall 2009 - present

Undergraduate Students -

Spring 2009 - Fall 2009

Jamaal Blankhead - Prey handling time in morphology distinct *Fundulus* populations of the Pascagoula and Pearl River drainages.

Spring 2008 - Fall 2008

Nkrumah Frazier

Ashley Walters - Metabolic cold adaptation and developmental plasticity in metabolic rates among species in the *Fundulus notatus* (Fundulidae, Teleostei) species complex. Manuscript in review, *Functional Ecology*

Jamaal Blankhead - Prey handling time in morphology distinct *Fundulus* populations of the Pascagoula and Pearl River drainages.

Spring 2007 - Spring 2008

Leah Gaines (McNair Scholar Program) - Competition among sister species in the *Fundulus notatus* species complex.

Fall 2005 - Spring 2006

Patrick Vigueira - Postzygotic reproductive barriers in the *Fundulus notatus* species complex. Honors Thesis.

Published results - Vigueira, P., Schaefer, J.F., Kreiser, B.R., Duvernell, D. 2007. Tests of reproductive isolation among species in the *Fundulus notatus* (Cyprinodontiformes: Fundulidae) species complex. *Evolutionary Ecology*: **21**(1) 55-70.

Spring 2005

Anthony Ryan - Developmental plasticity in the thermal tolerance of zebrafish (*Danio rerio*).

Published results - Schaefer, J.F., and Ryan, A. 2006. Developmental plasticity in the thermal tolerance of zebrafish (*Danio rerio*). *Journal of Fish Biology* **69**: 722-734.

Spring 2004

Larissa Harrison - Thermal preference in male and female zebrafish (*Danio rerio*)

Fall 2003

Tatanisha Handy - Food processing time by an herbivorous minnow (*Campostoma anomalum*) and its potential effects of nutrient cycling.

Spring 2003

Jennifer Burden - Stress Induced Fever in the goldfish (*Carassius auratus*)
Natalie Ohl - Darter Thermal Preference Under the Threat of Predation
Kelli Lomas - Behavioral fever in response to osmotic shock in the goldfish.

Fall 2002

Angie Markovich - Does the Turbidity of Water Effect the Rate of Hybridization Between Two Species of Topminnows?
Elizabeth Shebut - Will Restrictive and Unrestrictive Feeding Treatments Effect Reproductive Effort Among Two Species of Fundulus?

Spring 2002

Steve Zacha - A Diet Study of *Semotilus atromaculatus* Populations in Piasa Creek.
Lucas Roberts - Top-down vs. Bottom-up Effects on Daphnia densities.
Travis Burluson - A mark/recapture study to estimate movement and dispersal of nongame stream fish in Piasa Creek

Fall 2001

Cathie Funderburg - Correlations Between Habitat Complexity and Fish Community Properties at Piasa Creek.
Carrie Casarta - Correlating Environmental Variables with Halibut Sport Fishing Yields, Cook Inlet, Alaska

Spring 2001

Rick McClain - Behavioral Reaction of the Zebra danio (*Danio rerio*) to Alarm Substance and Temperature Variation.
Nate Brooks - The Effects of Condition on Endurance in Green Sunfish.

Professional Memberships and Honors -

2000 George Miksch Sutton Award in Conservation Research, The Southwestern Association of Naturalists.

Sigma Xi member since 2000

Beta Beta Beta biological honor society member since 1991

Southwestern Association of Naturalists

American Fisheries Society

Society for the Study of Evolution

Southeastern Fishes Council

Computer Languages -

Developed and published software in C/C++, Pascal, and PHP in both Windows and UNIX environments. Experience developing database applications deployed over networks. R.

References and Collaborators -

Dr. William Matthews
Department of Zoology
University of Oklahoma
(405)325-0810

Dr. Edie Marsh-Matthews
Department of Zoology
University of Oklahoma
(405) 325-0034

Dr. Caryn Vaughn
Department of Zoology
University of Oklahoma
(405) 325-5959

Dr. Victor Hutchison
Department of Zoology
University of Oklahoma
(405) 325-6721

Dr. Terry Farrell
Biology Department
Stetson University
(904) 822-8171

Dr. Peter May
Biology Department
Stetson University
(904) 822-8174

Dr. Keith Gido
Department of Biology
Kansas State University
(785) 532-5088

Dr. Paul Brunkow
Department of Biology
Southern Illinois University
(618) 650-2976

Dr. Dick Brugam
Department of Biology
Southern Illinois University
(618) 650-2377

Dr. Dave Duvernell
Department of Biology
Southern Illinois University
(618) 650-3468

Dr. Brian Kreiser
Department of Biological Sciences
University of Southern Mississippi
601-266-6556

Dr. Frank Moore
Department of Biological Sciences
University of Southern Mississippi
601-266-4748