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Aquatic Ecology Laboratory
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Education

The Ohio State University, B.S. in Natural Resources, *cum laude*, 1979.
The Ohio State University, M.S. in Zoology, 1984.
North Carolina State University, Ph.D. in Zoology (Biomathematics minor), 1991.

Professional Experience

1985 - 1991. Graduate Fellow, Research Assistant, and Teaching Assistant in Zoology at North Carolina State University.

1992. Postdoctoral Researcher in Zoology at North Carolina State University, sponsored by COMPMECH, Electric Power Research Institute. Coordinator of the Salmonid Key Species Project.

1992 - 1999. Department of Evolution, Ecology, and Organismal Biology (formerly Zoology), The Ohio State University, Assistant Professor.

1999 - present. Department of Evolution, Ecology, and Organismal Biology, The Ohio State University, Associate Professor.

2002 – present. Evolution, Ecology, and Organismal Biology Graduate Studies Committee, Chair

Peer-reviewed Publications

Gross, K.L., T. Berner, E. Marschall, and C. Tomcko. 1983. Patterns of resource allocation among five herbaceous perennials. *Bulletin of the Torrey Botanical Club* 110:345-352.

Stein, R.A., C.G. Goodman, and E.A. Marschall. 1984. Using time and energetic measures of cost in estimating prey value for fish predators. *Ecology* 65:702-715.

Miller, T.J., L.B. Crowder, J.A. Rice, and E.A. Marschall. 1988. Larval size and recruitment mechanisms in fishes: toward a conceptual framework. *Canadian Journal Fisheries and Aquatic Sciences* 45:1657-1670.

Marschall, E.A., P.L. Chesson, and R.A. Stein. 1989. Foraging in a patchy environment: prey-encounter rate and residence time distributions. *Animal Behaviour* 37:444-454.

- Savino, J.F., E. A. Marschall, and R.A. Stein. 1992. Bluegill growth as modified by plant density: an exploration of underlying mechanisms. *Oecologia* 89:153-160.
- Real, L.A., E.A. Marschall, and B.M. Roche. 1992. Individual behavior and pollination ecology: implications for the spread of sexually transmitted plant diseases. Pages 492-508 *in* D.L. DeAngelis and L.J. Gross (editors), *Individual-Based Models and Approaches in Ecology: Populations, Communities, and Ecosystems*. Routledge, Chapman, and Hall: New York.
- Crowder, L.B., J.A. Rice, T.J. Miller, and E.A. Marschall. 1992. Empirical and theoretical approaches to size-based interactions and recruitment variability in fishes. Pages 237-255 *in* D.L. DeAngelis and L.J. Gross (editors), *Individual-Based Models and Approaches in Ecology: Populations, Communities, and Ecosystems*. Routledge, Chapman, and Hall: New York.
- Rice, J.R., T.J. Miller, K.A. Rose, L.B. Crowder, E.A. Marschall, A. Trebitz, and D.L. DeAngelis. 1993. Growth rate variation and larval survival: implications of an individual-based size-dependent model. *Canadian Journal of Fisheries and Aquatic Sciences* 50:133-142.
- DeAngelis, D.L., K.A. Rose, L.B. Crowder, E.A. Marschall, and D. Lika. 1993. Fish cohort dynamics: application of complementary modeling approaches. *The American Naturalist* 142:604-622.
- Marschall, E.A. and L.B. Crowder. 1995. Density-dependent survival as a function of size in juvenile salmonids in streams. *Canadian Journal of Fisheries and Aquatic Sciences* 52:136-140. Erratum: volume 52:2304.
- Pappas, P.W., E.A. Marschall, S.H. Morrison, G.M. Durka, and C.S. Daniel. 1995. Increased coprophagic activity of the beetle, *Tenebrio molitor*, on feces containing eggs of the tapeworm, *Hymenolepis diminuta*. *International Journal for Parasitology* 25:1179-1184.
- Marschall, E.A. and L.B. Crowder. 1996. Assessing population responses to multiple anthropogenic effects: A case study with brook trout. *Ecological Applications* 6:152-167.
- Rice, J.A., L.B. Crowder, and E.A. Marschall. 1997. Predation on juvenile fishes: dynamic interactions between size-structured predators and prey. Pages 333-356. *In*, R.C. Chambers and E.A. Trippel (editors), *Early Life History and Recruitment in Fish Populations*. Chapman and Hall, London.
- Garvey, J.E., E.A. Marschall, and R.A. Wright. 1998. From starcharts to stoneflies: detecting relationships in continuous bivariate data. *Ecology* 79:442-447.

- Marschall, E.A. and B.M. Roche. 1998. Using models to enhance the value of information from observations and experiments. Pages 281-297. *In*, W.J. Resetarits and J. Bernardo (editors), *Experimental Ecology: Issues and Perspectives*. Oxford University Press, New York.
- Mion, J.B., R.A. Stein, and E.A. Marschall. 1998. River discharge drives survival of larval walleye. *Ecological Applications* 8:88-103.
- Crowder, L. B. , S. S. Heppell, and E. A. Marschall. 1998. Development and use of matrix models to evaluate alternative management approaches for restoring biological populations. *In*, J. B. Waide and L. M. Gandy (editors), *Proceedings of a workshop on aquatic ecosystem modeling and assessment techniques for application within the U.S. Army Corps of Engineers*.
- Marschall, E.A., D.A. Roff, T.P. Quinn, J.A. Hutchings, N.B. Metcalfe, T.A. Bakke, R.L. Saunders, and L. Poff. 1998. A framework for understanding Atlantic salmon life history. *Canadian Journal of Fisheries and Aquatic Sciences* 55(Supplement 1):48-55.
- Kershner, M.W. and E.A. Marschall. 1998. Allocating sampling effort to equalize precision of electrofishing catch per unit effort. *North American Journal of Fisheries Management* 18:822–831.
- Doherty, P.F., E.A. Marschall, and T. Grubb. 1999. A dynamic programming approach to optimizing the balance between conservation and economic gain. *Ecological Economics* 29:349-358.
- Kershner, M. W., D. M. Schael, R. L. Knight, R. A Stein, and E. A. Marschall. 1999. Modeling sources of variation for growth and predatory demand of Lake Erie walleye, 1986-1995. *Canadian Journal of Fisheries and Aquatic Sciences* 56:527-438.
- Mauck, R. A., E. A. Marschall, and P. G. Parker. 1999. Interaction of adult survival and uncertainty of paternity in parental care decisions. *The American Naturalist* 154:99-109.
- Martinez, F.A. and E. A. Marschall. 1999. A dynamic model of group-size choice: optimal decisions lead to group-size variability. *Behavioral Ecology* 10:572-577.
- Treydte, A. C., J. B. Williams, E. Bedi, S. Ostrowski, P. J. Seddon, E. A. Marschall, T. A. Waite, and K. Ismail. 2001. In search of the optimal management strategy for Arabian oryx. *Animal Conservation* 4:239-249.
- Bunnell, D. B. and E. A. Marschall. 2003. Optimal energy allocation to ovaries after spawning. *Evolutionary Ecology Research* 5: 439–457.

- Garvey, J. E. and E. A. Marschall. 2003. Understanding latitudinal trends in fish body size through models of optimal seasonal energy allocation. *Canadian Journal of Fisheries and Aquatic Sciences* 60: 938-948.
- Yoder, J. A, E. A. Marschall, and D. A. Swanson. 2004. The cost of dispersal: predation as a function of movement and site familiarity in ruffed grouse. *Behavioral Ecology* 15:469-476.
- Steinhart, G. B., E. A. Marschall, and R. A. Stein. 2004. Round goby predation on smallmouth bass offspring in nests during experimental catch-and-release angling. *Transactions of the American Fisheries Society* 133: 121-131.
- Steinhart, G. B, R. A. Stein, and E. A. Marschall. 2004. High growth rate of young-of-year smallmouth bass in Lake Erie: a benefit of round goby invasion? *Journal of Great Lakes Research* 30(3): 381-389.
- Asoh, K., T. Yoshikawa, R. Kosaki, and E. A. Marschall. 2004. Damage to cauliflower coral by monofilament fishing lines in Hawaii. *Conservation Biology* 18: 1645-.
- Steinhart, G. B., M.E. Sandrene, S. Weaver, R. A. Stein, and E. A. Marschall. 2005. Parental care for a nest-guarding fish increases in response to an exotic, hyper-abundant nest predator. *Behavioral Ecology* 16:427-434.
- Steinhart, G.B., N.J. Leonard, R. A. Stein, and E. A. Marschall. *In press*. Effects of storms, anglers, and predators on smallmouth bass nest success. *Canadian Journal of Fisheries and Aquatic Sciences*.

Presentations at Meetings

- Marschall, E.A. and R.A. Stein. 1983. Bluegills foraging in patches of simulated macrophytes. Fourth Biennial Ethology and Behavioral Ecology of Fishes Symposium, Normal, Illinois.
- Marschall, E.A., R.A. Stein, and P.L. Chesson. 1985. Behavior of bluegill foraging for patchily distributed prey. Annual Meeting of the Ecological Society of America, Minneapolis, Minnesota.
- Marschall, E.A. 1986. A laboratory test of a null model of foraging among patches. Southeastern Mathematical Ecology Conference, Raleigh, North Carolina.
- Crowder, L.B., J.A. Rice, E.A. Marschall, and T.J. Miller. 1986. Larval size and recruitment constraints in pelagic fishes: larval bloaters don't fit the northern anchovy "model". Tenth Larval Fish Conference, Miami, Florida.
- Marschall, E.A. 1990. Projected population responses of brook trout to presence of rainbow trout. Annual Meeting of the American Fisheries Society, Pittsburgh, PA.

- Marschall, E.A. and L.B. Crowder. 1991. Early life history of a stream fish: projected population responses to sublethal acidity levels. 1991 Annual Meeting of the Ecological Society of America, San Antonio, Texas.
- Rice, J.R., L.B. Crowder, E.A. Marschall, G.R. Fitzhugh, D.L. Barker, and M.K. Crawford. 1991. Size-dependent survival of juvenile fish cohorts exposed to different predator fields: an experimental test of model predictions. 1991 Annual Meeting of the American Fisheries Society, San Antonio, Texas.
- Marschall, E.A., L.A. Real, And B.M. Roche. 1992. Spatial patterns in a plant-pathogen association: a model of the influence of vector behavior. 1992 Annual Meeting of the Ecological Society of America, Hawaii.
- Crowder, L.B., E.A. Marschall, and D.L. DeAngelis. 1993. Growing predators and growing prey: Interactions of size-structured populations. 1993 Annual Meeting of the Ecological Society of America, Madison, Wisconsin.
- Marschall, E.A. 1995. Using experiments to interpret model results. Symposium: The State of Experimental Ecology: Questions, Levels, and Approaches. 1994 Annual Meeting of the American Society of Zoologists, St. Louis, Missouri.
- Dingledine, N.A. and E.A. Marschall. 1995. The effects of fish on invertebrate communities: the importance of spatial dynamics in streams. Annual Meeting, North American Benthological Society, Keystone, Colorado.
- Kershner, M.W., R.A. Stein, and E.A. Marschall. 1995. Food web modeling in Lake Erie: Balancing prey availability and predatory demand. Ohio Cooperative Fish and Wildlife Research Unit Coordinating Committee Meeting, Columbus, Ohio.
- Dingledine, N.A. and E.A. Marschall. 1995. Differential non-lethal effects of fish on stream macroinvertebrates: implications for community composition. Ohio Cooperative Fish and Wildlife Research Unit Coordinating Committee Meeting, Columbus, Ohio.
- Martinez, F. and E. Marschall. 1996. A dynamic programming model of group-size choice for settling juvenile coral reef fish. American Society of Ichthyologists and Herpetologists, New Orleans, LA, June 1996.
- Stein, R.A., E.A. Marschall, D.J. Stouder. 1996. Stage-dependent mentoring in recognition of the ontogenetic development of graduate students. Symposium: The American Fisheries Society, Detroit, MI, August 1996.

- Mather, K.A. and E.A. Marschall. 1997. Effects of notonectids on naïve and experienced prey communities. Annual Meeting of the North American Benthological Society, Texas, June 1997.
- Yoder, J.M., D.A. Swanson, and E. A. Marschall. Dispersal and Population Dynamics of Ruffed Grouse in a Heterogeneous Landscape: Developing a Spatial Model. Annual Meeting of the Ornithological Union, Minnesota, August 1997.
- Doherty, P., E. A. Marschall, and T. C. Grubb, Jr. 1997. Balancing conservation and economic gain: a dynamic programming approach. Annual Meeting of the Ornithological Union, Minnesota, August 1997.
- Kershner, M.W., E.A. Marschall, and R.A. Stein. 1997. A spatially explicit, individual-based model of walleye growth and consumption in Lake Erie. Annual Meeting of the American Fisheries Society, Monterey, CA, August 1997.
- Mion, J. B., R. A. Stein, and E. A. Marschall. 1998. Exploring ecological mechanisms underlying larval walleye recruitment from Lake Erie tributaries. Northeastern American Fisheries Society Meeting, Harrisburg, PA.
- Marschall, E. A. and L. A. Real. 1998. Spatial organization of floral nectar volumes: What should foragers expect? Annual Meeting of the Ecological Society of America, Baltimore. MD, August 1998.
- Yoder, J.M., D.A. Swanson, and E.A. Marschall. 1998. Dispersal and population dynamics of Ruffed Grouse in a fragmented landscape. 60th Annual Midwest Fish and Wildlife Conference, Cincinnati, OH, December 1998.
- Garvey, J. E. and E. A. Marschall. 1998. Evaluating how largemouth bass recruitment varies along a latitudinal gradient. Annual Meeting of the American Fisheries Society, Hartford, CT, August 1998.
- Yoder J. M., D. A. Swanson, E. A. Marschall. 1999. Measuring the cost of dispersal: Predation risk as a function of movement distance in Ruffed Grouse. 116th Stated Meeting of the American Ornithologists' Union. Cornell, NY. August 10-14, 1999.
- Micucci, S. M., D. J. Stouder, E. A. Marschall. 1999. Estuarine function with emphasis on fish in a marine and freshwater estuary. 61st Midwest Fish and Wildlife Conference. Chicago. December 8-11, 1999.
- Spoelstra, J. A., E. A. Marschall, and R. A. Stein. 2000. The contribution of reservoir-stocked saugeye from tailwaters into streams and rivers. Ohio Fish and Wildlife Conference, Columbus, OH, February 2000.

- Steinhart, G. B., R. A. Stein, E. A. Marschall. 2000. Predation on smallmouth bass nests in Lake Erie: the effects of angling and an introduced predator. Annual Meeting of the American Fisheries Society, St. Louis, MO, August 2000.
- Spoelstra, J. A., E. A. Marschall, and R. A. Stein. 2000. Movement of reservoir-stocked saugeye into streams and rivers. Annual Meeting of the American Fisheries Society, St. Louis, MO, August 2000.
- Steinhart, G.B., R.A. Stein, and E.A. Marschall. 2001. Weathering the storm: synergistic effects of storms, angling, and predators on smallmouth bass nest success. 86th Annual Meeting of the Ecological Society of America, Madison, WI. August 2001.
- Yoder J. M., D. A. Swanson, E. A. Marschall. 2001. Dispersal of Ruffed Grouse in a fragmented landscape. 1st Annual Ohio Avian Ecology and Conservation Conference. Columbus OH. August 3, 2001.
- Steinhart, G.B., N. J. Leonard, E.A. Marschall, and R.A. Stein. 2001. Smallmouth bass nest success in Lake Erie: storms, anglers, and round gobies. 41st Ohio Fish and Wildlife Conference. Columbus, OH. February 2001.
- Spoelstra, J. A., R. A. Stein, and E. A. Marschall. 2001. The contribution of reservoir-stocked saugeye to populations downstream. 41st Ohio Fish and Wildlife Conference, Columbus, OH. February 2001.
- Kim, G. W., M. R. Gearhiser, E. A. Marschall, C. Knight, S.W. Fisher, and R. A. Stein. 2002. Comparing laboratory and field estimates of predation by smallmouth bass on round goby, emerald shiner, and crayfish. 132nd Annual Meeting of the American Fisheries Society, Baltimore, MD.
- Kim, G. W., M. R. Gearhiser, C. Knight, E. A. Marschall, S. W. Fisher, and R. A. Stein. 2002. Selective predation by smallmouth bass on round goby, emerald shiner, and crayfish. 45th Annual Meeting of the International Association for Great Lakes Research, Winnipeg, Manitoba.
- Steinhart, G.B., E.A. Marschall, and R.A. Stein. 2003. High growth rate of young-of-year smallmouth bass in Lake Erie: benefit of the round goby invasion? 46th Annual International Association of Great Lakes Research Conference, Chicago. (Best student presentation award)
- Marschall, E. A. and J. E. Garvey. 2003. Understanding latitudinal trends in fish body size through models of optimal seasonal energy allocation. Annual meeting of the Ecological Society of America, Savannah, GA.

- Steinhart, G.B., M.E. Sandrene, R.A. Stein, and E.A. Marschall. 2003. An introduced nest predator increases smallmouth bass parental care costs. 133rd Annual Meeting of the American Fisheries Society, Quebec City, Quebec.
- Southward, L.R., E.A. Marschall, and R.A. Stein. 2003. Trophic Transfer of Heavy Metals to Top Predators: Quantifying the Role of Non-Native Species. 133rd Annual Meeting of the American Fisheries Society, Quebec City, Quebec.
- Steinhart, G. B., E. A. Marschall, and R. A. Stein. 2004. Managing smallmouth bass in a changing world: effects angling and exotic species on smallmouth bass reproductive success. 134th Annual Meeting of the American Fisheries Society. Madison, Wisconsin.
- Steinhart, G. B., E. A. Marschall, R. A. Stein, and N. J. Leonard. 2004. Assessing the relative importance of storms, angling, and nest predation on smallmouth bass nest survival in Lake Erie. Poster presentation. 46th Annual Meeting of the International Association of Great Lakes Research. Waterloo, Ontario.
- Kim, G. W., T. Kwon, M. R. Gearhiser, E. A. Marschall, S. W. Fisher, and R. A. Stein. 2004. PCB Biomagnification in the Zebra Mussel - Round Goby – Smallmouth Bass Food Chain in Lake Erie. 44th Ohio Fish and Wildlife Conference.

Grants and Awards Received

- Lucas Memorial Fellowship in Biomathematics, *NCSU*, 1985 - 1987
- J. Francis Allen Scholarship from the *American Fisheries Society*, 1987/1988
- Pre-doctoral Fellowship from *University of Virginia* at Mountain Lake Biological Station, 1988
- Fellowship in Population Dynamics from the *Electric Power Research Institute/Sport Fishing Institute*, 1989 -1991
- Early life history of brook trout: population consequences of interactions with rainbow trout. USDA Forest Service Research Challenge Cost-Share award for research, with Larry B. Crowder, 1990 - 1992
- Postdoctoral award from the *Electric Power Research Institute* program in "Compensatory Mechanisms in Fish Populations", 1992.
- The structure of populations along longitudinal gradients in streams. Seed Grant from The Ohio State University Office of Research, 1993.

- A model of short-term effects of disturbance in stream fish assemblages: consequences for community structure. *The Nature Conservancy, Ohio Chapter*, with Felix Martinez. 1994/1995.
- Pollinator-plant interactions on rugged energetic landscapes. *National Science Foundation*, with Leslie Real. 1994 - 1996.
- Fate of stocked saugeye during their first year of life with an emphasis on quantifying movement within and from Ohio reservoirs. *Ohio Division of Wildlife*, with Roy Stein. 1995 - 1998. (\$185,562)
- Population dynamics of coral reef fish: consequences of the pelagic to demersal phase transition on juvenile recruitment success. *Ohio and Hawaii Sea Grant*, with Christopher Brown, April 1999 – March 2000. (Ohio Sea Grant: \$48,174)
- Differentiating weather-driven trends from management/food-web driven trends in Lake Erie fish populations. *Lake Erie Protection Fund*, 1998-1999. (\$7500)
- Movement of reservoir-stocked saugeye between tailwaters, streams, and rivers. *Ohio Division of Wildlife*, with R.A. Stein. 1998-2002. (\$280,622)
- Factors affecting smallmouth bass recruitment in Lake Erie. *Ohio Division of Wildlife*, with Roy Stein, 1999-2004. (\$407,499)
- Modeling smallmouth bass consumption of round goby in Lake Erie: implications for predator growth and contaminant transfer. *Sea Grant*, with S. A. Fisher and R. A Stein, 2000-2003. (\$95,894)
- Food web and feeding influences on PCB bioavailability. *Lake Erie Protection Fund*, with S.A. Fisher and R.A. Stein, 2001-2003. (\$77,340)
- Reef degradation by monofilament fishing line. *National Fish and Wildlife Foundation*, 2002-2003. (\$25,100)
- Trophic transfer of heavy metals to top predators: Quantifying the role of non-native species. *Lake Erie Protection Fund*, with R.A. Stein, 2002-2003. (\$9988)
- Trophic transfer of heavy metals to top predators: Quantifying the role of non-native species. *NOAA*, with R.A. Stein, 2002-2003. (\$7500)
- Quantifying how parental attributes influence characteristics of early life history stages of Ohio stocks of Lake Erie walleye. *Ohio Division of Wildlife*, with R. A. Stein and K. Dabrowski, 2002-2005. (\$184,952; pending FY06:\$111,281)

Chemical composition and ring formation of percid otoliths: Effects of elemental concentration and temperature. *NOAA Interjurisdictional Fisheries Act, 2004-2005* (\$12,173)

Assessing the potential for differential contributions of spawning stocks to Lake Erie yellow perch populations. *Ohio Division of Wildlife 2004-2005* (\$93,670; pending FY06: \$94,652)

Effect of temperature and elemental concentration on the chemical composition of juvenile percid otoliths. *Lake Erie Protection Fund 2004-2006* (\$29,922)

Graduate Students: Completed

Natalie Dingledine (M.S., 1996). Thesis: The effect of fish on invertebrates: the importance of spatial location in streams.

Karen Blocksom (M.S., Zoology; M.A.S., Statistics; 1998). Thesis: Effects of community experience on the response to a generalist invertebrate predator. (Statistician, EPA, Ecosystems Research Branch)

Mark W. Kershner (Ph.D., 1998). Dissertation: Walleye predatory demand and prey supply in Lake Erie: exploring environmental variation and its historical effects. (Assistant Professor, Kent State University)

Stephanie Micucci (M.S., 2000). Thesis: Wetland habitats and their influence on fish assemblage characteristics. (Biological consultant, Foster Wheeler Environmental Corporation)

Rick Silk (M.S., 2001). Thesis: Movement of stocked saugeye from reservoirs: impact on native fish communities. (Attorney, Freund, Freeze, & Arnold)

Jeffrey Spoelstra (M.S., 2001) Thesis topic: Implications of stocking riverine fish into onstream impoundments. (Biological consultant, Kieser & Associates)

Felix Martinez (Ph.D., 2003) Dissertation topic: Consequences of optimal decisions to settlement patterns in coral reef fish. (Program Analyst, NOAA, National Centers for Coastal Ocean Science)

LeAnn Southward (M.S., 2003). Thesis topic: Trophic transfer of mercury and lead to top predators: quantifying the role of non-native species in Lake Erie. (Sea Grant Knauss Fellow 2004, U.S. State Department, Marine Conservation)

Geoff Steinhart (Ph.D., 2004) Dissertation topic: Understanding early life dynamics of smallmouth bass in Lake Erie. OSU Presidential Fellow 2003-2004. (Postdoctoral Researcher, Cornell University)

James Yoder (Ph.D., 2004) Dissertation topic: Ruffed grouse dispersal: correlations with landscape and consequences for survival. (Assistant Professor, Eastern Mennonite University)

Graduate Students: Current

Gene Kim (Ph.D., expected 2005) Dissertation topic: Interactions between food web and contaminants in Lake Erie. OSU Presidential Fellow 2004; Sea Grant Knauss Fellow 2005.

Jason Van Tassell (Ph.D. expected 2007) Dissertation topic: Influence of parental attributes on characteristics and success of early life stages of walleye.

Paris Collingsworth (Ph.D. expected 2008). Dissertation topic: Differential contributions of spawning stocks to Lake Erie yellow perch populations

Joe Beuchel (M.S. expected 2006).

Reviewer and Evaluation Experience

2004 – present, Associate Editor, *Oecologia*

1997 – 2001, National Science Foundation, Ecology Panel

1995, 1996, 2002, 2005 National Science Foundation, Graduate Fellowship Panel

1994-1997, Associate Editor, *Transactions of the American Fisheries Society*

Manuscript review for journals:

- Transactions of American Fisheries Society
- Canadian Journal of Fisheries and Aquatic Science
- The American Naturalist
- Animal Behaviour
- Behavioral Ecology
- Journal of Applied Ecology
- North American Journal of Fisheries Management
- Ecology
- Ecological Applications
- Environmental Biology of Fishes
- Bulletin of Mathematical Biology
- Journal of the North American Benthological Society
- Journal of Comparative Psychology
- Oecologia
- Ecological Modelling
- Evolutionary Ecology Research

Proposal review for granting agencies:

Illinois-Indiana Sea Grant
Michigan Sea Grant
National Science Foundation
Lake Erie Protection Fund
Great Lakes Fishery Commission

Departmental and College Service

Departmental Seminar Committee (1992 - 1996); CHAIR (2001-2002)
Conservation Biology Committee (1993 - 1994)
Graduate Studies Committee (1996 - 2001); CHAIR (2002 – present)
Curriculum Committee (1996 -1998)
Graduates in Evolution and Ecology Students (GEES) Advisor (1996 – 2000; 2001 – present)
Advisory Committee to the Chair (1998-1999; 2001-2002; 2005-2006)
Biological Sciences Day (1993)
Lauritz Muehlbach Memorial Research Fund review committee (2001)
% for Art Committee for Greenhouse/Aronoff/Jennings (2004 - present)

Search Committees:

Department of Zoology, Mansfield Faculty (1993)
Cooperative Research Unit, Assistant Leader in Wildlife (1996-97)
Department of Plant Biology, Sabbatical replacement
Department of Evolution, Ecology, and Organismal Biology Faculty (2000)
Department of Evolution, Ecology, and Organismal Biology, Mansfield Faculty (2001-02)
Department of Evolution, Ecology, and Organismal Biology, AEL Director Search (2005)

Graduate School Service

Interdisciplinary Research Seminar Program Review Panel, Office of Research and Graduate School (1997)
University Fellowship Selection Committee (1999)
Graduate Enrichment Fellowship Selection Committee (2004)

Graduate School Representative

Dissertation defense: Anthropology (1996); Environmental Science Graduate Program (2000);
Teaching and Learning (2001); Music (2002); French and Italian (2004); Molecular Genetics (2004); Ohio State Biochemistry Program (2005)
Candidacy Exam: Geography (1997); Public Health (1997); Statistics (1999)

University Service

ASC Senate Alternate (1996, 1997)
University Senate (2000 – 2003)
Faculty Council (2000 – 2003)

Committee on Academic Misconduct (2000-2001)
Council on Student Affairs (2001- 2003)
English as a Second Language Mock-Teaching Tests evaluator (2003, 2004)

Professional Service

Promotion and Tenure External review: Cornell University (2001); Texas A&M University (2002); Old Dominion University (2003); Southern Illinois University (2004)

Board of Directors, Sigma Xi, Ohio State Chapter (1998 - 2001)

Treasurer, Sigma Xi, Ohio State Chapter (1999 - 2001)

American Fisheries Society

Committee on Native Peoples' Fisheries (1992)

J. Frances Allen award Committee (1996, 1997, 1998)

Ohio Chapter, Rivers and streams Committee (1996, 1997, 1998)

Student Paper judge: Annual Meeting of the American Fisheries Society (1996, 1998); Annual Meeting of the Ecological Society of America (2003)

Ohio EPA Headwater Streams Academic Advisory Panel member (2001)

Conducted two-day Statistics Workshop (with Russell Wright, Postdoc) for Ohio Division of Wildlife (1994)

Invited participant:

Habitat-based modeling of Great Lakes fish populations workshop. Sponsored by Great Lakes Fish Commission. Toronto, June 1996

Integrating across scales: predicting patterns of change in Atlantic salmon workshop. Sponsored by US Forest Service. Invited co-leader of "General theory of life history change for Atlantic salmon" workgroup. Braemar, Scotland, March 1997.

Math Across the Curriculum workshop, NSF-sponsored workshop to incorporate mathematics throughout the undergraduate curriculum. Dartmouth University, February, 1998

Evaluation of Quantitative Techniques for Applied Ecological Problem-Solving workshop. Sponsored by USGS-BRD. Member of steering committee and participant. Colorado, 2000.

Outreach and Mentoring

Howard Hughes 3-week summer high school program host (1993, 1994)

Undergraduate student research: Joshua Ryland (1996); Michelle Prysby (1996-97); Kristen Hartzell (1997-98); Matthew Oliver (1998-2000); Jacob Wanio (1999); Stephanie Weaver (2002); Tylar Lars Groll (2004-2005)

Art & Environment course for High School students (Wexner Center for the Arts). Served as one of three environmental scientists (2004 -2005)

Shadowing and interviews (1996 – present)

High school two-week senior project mentor and host (1999, 2000)

OSU Maximus Scholars receptions (1997, 1998, 2000)

Central Ohio Juniors Recognition Night (1999)

National Merit Day (2000)

Women in Science Day (1999, 2000, 2001, 2002, 2003, 2004, 2005)