

CURRICULUM VITAE

NAME AND TITLE Roy A. Stein, Professor, EEOB

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PERSONAL Born August 28, 1947, Warren, Ohio
Widower, Joan Zukanovich Stein, deceased
2 children: Adam, 08/14/86; Alexander, 10/24/88

EDUCATION B.S. University of Michigan 1969
M.S. Oregon State University 1971 (Adviser: Jim Hall)
Ph.D. University of Wisconsin, Madison 1975 (Adviser: John Magnuson)

PROFESSIONAL EXPERIENCE

1968-70 (summers), sampling program in coastal fisheries, Fish Commission of Oregon
1970-71, Teaching Assistant, Department of Fisheries and Wildlife, Oregon State University
1971-75, Research Assistant, Department of Zoology, University of Wisconsin
1976, Instructor, Department of Zoology, University of Wisconsin
1976-82, Assistant Professor, Department of Zoology, The Ohio State University
1982-87, Associate Professor, Department of Zoology, The Ohio State University
1987-present, Professor, Department of Zoology (now EEOB), The Ohio State University
1998-2004, United States Commissioner, Great Lakes Fishery Commission, appointed by President Bill Clinton
2004-2008, Senior Fishery Scientist, Great Lakes Fishery Commission, Ann Arbor, MI
2008-present, Professor Emeritus, EEOB, The Ohio State University

ADDITIONAL EXPERIENCE

6/72-12/72, 6/73, Participating Scientist, Smithsonian Foreign Currency Program, Skadar Lake, Yugoslavia

MAJOR INTERESTS

Community ecology with a major emphasis on aquatic ecosystems. Especially interested in how major ecological processes, such as competition (i.e., bottom-up forces), predation (i.e., top-down forces), and keystone species (i.e., intermediate, strong regulators, often in the middle of the food web) structure freshwater communities and in turn how these findings can be used to manage aquatic ecosystems.

AWARDS

2010 American Fisheries Society Award of Excellence
2007 Silver Eagle Award, United State Fish and Wildlife Service, Great Lakes-Big Rivers Region, Minneapolis
2006 Distinguished Service Award for Conservation of Ohio's Wildlife Resources, Ohio Division of Wildlife
2004 Best Student Paper- International Association of Great Lakes Research (Advisor: RAS)
2004 Honorable Mention, Best Student Paper-American Fisheries Society Meeting (Advisor: RAS)
2003 Dean's Award for Excellence in Research & Graduate Education (College of Biological Sciences, OSU)
2002 Best Student Poster-American Fisheries Society Meeting (Advisor: RAS)
2001 Best Paper, Ohio Fish and Wildlife Conference (Advisor: RAS)
1998 Honorable Mention, Best Student Paper-American Fisheries Society Meeting (Advisor: RAS)
1996 Best Student Paper-Midwest Fish & Wildlife (Advisor: RAS)
1996 Best Student Poster-American Fisheries Society Meeting (Advisor: RAS)
1996 Honorable Mention, Best Student Paper-American Fisheries Society Meeting (Advisor: RAS)

AWARDS (cont.)

1995 Fellow, American Association for the Advancement of Science

1995 Distinguished Graduate, Oregon State University, Corvallis, OR

1995 Honorable Mention, Best Student Paper-American Fisheries Society Meeting (Advisor: RAS)

1995 Honorable Mention, Best Student Paper-American Fisheries Society Meeting (Advisor: RAS)

1994 Best Student Paper-American Fisheries Society Meeting (Advisor: RAS)

1994 Honorable Mention, Best Student Paper-American Fisheries Society (Advisor: RAS)

1993 Honorable Mention, Best Student Paper-American Fisheries Society (Advisor: RAS)

1992 Excellence in Fisheries Education-the American Fisheries Society

1992 Best Paper, Ohio Fish and Wildlife Conference (Advisor: RAS)

1990 Best Student Paper-American Fisheries Society Meeting (Advisor: RAS)

1990 Best Student Paper- American Fisheries Society Meeting (Advisor: RAS)

1989 Honorable Mention, Best Student Paper-Midwest Fish & Wildlife (Advisor: RAS)

1989 Honorable Mention, Best Student Paper-American Fisheries Society (Advisor: RAS)

1989 Second Best Student Paper Award-Ecological Society of America (Advisor: RAS)

1988 Best Paper Award, Ohio Fish and Wildlife Conference (Advisor: RAS)

1986 Distinguished Service Award-American Fisheries Society

1984 Distinguished Service Award-OSU Council of Graduate Students

1982 Sigma Xi Research Award

PUBLICATIONS

1. **Stein, R.A.**, P.E. Reimers, and J.D. Hall 1972. Social interaction between juvenile coho (*Oncorhynchus kisutch*) and fall chinook salmon (*O. tshawytscha*) in Sixes River, Oregon. *Journal of the Fisheries Research Board of Canada* 29:1737-1748.
2. Stewart, D.J. and **R.A. Stein**. 1974. Short-term fate of dietary dieldrin in the digestive tract of juvenile lake trout. *Bulletin of Environmental Contamination and Toxicology* 11:563-566.
3. **Stein, R.A.**, J.F. Kitchell, and B. Knezevic. 1975. Selective predation by carp (*Cyprinus carpio* L.) on benthic molluscs in Skadar Lake, Yugoslavia. *Journal of Fish Biology* 7:391-399.
4. **Stein, R.A.**, J.O. Mecom, and B. Ivanovic. 1975. Commercial exploitation of fish stocks in Skadar Lake, Yugoslavia 1947-1973. *Biological Conservation* 8:1-18.
5. Magnuson, J.J., G.M. Capelli, J.G. Lorman, and **R.A. Stein**. 1975. Consideration of crayfish for macrophyte control. Pages 66-74 in P.L. Brezonik and J.L. Fox editors. Proceedings of a Symposium on Water Quality Management through Biological Control. Report ENV 07-75-1, University of Florida, Gainesville, Florida, USA.
6. **Stein, R.A.** 1976. Sexual dimorphism in crayfish chelae: functional significance linked to reproductive activities. *Canadian Journal of Zoology* 54:220-227.
7. **Stein, R.A.** and J.J. Magnuson. 1976. Behavioral response of crayfish to a fish predator. *Ecology* 57:751-761.
8. **Stein, R.A.** and M.L. Murphy. 1976. Changes in the proximate composition of crayfish with size, sex and life history stage. *Journal of the Fisheries Research Board of Canada* 33:2450-2458.
9. **Stein, R.A.**, M.L. Murphy, and J.J. Magnuson. 1977. External morphological changes associated with sexual maturity in the crayfish (*Orconectes propinquus*). *American Midland Naturalist* 97:495-502.
10. **Stein, R.A.** 1977. Selective predation, optimal foraging, and the predator-prey interaction between fish and crayfish. *Ecology* 58:1237-1253.
11. Kitchell, J.F., **R.A. Stein** and B. Knezevic. 1978. Utilization of filamentous algae by fishes in Skadar Lake, Yugoslavia. *Internationale Vereinigung Fuer Theoretische und Angewandte Limnologie Verhandlungen* 20:158-165.
12. **Stein, R.A.** 1979. Behavioral responses of prey to fish predators. Pages 343-353 in R.H. Stroud and H. Clepper, editors. Predator-Prey Systems in Fisheries Management. Sport Fishing Institute, Washington, District of Columbia, U.S.A.
13. Johnson, D.L. and **R.A. Stein** editors. 1979. Response of fish to habitat structure in standing water. *North Central Division American Fisheries Society Special Publication* 6:77 p.
14. Gillen, A.L., **R.A. Stein** and R.F. Carline. 1981. Predation by pellet-reared tiger muskellunge on minnows and bluegills in experimental systems. *Transactions of the American Fisheries Society* 110:197-209.
15. **Stein, R.A.**, R.F. Carline, and R.S. Hayward. 1981. Predation as a source of mortality for stocked tiger muskellunge. *Transactions of the American Fisheries Society* 110:602-609.

16. Savino, J.F. and **R.A. Stein** 1982. Predator-prey interaction between largemouth bass and bluegills as influenced by simulated, submersed vegetation. *Transactions of the American Fisheries Society* 111:255-266.
17. Moody, R.C., J.M. Helland, and **R.A. Stein** 1983. Escape tactics used by bluegills and fathead minnows to avoid predation by tiger muskellunge. *Environmental Biology of Fishes* 8:61-65.
18. **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.
19. Tomcko, C.M., **R.A. Stein** and R.F. Carline. 1984. Use of bluegill forage by tiger muskellunge: effects of predator experience, vegetation, and prey density. *Transactions of the American Fisheries Society* 113:588-594.
20. Bevelhimer, M.S., **R.A. Stein** and R.F. Carline. 1985. Assessing significance of physiological differences among three esocids with a bioenergetics model. *Canadian Journal of Fisheries and Aquatic Sciences* 42:57-69.
21. Butler, M.J., III and **R.A. Stein** 1985. An analysis of replacement mechanisms governing range expansion in crayfish. *Oecologia* 66:168-177.
22. Sechnick, C.W., R.F. Carline, **R.A. Stein** and E.T. Rankin. 1986. Habitat selection by smallmouth bass in response to physical characteristics of a simulated stream. *Transactions of the American Fisheries Society* 115:314-321.
23. Johnson, B.L. and **R.A. Stein** 1986. Competition for open-access resources: a participatory class exercise that demonstrates the tragedy of the commons. *Fisheries* 11(3):2-6.
24. Mather, M.E., **R.A. Stein** and R.F. Carline. 1986. Experimental assessment of mortality and hyperglycemia in tiger muskellunge due to stocking stressors. *Transactions of the American Fisheries Society* 115:762-77.
25. Lodge, D.M., K.M. Brown, **R.A. Stein** S.P. Klosiewski, B.K. Leathers, A.P. Covich, and C. Bronmark. 1986. A preliminary model of lake snail distributions: The relative importance of physico-chemical and biotic factors. *American Malacological Bulletin* 5:73-84.
26. Carline, R.F., **R.A. Stein** and L.M. Riley. 1986. Effects of size at stocking, season, largemouth bass predation, and forage abundance on survival of stocked tiger muskellunge. *American Fisheries Society Special Publication* 15:151-167.
27. Wahl, D. H. and **R.A. Stein**. 1987. The application of liquid oxytetracycline in formulated feeds to mark and treat tiger muskellunge. *Progressive Fish-Culturist* 49:312-314.
28. Rahel, F. J. and **R.A. Stein**. 1988. Complex predator-prey interactions and predator intimidation among crayfish, piscivorous fish, and small benthic fish. *Oecologia* 75:94-98.
29. Wahl, D.H. and **R.A. Stein**. 1988. Prey selection by three esocids in the laboratory and field. *Transactions of the American Fisheries Society* 117:142-151.
30. Johnson, B. M., **R.A. Stein**, and R. F. Carline. 1988. Using a quadrat rotenone technique and bioenergetics modeling to evaluate forage fish size and abundance for stocked piscivores. *Transactions of the American Fisheries Society* 117:127-141.
31. **Stein, R.A.**, S. T. Threlkeld, C. D. Sandgren, W. G. Sprules, L. Persson, E. E. Werner, W. E. Neill, and S. I. Dodson. 1988. Size-structured interactions in lake communities. Pages 161-179 in S. R. Carpenter, editor. *Complex interactions in lake communities*, Springer Verlag, Berlin, Germany.
32. Savino, J.F. and **R.A. Stein** 1989. Behavior of fish predators and their prey: habitat choice between open water and dense vegetation. *Environmental Biology of Fishes* 24:287-293.
33. Savino, J. F. and **R.A. Stein**. 1989. Behavioural interactions between fish predators and their prey: effects of body shape and plant density. *Animal Behaviour* 37:311-321.
34. Marschall, E.A., P.L. Chesson, and **R.A. Stein** 1989. Sunfish foraging among patches: Random encounter rates and variation in distribution of prey. *Animal Behaviour* 37:444-454.
35. DeVries, D.R., **R.A. Stein** and P.L. Chesson. 1989. Sunfish foraging among patches: Variation in habitat quality and a test of an optimal giving-up time model. *Animal Behaviour* 37:455-464.
36. Wahl, D.H., and **R.A. Stein** 1989. Comparative vulnerability of three esocids to largemouth bass (*Micropterus salmoides*) predation. *Canadian Journal of Fisheries and Aquatic Sciences* 46:2095-2103.
37. DeVries, D.R., and **R.A. Stein** 1990. Manipulating shad to enhance sport fisheries in North America: an assessment. *North American Journal of Fisheries Management* 10:209-223.
38. Wahl, D.H., and **R.A. Stein**. 1991. Field testing an esocid bioenergetics model. *Transactions of the American Fisheries Society* 120:230-246.
39. DeVries, D.R., and **R.A. Stein** 1991. Comparing three zooplankton samplers: a taxon-specific assessment. *Journal of Plankton Research* 13:53-59.

40. DeVries, D.R., **R.A. Stein** J.G. Miner, and G.G. Mittelbach. 1991. Threadfin shad as supplementary forage: consequences for young-of-year fishes. *Transactions of the American Fisheries Society* 120:368-381.
41. 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.
42. DeVries, D.R., and **R.A. Stein** 1992. Complex interactions between fish and zooplankton: quantifying the role of an open-water planktivore. *Canadian Journal of Fisheries and Aquatic Sciences* 49:1216-1227.
43. Lazzaro, X., R.W. Drenner, **R.A. Stein** and J.D. Smith. 1992. Planktivores and plankton dynamics: effects of fish biomass and planktivore type. *Canadian Journal of Fisheries and Aquatic Sciences* 49:1466-1473.
44. Bronmark, C., S.P. Klosiewski, and **R.A. Stein** 1992. Indirect effects of predation in a freshwater, benthic food chain. *Ecology* 73:1662-1674.
45. Dettmers, J.M. and **R.A. Stein** 1992. Food consumption by larval gizzard shad: zooplankton effects and its implications for reservoir communities. *Transactions of the American Fisheries Society* 121:494-507.
46. Garvey, J.E. and **R.A. Stein** 1993. Chela size differences among three crayfishes: exploring their role in a species replacement. *American Midland Naturalist* 129:172-181.
47. Mather, M.E., and **R.A. Stein** 1993. Using growth/mortality tradeoffs to explore a crayfish species replacement in stream riffles and pools. *Canadian Journal of Fisheries and Aquatic Sciences* 50:88-96.
48. Miner, J.G. and **R.A. Stein** 1993. The interactive influence of turbidity and light on larval bluegill foraging. *Canadian Journal of Fisheries and Aquatic Sciences* 50:781-788.
49. Mather, M.E. and **R.A. Stein** 1993. Direct and indirect effects of fish predation on the replacement of a native crayfish by an invading congener. *Canadian Journal of Fisheries and Aquatic Sciences* 50:1279-1288.
50. Garvey, J.E., **R.A. Stein** and H.M. Thomas. 1994. Assessing how fish predation and interspecific prey competition influence a crayfish assemblage. *Ecology* 75:532-547.
51. Bremigan, M.T. and **R.A. Stein** 1994. Larval gape and zooplankton size: evaluating size-dependent recruitment in fishes. *Canadian Journal of Fisheries and Aquatic Sciences* 51:913-922.
52. Wahl, D.H. and **R.A. Stein** 1994. Comparative population characteristics of muskellunge, northern pike, and their hybrid. *Canadian Journal of Fisheries and Aquatic Sciences* 50:1961-1968.
53. Stahl, T.P. and **R.A. Stein** 1994. Influence of larval gizzard shad (*Dorosoma cepedianum*) density on piscivory and growth of young-of-year saugeye (*Stizostedion vitreum vitreum* X *S. canadense*). *Canadian Journal of Fisheries and Aquatic Sciences* 51:1993-2002.
54. Wahl, D.H., **R.A. Stein** and D.R. DeVries. 1995. An ecological framework for evaluating the success and impact of stocked fishes. Pages 176-189 in H.L. Schramm, Jr. and R.G. Piper, editors. *Uses and effects of cultured fishes in aquatic ecosystems. American Fisheries Society Symposium* 15.
55. Parrish, D.L., M.E. Mather, and **R.A. Stein**. 1995. Problem-solving research for management: a perspective. *Fisheries* 20 (10): 6-12.
56. Mather, M.E., D.L. Parrish, **R.A. Stein** and R.M. Muth 1995. Management issues and their relative priority within state fisheries agencies. *Fisheries* 20 (10): 14-21.
57. Dettmers, J.M. and **R.A. Stein** 1996. Quantifying linkages among gizzard shad, zooplankton, and phytoplankton in reservoirs. *Transactions of the American Fisheries Society* 125:27-41.
58. **Stein, R.A.**, D.R. DeVries, and J.M. Dettmers 1995. Food-web regulation by a planktivore: Exploring the generality of the trophic cascade. *Canadian Journal of Fisheries and Aquatic Sciences* 52:2518-2526.
59. Miner, J.G. and **R.A. Stein** 1996. Detection of predators and habitat choice by small bluegill: effects of turbidity and alternative prey. *Transactions of the American Fisheries Society* 125:97-103.
60. Stahl, T.P., G.P. Thiede, **R.A. Stein**, M.R. Austin, and D.A. Culver. 1996. Factors affecting survival of young-of-year saugeye (*Stizostedion vitreum vitreum* x *S. canadense*) stocked in Ohio reservoirs. *North American Journal of Fisheries Management* 16:378-387.
61. Dettmers, J.M., D.R. DeVries, and **R.A. Stein**. 1996. Quantifying responses to hybrid bass predation across multiple trophic levels: implications for reservoir biomanipulation. *Transactions of the American Fisheries Society* 125:491-504.
62. Yako, L.A., J.M. Dettmers, and **R.A. Stein**. 1996. Feeding preferences of omnivorous gizzard shad as influenced by fish size and zooplankton density. *Transactions of the American Fisheries Society* 125: 753-759.
63. **Stein, R.A.**, M. T. Bremigan, and J. M. Dettmers. 1996. Understanding reservoir systems with experimental tests of ecological theory: a prescription for management. Pages 12-22 in L.E. Miranda and D.R. DeVries, editors. *Multidimensional Approaches to Reservoir Fisheries Management. American Fisheries Society Symposium* 16.

64. Bremigan, M.T., and **R.A. Stein**. 1997. Experimental assessment of the influence of zooplankton size and density on gizzard shad recruitment. *Transactions of the American Fisheries Society* 126:622-637.
65. Donovan, N.S., **R.A. Stein**, and M.M. White. 1997. Enhancing percid stocking success through an understanding of age-0 piscivore-prey interactions in reservoirs. *Ecological Applications* 7:1311-1329.
66. Schaus, M.H., M.J. Vanni, T.E. Wissing, M.T. Bremigan, J.E. Garvey, and **R.A. Stein**. 1997. Nitrogen and phosphorus excretion by detritivorous gizzard shad in a reservoir ecosystem. *Limnology and Oceanography* 42:1386-1397.
67. Mion, J.B., **R.A. Stein**, and E.A. Marschall. 1998. River discharge drives differential survival of larval walleye. *Ecological Applications* 8:88-103.
68. Garvey, J.E., N.A. Dingledine, N.S. Donovan, and **R.A. Stein**. 1998. Exploring spatial and temporal variation within reservoir food webs: Predictions for fish assemblages. *Ecological Applications* 8:104-120.
69. Lodge, D.M., **R.A. Stein**, K.M. Brown, A.P. Covich, C. Bronmark, and J.E. Garvey. 1998. Predicting the impact of freshwater exotic species on native biodiversity: challenges in spatial and temporal scaling. *Australian Journal of Ecology* 23: 53-67.
70. Dettmers, J.D., **R.A. Stein**, and E.M. Lewis. 1998. Potential regulation of age-0 gizzard shad by hybrid striped bass in Ohio reservoirs. *Transactions of the American Fisheries Society* 127:84-94.
71. Garvey, J.E., and **R.A. Stein**. 1998. Linking bluegill and gizzard shad assemblages to growth of age-0 largemouth bass in reservoirs. *Transactions of the American Fisheries Society* 127:70-82.
72. Garvey, J.E., R.A. Wright, and **R.A. Stein**. 1998. Overwinter growth and survival of age-0 largemouth bass: testing a recruitment paradigm. *Canadian Journal of Fisheries and Aquatic Sciences* 55:2414-2424.
73. Garvey, J.E., and **R.A. Stein**. 1998. Competition between larval fishes in reservoirs: the role of relative timing of appearance. *Transactions of the American Fisheries Society* 127:1021-1039.
75. 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* 56:527-538. **Lead article.**
76. Wright, R.A., J.E. Garvey, A.H. Fullerton, and **R.A. Stein**. 1999. Predicting how winter affects energetics of age-0 largemouth bass: How do current models fare? *Transactions of the American Fisheries Society* 128:603-612.
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78. Bremigan, M.T., and **R.A. Stein**. 1999. Larval gizzard shad success, juvenile effects, and reservoir productivity: toward a framework for multi-system management. *Transactions of the American Fisheries Society* 128: 1106-1124.
79. Garvey, J.E., R.A. Wright, **R.A. Stein**, and K.H. Ferry. 2000. Evaluating how local- and regional-scale processes regulate growth of age-0 largemouth bass. *Transactions of the American Fisheries Society* 129:1044-1059.
80. Kerans, B.L., P.L. Chesson, and **R.A. Stein**. 2000. Assessing density-dependent establishment and dispersal: an example using caddisfly larvae. *Canadian Journal of Fisheries and Aquatic Sciences* 57:1190-1199.
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82. Bremigan, M.T. and **R.A. Stein**. 2001. Variable gizzard shad recruitment with reservoir productivity: causes and implications for classifying systems. *Ecological Applications* 11:1425-1437.
83. Garvey, J.E., R.A. Stein, R.A. Wright, and M.T. Bremigan. 2002. Largemouth bass recruitment in North America: Quantifying underlying ecological mechanism along environmental gradients, Pages 7-21. D. Philipp and M.S. Ridgway, editors. Black bass: ecology, conservation and management. American Fisheries Society Symposium 31, Bethesda, Maryland.
84. Muccucci, S.M., J.E. Garvey, R.A. Wright, and **R.A. Stein**. 2003. Individual growth and foraging responses of age-0 largemouth bass to mixed prey assemblages during winter. *Environmental Biology of Fishes* 67: 157-168.
85. McCollum, A.B., D.B. Bunnell, and **R.A. Stein**. 2003. Cold, northern winters: The importance of temperature to overwinter mortality of age-0 white crappies. *Transactions of the American Fisheries Society* 132: 977-987.
86. Bunnell, D.B., M.A. Gonzalez, and **R.A. Stein**. 2003. Zooplankton enhances growth but not survival of first-feeding *Pomoxis* spp. larvae. *Canadian Journal of Fisheries and Aquatic Sciences* 60:1314-1323.
87. Garvey, J.E., J.E. Rettig, **R.A. Stein**, D.M. Lodge, and S.P. Klosiewski. 2003. Impact of fish predation and littoral

- habitat on lake-wide distributions of native and exotic crayfishes. *Ecology* 84: 3339-3348.
88. 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.
 89. 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 the round goby invasion? *Journal of Great Lakes Research* 30:381-389.
 90. Vanni, M.J., D.B. Bunnell, M.T. Bremigan, J.E. Garvey, M.J. Gonzalez, W.H. Renwick, P.A. Soranno, and **R.A. Stein**. 2005. Linking landscapes and food webs: Interactive effects of omnivorous fish and watersheds on reservoir ecosystems along a gradient of productivity. *BioScience* 55:155-167.
 91. Steinhart, G.B., M.E. Sandrene, S. Weaver, **R.A. Stein**, and E.A. Marschall. 2005. Parental care cost for a nest-guarding fish increases in response to a hyper-abundant nest predator. *Behavioral Ecology* 16:427-434 .
 92. Bunnell, D.B., M.A. Scantland, and **R.A. Stein**. 2005. Testing for evidence of maternal effects among individuals and populations of white crappie. *Transactions of the American Fisheries Society* 134:607-619.
 93. Rinchar, J., K. Dabrowski, J. Van Tassel, and **R.A. Stein**. 2005. Effect of gamete storage and sperm: egg ratio on fertilization success in walleye *Sander vitreum*. *Journal of Fish Biology* 76:1157-1161.
 94. Steinhart, G.B., N.J. Leonard, **R.A. Stein**, and E.A. Marschall. 2005. Effects of storms, angling, and nest predation during angling on smallmouth bass (*Micropterus dolomieu*) nest success. *Canadian Journal of Fisheries and Aquatic Sciences* 62:2649-2660.
 95. Sieber-Denlinger, J.C., R.S. Hale, and **R.A. Stein**. 2006. Seasonal consumptive demand and prey use by stocked saugeye in Ohio reservoirs. *Transactions of the American Fisheries Society* 135:12-27.
 96. Bunnell, D.B., R. Scott Hale, and **R.A. Stein**. 2006. Predicting crappie recruitment in Ohio reservoirs with spawning stock size and larval density. *North American Journal of Fisheries Management* 26:1-12.
 97. Vanni, M.J., A.M. Bowling, E.M. Dickman, R.S. Hale, K.A. Higgins, M.J. Horgan, , L.B. Knoll, W.H. Renwick, and **R.A. Stein**. 2006. Nutrient cycling by omnivorous fish supports an increasing proportion of lake primary production as ecosystem productivity increases. *Ecology* 87:1696-1709.
 98. **Stein, R.A.** and C.C. Krueger. 2006. Cooperative research in the Great Lakes: Exploring characteristics of success. Pages 169-171 in A. N. Read and T. W. Hartley, editors. Partnerships for a common purpose: cooperative fisheries research and management. American Fisheries Society, Symposium 52, Bethesda, Maryland.
 99. Krueger, C.C., and **R.A. Stein**. 2006. Cooperative management in the Great Lakes: Exploring characteristics of success. Pages 193-196 in A.N. Read and T.W. Hartley, editors. Partnerships for a common purpose: cooperative fisheries research and management. American Fisheries Society, Symposium 52, Bethesda, Maryland.
 100. Southward-Hogan, L.R., E.A. Marschall, C. Folt, and **R.A. Stein**. 2007. How non-native species in Lake Erie influence trophic transfer of mercury and lead to top predators. *Journal of Great Lakes Research* 33:46-61.
 101. Bunnell, D.B., S.E. Thomas, and **R.A. Stein**. 2007. Prey resources before spawning influence gonadal investment of female, but not male, white crappie. *Journal of Fish Biology* 70:1838-1854.
 102. Kim, G.W., A.P. Wintzer, T.K. Menker, **R.A. Stein**, J.M. Dettmers, R.A. Wright, and D.R. DeVries. 2007. Effect of detritus quality on growth and survival of gizzard shad (*Dorosoma cepedianum*) survival: potential importance to benthic-pelagic coupling. *Canadian Journal of Fisheries and Aquatic Sciences* 64: 1805-1815.
 103. **Stein, R.A.**, and C.I. Goddard. 2008. Reconciling fisheries with conservation: the Laurentian Great Lakes case study. Pages 1731-1744 in J. L. Nielsen, J. J. Dodson, K. Friedland, T. R. Hamon, J. Musick, and E. Verspoor, editors. Reconciling fisheries with conservation: proceedings of the Fourth World Fisheries Congress. American Fisheries Society, Symposium 49, Bethesda, Maryland.
 104. Spoelstra, J.A., **R.A. Stein**, J.A. Royale, and E.A. Marschall. 2008. Movement of reservoir-stocked riverine fish between tailwaters and rivers. *Transactions of the American Fisheries Society* 137:1530-1542.
 105. Bremigan, M.T., P.A. Soranno, M.J. Gonzalez, D.B. Bunnell, K.K. Arend, W.H. Renwick, **R.A. Stein**, and M.J. Vanni. 2008. Hydrogeomorphic features mediate the effects of land use/cover on reservoir productivity and food webs. *Limnology and Oceanography* 53:1420-1433.
 106. Hale R.S., D.J. Degan, W.H. Renwick, M.J. Vanni and R.A. Stein. 2008. Assessing fish biomass and prey availability in Ohio reservoirs. *American Fisheries Society Symposium* 62:517-541.
 107. DeVries, D.R., E.A. Marschall, and **R.A. Stein**. 2009. Exploring the peer review process: what is it, does it work, and can it be improved? *Fisheries* 34 (6): 270-277.
 108. **Stein, R.A.**, and C.C. Krueger. 2009. Fisheries management within the AYK Region: Emerging themes and developing insights. Pages 1225-1231 in C.C. Krueger and C.E. Zimmerman, editors. Pacific salmon: ecology

and management of western Alaska's populations. American Fisheries Society, Symposium 70, Bethesda, Maryland.

109. Tyson, J.T., **R.A. Stein**, and J.M. Dettmers [EDS.]. 2009. The state of Lake Erie in 2004. Great Lakes Fishery Commission Special Publication 09-02.
110. Zweifel, R.D., A.M. Gascho Landis, R.S. Hale, and **R.A. Stein**. 2010. Development and evaluation of a bioenergetics model for saugeyes. *Transactions of the American Fisheries Society* 139: 855-867.
111. Rinchar, J., K. Ware, K. Dabrowski, J.J. Van Tassell, E.A. Marschall, and **R.A. Stein**. 2011. Egg thiamine concentration affects embryo survival in Lake Erie walleye. *Environmental Biology of Fishes* 90:53-60.
112. Mack, H.R., J.D. Conroy, K.A. Blocksom, **R.A. Stein**, and S.A. Ludsin. In press. A comparative analysis of zooplankton field collection and sample enumeration methods, 28 text pages, 4 Tables, 5 Figures, *Limnology and Oceanography: Methods*

BOOK REVIEWS

1. Stein, R.A. 1977. Book review of *The Ethology of Predation*, by E. Curio. 1976. (Zoophysiology and ecology, Volume 7) Springer-Verlag, Berlin, West Germany. 250 pp. *Transactions of the American Fisheries Society* 106:407-408.
2. Stein, R.A. 1980. Book review of *How We Know, an Exploration of the Scientific Process*, by M. Goldstein and I.F. Goldstein. 1978. Plenum Press, New York, New York. 357 pp. *Fisheries (Bethesda)* 5(2):44.
3. Stein, R.A. 1990. Book review of *Designing Effective Slide Presentations*, by R.F. Carline. 1990. Produced in cooperation with the Education Section of the American Fisheries Society. 20-minute video tape. *Fisheries* 15(4):58.
4. Stein, R.A. 1995. Book review of *Feeding Ecology of Fish*, by S.D. Gerking. 1995. Academic Press, Inc., San Diego, California. *Copeia* 1995:754-756.

INVITED PRESENTATIONS AND SEMINARS (SINCE 1999)

- 1999 Department of Ecology, University of Lund, Lund, Sweden
- 2000 Department of Biology, University of Dayton, Dayton, OH
- 2000 Invited Keynote Speaker, Black Bass 2000, American Fisheries Society, St. Louis, MO
- 2001 Department of Fisheries and Aquatic Sciences, University of Florida, Gainesville
- 2005 Keynote Speaker, Ohio Academy of Science Annual Meeting, Bowling Green, OH
- 2006 Department of Biological Sciences, Southern Illinois University, Carbondale
- 2006 Invited Plenary Speaker, American Fisheries Society Annual Meeting, Lake Placid, NY
- 2007 Illinois Natural History Survey, Sullivan, IL
- 2007 United States Geological Survey, Great Lakes Science Center, Ann Arbor, MI
- 2010 Invited Plenary Speaker, Ohio Fish and Wildlife Conference, Columbus, OH
- 2010 Invited speaker, Symposium to honor James F. Kitchell, ASLO, Santa Fe, NM
- 2011 Invited speaker, NW Fisheries Science Center, NOAA lab, Seattle, WA
- 2011 Invited speaker, School of Fisheries and Aquatic Sciences, University of Washington, Seattle
- 2012 Invited speaker, NRC Committee on Sustainability Linkages in the Federal Government, (energy, water, & health), Seattle.

CONTRIBUTED PAPERS BY GRADUATE ADVISEES AND COLLEAGUES (SINCE 2004)

128. Bremigan, M.T., P.A. Soranno, J.A. Chiotti, M.J. Gonzalez, W.H. Renwick, **R.A. Stein**, and M.J. Vanni. 2004. Do landscape and local basin properties mediate the effects of land use change on reservoir nutrient concentrations and foodweb dynamics? Contributed Paper, Ecological Society of America, August.
129. **Stein, R.A.** and C. Goddard. 2004. Reconciling Fisheries with Rehabilitation in the Laurentian Great Lakes. Invited Paper, World Fisheries Congress, Vancouver, British Columbia, May.
130. 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, International Association of Great Lakes Research, June.
131. Steinhart, G.B., E.A. Marschall, and **R.A. Stein**. 2004. Managing smallmouth bass in a changing world: effects of angling and exotic species on smallmouth bass reproductive success. American Fisheries Society Annual Meeting, Madison, Wisconsin, August.

132. **Stein, R.A.** and J. Casselman. 2004. An update on the American Eel: a species in peril. Law Enforcement Committee Meeting, Toronto, Ontario, September 9.
133. **Stein, R.A.**, and R. Eshenroder. 2004. New guidelines for state-of-the-lake reports, Council of Lake Committees, Detroit, MI, October 20.
134. **Stein, R.A.** 2005. Strategic research issues facing the Great Lakes. Ohio Academy of Sciences, **Invited All-Academy Keynote Presentation**, Bowling Green State University, Bowling Green, OH, April 2.
135. Christie, G.C., C. Goddard, and **R.A. Stein**. 2005. Developing and implementing alternative controls to suppress sea lampreys in the Great Lakes. International Association of Great Lakes Research, Annual Meeting, Ann Arbor, May 23-27.
136. Wagner, C.M., M.L. Jones, M.B. Twohey, W. Li, P.W. Sorenson, and **R.A. Stein**. 2005. The potential use of pheromones in seal lamprey control: A proof of concept study. International Association of Great Lakes Research, Annual Meeting, Ann Arbor, May 23-27.
137. **Stein, R.A.** and C. Krueger. 2005. Reflections on life with the GLFC: Essential tensions in a dynamic program. Great Lakes Fishery Commission 50th Anniversary Meeting, Niagara-on-the-Lake, Ontario, June 7-9.
138. **Stein, R.A.**, and E.A. Marschall. 2005. Training students in the art of manuscript review. American Fisheries Society, Anchorage, AK, September.
139. **Stein, R.A.** and C. Krueger. 2005. Cooperative fisheries management, Panel member, American Fisheries Society, Anchorage, AK, September.
140. Bigrigg, J.L., J.J. Van Tassell, S.A. Ludsin, D. D. Aday, and **R.A. Stein**. 2005. Determining stream origin to evaluate homing behavior of Lake Erie walleye by otolith elemental analysis. American Fisheries Society, Anchorage, AK, September.
141. **Stein, R.A.**. 2006. Essential tensions in science-based fishery management. American Fisheries Society, Lake Placid, New York. **Invited Plenary Speaker**, September.
142. Fedor, Samantha, **R.A. Stein**, and E.A. Marschall. 2006. Investigating regional patterns in Great Lakes walleye recruitment: does climate influence recruitment. International meeting of the American Fisheries Society, Lake Placid, New York, September.
143. Van Tassell, J.J, E.A. Marschall, C.S. Vandergoot, and **R.A. Stein**. 2006. Age-, size-, sex-dependent arrival on spawning grounds by river and reef stocks of walleye. International meeting of the American Fisheries Society, Lake Placid, New York, September.
144. Van Tassell, J.J., J. Rinchard, K. Dabrowski, E.A. Marschall, and **R.A. Stein**. 2006. Do egg and larval characteristics vary with female phenotypes and spawning groups in Lake Erie walleye? International meeting of the American Fisheries Society, Lake Placid, New York, September.
145. Aman, C.R., **R.A. Stein**, A. Gascho-Landis, and R.S. Hale. 2006. Factors influencing percid stocking success. International meeting of the American Fisheries Society, Lake Placid, New York, September.
146. Fedor, S.L., **R.A. Stein**, and E.A. Marschall. 2006. Investigating regional patterns in Great Lakes walleye recruitment: does climate influence recruitment? American Fisheries Society, Lake Placid, New York, September.
147. **Stein, R.A.**, C. Goddard, J. Finster, and G. Christie. 2006. Uncertainty associated with lampricide control: Count, kill, and characterize impact. Great Lakes Fishery Commission Interim Meeting, Chicago, Illinois, November.
148. **Stein, R.A.** 2007. Success through research partnerships. **Invited Seminar**, 2007 Fisheries Staff Meeting, Ohio Department of Natural Resources, Division of Wildlife, Sandusky, OH, January 11-12.
149. Stein, R.A. Fisheries management within the AYK Region: Emerging themes and developing insights. **Invited Participant**, Arctic Yukon Kuskokwim Sustainable Salmon Initiative (AYKSSI), Anchorage, AK, February 4-10.
150. **Stein, R.A.** 2007. Essential tensions in science-based fishery management. **Invited Seminar**, 2007 Fisheries Training Session, Adapting Fisheries Management for a Changing World, Minnesota Department of Natural Resources, Brainerd, MN, February 13-15.
151. **Stein, R.A.**, R. Knight, A. Gascho-Landis, and E.A. Marschall. 2007. Overview of percid research in Lake Erie: Providing insight into future management. **Invited Talk**, Lake Erie Committee, Great Lakes Fishery Commission, Ypsilanti, MI, March 19-23.
152. **Stein, R.A.** Essential tensions in science-based fishery management. 2007. **Invited Speaker**, University of Illinois and Illinois Natural History Survey, Sullivan, IL, June 11-13.
153. **Stein, R.A.** and J.M. Dettmers. 2007. Panel Discussion: Life in the Great Lakes Fishery Commission: Policy, Action, and Satisfaction. **Invited Speaker**, University of Illinois and Illinois Natural History Survey, Sullivan, IL, June 11-13.

154. **Stein, R.A.** 2007. Essential tensions in science-based fishery management. **Invited Brown Bag Speaker**, Great Lakes Science Center, Ann Arbor, MI, June 20.
155. **Stein, R.A.** 2007. Essential tensions in science-based fishery management with an emphasis on the DOW-OSU partnership. **Invited Speaker**, Ohio Division of Wildlife Administrators Meeting, Cantors Cave, OH, October 4-5.
156. **Stein, R.A.**, and M. Gaden. 2008. Science-based, multi-jurisdictional fishery management in the Laurentian Great Lakes: What makes it work? **Invited Speaker** in a session entitled *Integrating the Biophysical, Socioeconomic, and Policy Sciences to Achieve Sustainable Management of Coastal Ecosystems*. Estuarine Research Foundation Annual Meeting, Providence, RI, November 4-8

GRANTS

NATIONAL SCIENCE FOUNDATION (~\$1 M)

HISTORICAL SUPPORT

- Fish-snail interactions: An experimental analysis of a predator-prey system, 1977-78, Principal Investigator (total award: \$29,000)
- A multi-user request for a Hewlett-Packard desk-top calculator, 1978, Principal Investigator (total award: \$27,500)
- Fish-snail interactions: An experimental analysis of a predator-prey system, 1978-80, Principal Investigator (total award: \$99,000)
- Selective predation, herbivory, and habitat structure: multiple predators and their impact on freshwater snail assemblages; 1985-88; Principal Investigator (total award: \$131,000)
- Open-water planktivores and turbidity: influence on size-structured interactions among centrarchid fishes, 1987-89, Principal Investigator (total award: \$50,000)
- Predation, herbivory, and disturbance: Structuring forces in the littoral zone of north temperate lakes; 1989-92; Principal Investigator (total award: \$150,000)
- REU: Predation, herbivory, and disturbance: Structuring forces in the littoral zone of north temperate lakes; 1990; Principal Investigator (\$4,500)
- REU: Predation, herbivory, and disturbance: Structuring forces in the littoral zone of north temperate lakes; 1991; Principal Investigator (\$4,500)
- Pike piscivory and ponds: complex interactions in littoral benthic communities, 1990-93, Principal Investigator (total award: \$15,800)
- Intermediate regulation of aquatic ecosystems: pursuing the generality of the cascade hypothesis. 1991-94, Co-Principal Investigator (total award: \$203,387).
- REU: Intermediate regulation of aquatic ecosystems: pursuing the generality of the cascade hypothesis, 1994-95, Principal Investigator (\$5,200)
- Intermediate regulation of reservoir communities: Strong regulators, stochasticity, and the generality of the trophic cascade hypothesis; 1994-96; Co-Principal Investigator (total award to date: \$100,000)
- REU: Intermediate regulation of reservoir communities: Strong regulators, stochasticity, and the generality of the trophic cascade hypothesis; 1994; Co-Principal Investigator (\$4,000)
- REU: Intermediate regulation of aquatic ecosystems: Strong regulators, stochasticity, and the generality of the trophic cascade hypothesis, 1995-96, Principal Investigator (\$5,200)
- REU: Collaborative Research: Impacts of a strong regulator along a productivity gradient: linking watersheds with reservoir food webs, 1998-2000, Co-Principal Investigator (\$5,000)
- Collaborative Research: Impacts of a strong regulator along a productivity gradient: linking watersheds with reservoir food webs, 1998-2000, Co-Principal Investigator (\$135,368)
- REU: Collaborative Research: Impacts of a strong regulator along a productivity gradient: linking watersheds with reservoir food webs, 1998-2000, Co-Principal Investigator (\$5,000)

OHIO DEPARTMENT OF NATURAL RESOURCES, DIVISION OF WILDLIFE (~\$7.9 M overall)

HISTORICAL SUPPORT

- Evaluation of stocking tiger muskellunge into Ohio lakes, 1979-84, Principal Investigator (total award: \$120,000)
- Management of macrophyte communities to enhance largemouth bass and bluegill populations at Clark Lake, 1981-84, Principal Investigator (total award: \$122,000)

Evaluation of stocking northern pike, muskellunge, and tiger muskellunge into Ohio lakes: A comparative approach, 1983-89, Principal Investigator (total award: \$194,000)

Predicting carrying capacities and yields of top predators in Ohio impoundments, 1984-87, Principal Investigator (total award: \$110,000)

Evaluation of the effects of stocking threadfin shad on young-of-year crappie, bluegill, and largemouth bass in Ohio lakes; 1987-91; Principal Investigator (total award: \$157,000)

Controlling gizzard shad populations via predator stocking, 1990-95, Principal Investigator (total award: \$359,924)

Evaluating saugeye stocking success in Ohio reservoirs, 1992-96, Principal Investigator, (total award: \$486,672)

Pursuing mechanisms regulating walleye recruitment in the Sandusky and Maumee rivers, 1994-96, Principal Investigator (total award: \$248,905)

Assessing the influence of size on the overwinter survival of largemouth bass in Ohio on-stream impoundments, 1995-98, Principal Investigator (total award: \$356,985)

Food web modelling in the western and central basins of Lake Erie, 1994-98, Principal Investigator (total award to date: \$419,706)

Fate of stocked saugeye during their first year of life with an emphasis on quantifying movement from Ohio reservoirs, 1995-99, Co-Principal Investigator (total award: \$225,998)

Species interactions among young-of-year fishes in Lake Erie, 1995-2001, Principal Investigator (total award: \$444,208)

Movement of reservoir-stocked saugeye between tailwaters, streams, and rivers, 1998-2001, Co-Principal Investigator (total award: \$288,121)

Exploring mechanisms regulating crappie populations in Ohio reservoirs, 1998-2003, Principal Investigator (total award: \$576,075)

Quantifying predatory interactions between stocked saugeye and prey fishes in Ohio reservoirs, 2002-2004 Principal Investigator (total award: \$210,852)

Factors affecting smallmouth bass recruitment in Lake Erie, 1998-2004, Co-Principal Investigator (total award: \$535,837)

Determining stream origin and migration of four purported walleye stocks in Lake Erie using otolith elemental analysis. Co-Principal Investigator (total award: \$151,013)

Introduction of new piscivore population in an Ohio reservoir, 2003-2007 Principal Investigator (total award: \$336,628)

Assessing the effects of global climate change on food web dynamics and percid populations in Lake Erie. Principal Investigator (total award: \$133,311)

OHIO SEA GRANT

HISTORICAL SUPPORT (~\$150 K)

Modeling smallmouth bass consumption of round goby in Lake Erie: Implications for predator growth and contaminant transfer, 2000-2003, Co-Principal Investigator (total award: \$149,890)

Trophic transfer of heavy metals: Quantifying the role of non-native species, Co-Principal Investigator, 2002-2003 (total award: \$7,500)

LAKE ERIE PROTECTION FUND

HISTORIAL SUPPORT (~\$90 K)

Food web and feeding influences on PCB bioavailability. Co-Principal Investigator, 2002-2002 (total award: \$77,340)

Trophic transfer of heavy metals: Quantifying the role of non-native species. Co-Principal Investigator, 2002-2003 (total award: \$10,000)

CURRENT SUPPORT-OHIO DIVISION OF WILDLIFE

Quantifying how parental attributes influence characteristics of early life history stages of Ohio stocks of Lake Erie walleye. 2003-2004, Principal Investigator (award to date: \$104,502)

Aquatic ecology basic service, Basic Service Agreement, 1992-2004, Principal Investigator (award to date: \$1,952,913)

GREAT LAKES FISHERY COMMISSION (~\$60)

HISTORICAL SUPPORT

Strategic research issues facing the Great Lakes. \$56,000. 2005, Principal Investigator (total award: \$60,000)

MISCELLANEOUS (\$125 K)

HISTORICAL SUPPORT

Smithsonian Institution, Trophic relations of Skadar Lake (Yugoslavia) fishes, 1977, Co-Principal Investigator (total award: \$5,000)

Office of Water Research & Technology, Microhabitat selection by fish: A rationale for installation of mitigation structures in channelized streams technology, 1978-80, Co-Principal Investigator (total award: \$27,000)

Ohio Department of Natural Resources, Division of Natural Areas and Preserves: Displacement of the crayfish species *Orconectes sanborni* by *O. rusticus*, 1981-83, Principal Investigator (total award: \$5,000)

American Fishing Tackle Manufacturers, Direct effects of turbidity on largemouth bass and walleye growth rates and use of forage, 1986-87, Principal Investigator (total award: \$5,000)

American-Scandinavia Foundation, Pike piscivory and ponds: complex interactions in benthic littoral zone communities, 1990, Principal Investigator (total award: \$2,000)

Electric Power Research Institute (EPRI); Gizzard shad, weak trophic linkages, and the applicability of the trophic cascade to Ohio reservoirs; 1992-96; Principal Investigator (total award: \$62,673)

Lake Erie Protection Fund, Differentiating weather-driven trends from management/food-web driven trends in Lake Erie fish populations, 1998. Co-Principal Investigator (total award: \$7,754).

UNIVERSITY COURSES TAUGHT

<u>Course</u>	<u>Quarter(s)</u>	<u>Enrollment</u>
Ecology of Fishes (Z510)	Winter 1976	75/quarter
Fishery Biology (Z660)	Winter 1978-83, 85, 89	25/quarter
Research Techniques in Fishery Biology (Z665)	Autumn, 1977-79	10/quarter
Introduction to Zoology (Z201)	Autumn 1978	350/quarter
Introduction to Zoology (Z201)	Spring 1983-89	250/quarter
Introductory Ecology (EEOB413)	Autumn 1992-2001	150/quarter
Independent Study (EEOB693)	All quarters	1/quarter
Sociology of Science (EEOB881)	Alternate years (1978-present)	25/quarter
Zoology 881 or 891 Seminars	Participated 1977-present	15/quarter
Life History of Fishes (Z881)	Autumn 1992	20/quarter
Scientific Writing (Z800)	Winter 1990	5/quarter

POST DOCTORAL FELLOWS & VISITING FACULTY

1. Dr. Andy Sih (University of California, Santa Barbara) 1980, Professor, University of California-Davis
2. Dr. Christer Bronmark (University of Lund, Sweden) 1983, Professor, Department of Animal Ecology, University of Lund, Sweden
3. Dr. Frank Rahel (University of Wisconsin, Madison) 1985, Professor, Department of Zoology and Physiology, University of Wyoming
4. Dr. Russell Wright (University of Wisconsin, Madison) 1993-1997, Associate Professor, Department of Fisheries and Allied Aquacultures, Auburn University
5. Dr. Gary Allison (Oregon State University), 2001-present

FORMER GRADUATE STUDENTS (PhD)

1. Jaci F. Savino (PhD 1985) Research Scientist, National Biological Service, G.L. Science Center, Ann Arbor
2. David H. Wahl (PhD 1988) Assistant Center Director, Illinois Natural History Survey
3. Dennis R. DeVries (PhD 1989) Professor, Auburn University. Auburn, AL

4. Billie L. Kerans (PhD 1989) Associate Professor, Montana State University
5. Martha E. Mather (PhD 1990) Research Scientist, Mass. Cooperative Fish & Wildlife Research Unit, UMass
6. Jeffrey G. Miner (PhD 1990) Associate Professor, Bowling Green State University, Bowling Green, OH
7. Steve P. Klosiewski (Ph.D 1991) Research Scientist, U.S. Fish and Wildlife Service, Anchorage, Alaska
8. Xavier Lazzaro (Ph.D 1991) Research Scientist, ORSTOM, France
9. John M. Dettmers (PhD 1995) Senior Fishery Biologist, Great Lakes Fishery Commission, Ann Arbor, MI
10. Mary T. Bremigan (PhD 1997) Associate Professor, Michigan State University, East Lansing, MI
11. James E. Garvey (PhD 1997) Associate Professor, Southern Illinois University, Carbondale, IL
12. Mark W. Kershner (PhD 1998) Assistant Professor, Kent State University, Kent, OH
13. Stuart A. Ludsin (PhD 2000) Assistant Professor, EEOB, The Ohio State University, Columbus, OH
14. David "Bo" Bunnell (PhD 2002) Research Scientist, Great Lakes Science Center, USGS, Ann Arbor, MI
15. Geoff B. Steinhart (PhD 2004) Assistant Professor, Lake Superior State University, Saulte St. Marie, MI
16. Gene W. Kim (PhD 2007), Program Coordinator, NOAA Ecosystem Research Program, Washington, DC

FORMER GRADUATE STUDENTS (MS)

1. Alan L. Gillen (MS 1980) Associate Professor, Pensacola Christian College, Pensacola, FL
2. Cheryl G. Goodman (MS 1980) Research Biologist, Wisconsin Department of Natural Resources
3. Jaci F. Savino (MS 1981) Research Scientist, National Biological Service, Ann Arbor, MI
4. Carolyn S. Wilcox (MS 1981)
5. Cindy M. Tomcko (MS 1982) Research Biologist, Minnesota Department of Natural Resources
6. Mark S. Bevelhimer (MS 1983) Research Scientist, Oak Ridge National Laboratories
7. Mark J. Butler (MS 1983) Professor, Old Dominion University
8. Edward T. Rankin (MS 1983) Research Biologist, Ohio EPA
9. Elizabeth A. Marschall (MS 1984) Associate Professor, The Ohio State University
10. Dennis R. DeVries (MS 1985) Professor, Auburn University
11. Martha E. Mather (MS 1985) Research Scientist, Mass. Cooperative Fish & Wildlife Research Unit, UMass
12. Brett M. Johnson (MS 1986) Full Professor, Colorado State University
13. Lilly P. True (MS 1990) Scientist, Wright Patterson Air Force Base
14. John M. Dettmers MS 1991) Senior Fishery Biologist, Great Lakes Fishery Commission, Ann Arbor, MI
15. Mary T. Bremigan (MS 1992) Associate Professor, Michigan State University, East Lansing, MI
16. Paula T. Edersheim (MS 1992), High School Science Teacher
17. James E. Garvey (MS. 1992) Assistant Professor, Southern Illinois University, Carbondale, IL
18. Thomas P. Stahl (MS 1993) Fisheries Biologist, Oregon Department of Fish and Game, Portland, OR
19. Nicholas S. Donovan (MS 1996), Research Assistant, Osteoporosis Research Group, UC-San Francisco
20. Joseph B. Mion (MS 1996), Aquatic Biologist, Consulting Firm, East Lansing, MI
21. Richard J. Silk (MS, 2001), Environmental Lawyer, *Freund, Freeze, and Arnold*, a Dayton, Ohio Law Firm
22. Kristin K. Arend (MS, 2001), PhD Student, Cornell University, Ithaca, NY
23. Jeffrey A. Spoelstra (MS, 2001), Research Scientist, *Kieser and Associates*, Kalamazoo, Michigan
24. LeAnn R. Southward (MS, 2003), Sea Grant Knauss Fellow, Washington, DC
25. Jonathan Seiber-Denlinger (MS, 2004), Station Supervisor, Inland Fisheries Research Unit, DNR, Hebron, OH
26. Christopher R. Aman (MS, 2007), Fisheries Biologist, Division of Wildlife, DNR, Akron, OH
27. Samantha Fedor (MS, 2007), MS student, Education, UCLA, Los Angeles, CA
28. Jennell Bigrigg (MS, 2008), Student, OSU School of Veterinary Medicine, Columbus, OH

CURRENT GRADUATE STUDENTS (Ph.D.)

1. Jason Van Tassell (BS, Utah State University; MS, Stockholm University; PhD expected 2008; co-advised with Libby Marschall)

CURRENT GRADUATE STUDENTS (M.S.)

SERVICE AS A COMMITTEE MEMBER

MS Committees: 45

PhD Committees: 26

SERVICE AS EXTERNAL EXAMINER

1. Opponent, Dissertation Defense, Magnus Appelberg, Uppsala University, Sweden, 1986
2. External Examiner, Dissertation Defense, Vytenis Gotceitas, Queens University, Kingston, Ontario, 1987
3. Dissertation Defense, Michelle Dionne, Dartmouth College 1986, 1990
4. Dissertation Defense, Anna Hill, University of Notre Dame, 1994
5. External Examiner, Dissertation Defense, Trevor Freisen, University of Guelph, 1998
6. Opponent, Dissertation Defense, Per Nystrom, University of Lund, Sweden, 2000

CURRENT UNDERGRADUATE STUDENTS

RESEARCH EXPERIENCE FOR UNDERGRADUATES - NSF

1. Jessica Rettig, Ph.D. Program, Michigan State University, 1991
2. Heather M. Thomas, Ph.D. Program, Utah State University, 1992
3. Nicholas S. Donovan, Research Assistant, UC-San Francisco
4. JoAnn Dujnic, MS Program, Animal Pharmacology, The Ohio State University, 1994
5. Aimee H. Fullerton, MS Program, Notre Dame University, 1996
6. Alexis Wongchaowart, Senior, OSU, 2000

UNDERGRADUATE RESEARCH PROJECTS OR INTERNSHIPS (SINCE 1990)

1990 Gary Hunt
1991 Sean Lammers; Lisa Yako; Keith James
1992 Lisa Yako; Cathy Mitchell
1993 Lisa Yako; Cathy Mitchell; Angela Rigsby; Loren Schafer
1994 Gayle Martin; Kathy Jenks; Michelle Thomas; Laura Circle
1995 Gayle Martin; Kathy Jenks; Ken Freeman
1996 Michelle Thomas; Ken Freeman; Stephanie Micucci
1997 Stephanie Micucci; Heidi Shoup
1998 Heidi Shoup; Jacob Wainio
1999 Matt Scantland
2000 Matt Scantland, Alexis Wongchaowart, Erica Roche
2001 Artie McCollum; Scott Miehl
2002 Artie McCollum
2006 Jessica Best

UNIVERSITY SERVICE

ADMINISTRATION

Director, Aquatic Ecology Laboratory, 1991-present
Federal Aid Coordinator, Administer Wallop-Breaux Funds to OSU, 885K annually, 1991-present

COMMITTEES

UNIVERSITY

College of Biological Sciences, Dean Search Committee, 1983-84
School of Natural Resources, Advisory Committee, 1984-87
Graduate School, Retention Advisory Committee, 1984
Graduate School, Phone-in Registration Advisory Committee, 1986
Graduate School, Admissions Committee, 1986
Graduate School, Seminar Evaluation Committee, 1986
Graduate School, Elected to Graduate Council, 1986-90
Graduate School, Executive Committee, 1986-88
Graduate School, Graduate Studies Review Committee, Chair, 1986-87
Graduate School, Policy and Standards Committee, 1988-1990
School of Natural Resources, Advisory Committee, Chair, 1989-90
Graduate School, Dissertation Review Committee, 1989-90

Representative, Ohio Cooperative Fish and Wildlife Research Unit Coordinating Committee, 1990
University Tenure and Promotion Committee, 1994-96
Ad hoc Committee - Review College Base Allocations, 1996
Search Committee, Dean - College of Biological Sciences, 1995-96
Search Committee, Director - School of Natural Resources, 1997-99
Faculty Hearing Committee, University Senate, 1997-99
Search Committee, Ecological Engineering Program, 1999-00
Search Committee, Stream Ecologist, School of Natural Resources, 2000-01
Member, Large Interdisciplinary Grants Evaluation Panel, 2004
Member, Presidential Fellowship Committee, 2006-present

COLLEGE

Proposal Review Committee, Alumni Research Awards, 1979
Proposal Review Committee, Small Grants, 1979, 88-89
Internal Review Committee, 1984
Reorganization Committee, 1985
Research Committee, 1988-90
Co-chair, Promotion and Tenure Committee, 1990
Promotion and Tenure Committee, 1994-96, 98-00
Performance Management Initiative, 1997-00

DEPARTMENTAL

Ad hoc Committee to evaluate Z880, 1977
Research Review Committee, 1977
Coordinating advisor, 1977-79
Self-Study Committee, Secretary, 1980-83
Search Committee, Theoretical Ecologist, 1981
Member, Seminar Committee, 1981
Member, Word-Processor Committee, 1981
Member, Graduate Committee, 1981
Chair, Seminar Committee, 1982
Member, Graduate Studies Committee; Acting Chair, Summer, 1982
Ad hoc Ecology Curriculum Committee, Revise ecology courses, 1982-83
Chair, Graduate Studies Committee, 1983-87
Ad hoc Goals Committee, 1985
Member, Space Committee, 1988-89
Member, Promotion and Tenure Committee, 1988-present
Chair, Ad Hoc Budget Policy Committee, 1990
Chair, Aquatic Ecologist Search Committee, 1990-91
Member, Ad Hoc Budget Policy Committee, 1991-92
Chair, Selection Committee, Administrative Secretary, Aquatic Ecology Laboratory, 1991
Chair, Ecology Subcommittee, Curriculum Committee, 1991-94
Chair, Promotion and Tenure Subcommittee, 1992
Chair, Ad Hoc Budget Policy Committee, 1992-94
Member, Promotion and Tenure Subcommittee, 1992-present
Member, Curriculum Committee, 1995-97
Chair, Search Committee - Organismal Physiologist, 1995-96
Chair, Search Committee - Leader, Ohio Cooperative Fish and Wildlife Research Unit, 1996
Chair, Curriculum Committee, 1997-98
Member, Teaching Evaluation Committee, 1998
Member, Name Change Committee, 1998
Chair, Promotion and Tenure Subcommittee, 1996, 99-02
Member, Graduate Studies Committee, 2003-present
Chair, Seminar Committee, 2004-2005

Chair, Awards Committee, 2005-2007
Member, AEL Search Committee, 2006-2007

SERVICE TO COMMUNITY

Judge, State Science Day, Ohio Wesleyan University, 1977-79
OSU Young Scholars Program, 1992-present
Shadowing Experiences with local schools, 1992-present
Columbus Alternative High School/AEL Internship Program, 1992-present
Thomas Worthington High School/AEL Internship Program, 1996-present

PRESIDENTIAL APPOINTMENTS

Appointed by President Bill Clinton as Commissioner to the Great Lakes Fishery Commission, one of only four United State commissioners, 1998-2004.

GREAT LAKES FISHERY COMMISSION

United States Commissioner and Vice Chair (as of June, 2002), Great Lakes Fishery Commission, appointed by President Clinton, one of four US Commissioners plus four Canadian Commissioners (6-year term, beginning in 1998, ending in 2004)
Chair, SLIC, Sea Lamprey Integration Committee, Great Lakes Fishery Commission
Member, RPWG, Research Priorities Working Group, Great Lakes Fishery Commission
Chair, Fisheries and Environment Section, Great Lakes Fishery Commission, ended June 2004
Chair, Blue-Ribbon Panel, to review the delivery of the large-vessel program by the Great Lakes Science Center, Report written and submitted February 13
US Commissioner Representative to CLC, Council of Lake Committees, Great Lakes Fishery Commission, ended June 2004
US Commissioner Representative to the LEC, the Lake Erie Committee, Great Lakes Fishery Commission to aid in resolving disputed Total Allowable Catch for walleye among management agencies, ended June 2004
Co-chair, Blue-Ribbon Committee, to review the design and estimation techniques used to estimate walleye and yellow perch harvest on Lake Erie, in accordance with resolving disputed Total Allowable Catch for walleye among management agencies on the lake

PROFESSIONAL ACTIVITIES

SOCIETY MEMBERSHIPS

American Fisheries Society	Ecological Society of America
American Association for the Advancement of Science	Ohio Academy of Science
American Institute of Biological Sciences	North American Benthological Society
American Association of University Professors	Sigma Xi
American Society of Limnology & Oceanography	

OFFICES HELD IN PROFESSIONAL SOCIETIES

American Fisheries Society

Understudy, Constitutional Consultant, Parent Society, 1981-82
Secretary-Treasurer, Wisconsin Chapter, 1972-74
President, Ohio Chapter, 1980
Constitutional Consultant, Parent Society, 1982-85
Liaison between ESA and AFS, Parent Societies, 1979-80

Ecological Society of America

Editor, Aquatic Ecology Newsletter, 1978-81
Vice Chair, Aquatic Section, 1981-83
Chair, Aquatic Section, 1983-85

Sigma Xi

Board member, 1980-83
President-elect, Ohio State University Chapter, 1987
Past President, Ohio State University Chapter, 1988
Past President, Ohio State University Chapter, 1989

COMMITTEE ASSIGNMENTS IN PROFESSIONAL SOCIETIES

American Fisheries Society

Member, Membership Committee, Ohio Chapter, 1978
Program Chair, Ohio Fish and Wildlife Meetings, Ohio Chapter, 1980
Chair, Publications Committee, North Central Division, 1980
Chair, Program Committee, Tri State Communication in Fisheries, Joint meeting of the Ohio, Indiana, and Michigan Chapters, 1980
Member, Awards Committee, Best Student Paper, 1980
Member, Nominating Committee, 1981
Member, Publication Policy Committee, 1982
Member, Sessional Committee of the AFS, revise the Constitution and Bylaws of Society, 1981-85
Member, Educational Materials Committee, Fisheries Educators' Section, 1982
Member, Nominating Committee, North Central Division, 1982
Member, Publications Committee, North Central Division, 1982
Member, Publications Policy Committee, 1982-83
Member, Membership Categories Committee, 1984
Member, Program Committee, 1984 and 1985 Annual Meetings
Chair, Program Committee, 1986 Annual Meeting
Adviser, Long-term Planning Committee, 1987-1988
Chair, Publication Overview Committee, 1988
Member, Revision of the ByLaws for the Education Section, 1990
Member, Best Paper Awards Committee, Ohio Chapter, 1990
Member, Constitution Revision Committee, Ohio Chapter, 1990
Chair, Publications Committee, 1990
Member, Publications Committee, 1991
Member, Long-range Planning Committee, Ohio Chapter, 1991-93
Member, Procedural Manual Committee, Ohio Chapter, 1992-94
Member, Walleye Technical Committee, 1992
Chair, Nominating Committee, 1993-94
Chair, Nominating Committee, 1994
Judge, Best Student Paper award, 1994, 1998
Member, Excellence in Fisheries Education Award, 1996-98
Member, Steering Committee, "Ecosystem Management", 1996
Chair, Award of Excellence Committee, 1998-99

Ecological Society of America

Co-organizer, Symposium, 1977
Judge, Annual ESA Marty F. Buell Award for Excellence in Ecology, 1979-80

Chair, Aquatic Section, 1982 Annual Meeting
 Chair, Aquatic Section, 1983 Annual Meeting
 Member, Program Committee, 1983-86 Annual Meetings
 Member, Long-term Planning Committee, 1987
 Member, Future Programs Committee, 1987-89
 Mercer Award Committee, 1992-93
 Judge, Buell Award, 1993
 Miscellaneous
 Chair, Best-paper Committee, Midwest Fish and Wildlife Meetings, 1987
 Chair, Committee for Sigma Xi National Lecturer visit to campus, 1987-88
 Member, Best Paper Awards Committee, North American Benthological Society, 1990

ADVISORY PANELS TO GRANTING AGENCIES

NSF Advisory Panel, Ecology Program, 1987-90
 NOAA Undersea Research Center, Proposal Review Panel, University of Connecticut, 1989-91
 Lake Erie Protection Fund, Proposal Review Panel, 1993, 1994, 1996
 New York Sea Grant, Proposal Review Panel, SUNY-Stony Brook, 1994
 Grand Canyon Monitoring and Research Center, Park City, UT, 1997
 NSF Environmental Life Sciences Panel, Graduate Research Fellowship Program, Washington, DC, 1997-99
 Chair, NSF Environmental Life Sciences Panel, Graduate Research Fellowship Prog., Wash DC, 2000-01
 Great Lakes Fishery Trust Fund Review Panel, Lansing, MI, 1999-present
 Indiana/Illinois Sea Grant Program Review Panel, Chicago, IL, 1999
 Michigan Sea Grant Program Review Panel, Detroit, MI, 1999, 2004
 National Sea Grant Program, Essential Fish Habitat Competition, 2002
 Minnesota Sea Grant Panel, Duluth, MN, 2004

REVIEW PROPOSALS FOR

National Science Foundation	Illinois/Indiana Sea Grant
Hudson River Foundation	New York Sea Grant
Office of Water Resources and Technology	Ohio Sea Grant
National Geographic Society	Ohio Agricultural Research and Development
Georgia Sea Grant	Montana State Univ, NSF-EPSCoR Program

EDITORIAL ASSIGNMENTS

Associate Editor, *Transactions of the American Fisheries Society*, 1979-81
 Editor, Aquatic Ecology Newsletter, Ecological Society of American, 1978-81
 Member, Editorial Committee, North Central Division, American Fisheries Society, 1979-80
 Field Editor, *Transactions of the American Fisheries Society*, 1983-84
 Associate Editor, *American Midland Naturalist*, 1986-89
 Member, Editorial Board, *Canadian Journal of Fisheries and Aquatic Sciences*, 1987-1990
 Associate Editor, *Ecological Applications*, 1994-1998
 Editorial Board, Academic Press Series: Aquatic Ecology, 1992-present
 Interim Co-Editor, *Transactions of the American Fisheries Society*, 1999
 Ad Hoc Associate Editor, *Ecology, Ecological Monographs*, 2004-2008

SERVICE ON REVIEW TEAMS

Review Team, Wisconsin Sea Grant Program, 1983
 Review Team, Natural Resources Research Institute, University of Minnesota, 1985-88
 Review Team, Electric Power Research Institute, COMPMECH, Oak Ridge National Labs, 1991
 External Review, Department of Zoology, North Carolina State University, 1993
 NSF Committee of Visitors, Environmental Biology, Ecology and Ecosystem Programs, 1998
 NSF Review Team, Cornell Field Station, College of Natural Resources, Cornell University, 1999
 Review Team, Fisheries and Wildlife, Colorado State University, Fort Collins, CO, 2006

PROFESSIONAL SERVICE OR CONSULTATION

Participating Scientist, Smithsonian Foreign Currency Program, Titograd, Yugoslavia, 1972-82
Participant, Battelle Endowment for Technology and Human Affairs, Columbus, 1978-79
Workshop - Management of Lakes by Food Chain Manipulation, UN-FAO, Rome, Italy, 1981
Consultant, Illinois Institute of Research Technology, ELF Proposals, 1982
Workshop - Aquatic Macrophyte Management, New York, 1984
NSF Workshop, Complex Interactions in Lake Communities, University of Notre Dame, 1987
Workshop Leader, Stress in Fishes, Ohio Department of Natural Resources, 1990
Member, Board of Technical Experts, Great Lakes Fishery Commission, 1990-1998
Chair, Board of Technical Experts, Great Lakes Fishery Commission, 1996-1998
NSF Workshop - Reservoirs, Land Between the Lakes, Kentucky, 1990
Workshop Leader, Reservoir Food Webs, Ohio Department of Natural Resources, 1990
Consultant, Fish Kill Assessment, Ohio Department of Natural Resources, 1990
Workshop Leader, Scientific Presentations, Ohio Department of Natural Resources, 1991
Workshop - Forest Ecosystem Conceptual Model, US Forest Service, 1992
Ruffe Team, Ohio Department of Natural Resources, 1994-95
Facilitator, Great Lakes Fishery Commission Conference on Biodiversity and Sustainability in Aquatic Ecosystems, 1998
Member, then Chair, Environmental Life Sciences Review Panel, NSF Graduate Research Fellowship Program, Graduate Session A, Washington, DC, 1998-2001
Chair, US Section, Great Lakes Fishery Commission, 2001-2002
Chair, SLIC, Sea Lamprey Integration Committee, Great Lakes Fishery Commission, 2001-2007
Vice Chair, Great Lakes Fishery Commission, 2002, 2006
Chair, Blue Ribbon Committee, Vessel Program Review, Great Lakes Science Center, 2002-2003
Member, National Research Council, National Academies of Science, Review of Western Alaska (AYK) Research and Restoration Plan for Salmon, 2003-2005
Appointed scientist member, Franklin County Chemical Emergency Preparedness Advisory Council by Paula Brooks, Franklin County Commissioner, October 1, 2005 through September 30, 2007; re-appointed for second term, 2007-2009, 2009-2012
Chair, Committee of Visitors, Review of the Cornell Biological Field Station, Ithaca, NY, 2007
Member, Advisory Board, Quantitative Fisheries Center, Michigan State University, Co-Dirs: Mike Jones & Jim Bence, 2002-present
Invited to serve as the Chair, Review Panel, for the USGS Upper Midwest Environmental Sciences Center, LaCrosse, Wisconsin, Declined, 2009
Invited to represent academia (with expertise in fishery management) on the Ohio Lake Erie Fishing Regulatory Reform Task Force; then voted in as Chair; this task dealt with Senate Bill 77 which increased regulatory control of the commercial fishing industry on the lake; this committee was struck by the legislature to make the bill more palatable to the industry. As chair, I wrote a Draft Report, solicited reviews from TF members, collated reviews, and generated the Final Report that was then submitted to the Governor's Office, 2009
Member, Advisory Committee, Lake Huron Food Web Study, Michigan State University, 2011-present
Expert Consultant, Fisheries and Aquaculture Department of the Food and Agriculture Organization of the United Nations (FAO), contributing to an Expert Consultation on the "FAO Technical Guidelines for Responsible Fisheries: Recreational Fisheries", August 5-7, 2011 in Berlin, Germany.
Invited contributor, NRC Committee on Sustainability Linkages in the Federal Government, which was tasked with identifying and describing the linkages among domains such as energy, water, and health, Seattle, 2012.

REFEREE ARTICLES FOR

American Naturalist	Ecography
American Midland Naturalist	Ecology
Biotropica	Environmental Biology of Fishes
Canadian J. of Fisheries and Aquatic Sciences	Fisheries

Freshwater Invertebrate Zoology
Holarctic Ecology
International Environmental Affairs
Hydrobiologia
Journal of Freshwater Ecology
Journal of Crustacean Biology
Journal of Great Lakes Research
J. North American Benthological Society
Journal of Wildlife Management
North American Journal of Fishery Management

Northeastern Naturalist
Ohio Journal of Science
Prentice-Hall, Inc.
Proc. Ann. Conf. SE Fish & Wildlife Agencies
Progressive Fish-Culturist
Science
State University Press of New York
Texas Journal of Science
Transactions of the American Fisheries Society