

CURRICULUM VITAE

James A. Rice

Department of Applied Ecology
North Carolina State University
Raleigh, NC 27695-7617

E-mail: jrice@ncsu.edu

Education:

B.A. 1978, Biology (Summa Cum Laude), St. Louis University, St. Louis, MO.
M.S. 1981, Zoology, University of Wisconsin, Madison, WI.
Ph.D. 1985, Zoology, University of Wisconsin, Madison, WI.

Employment:

1978 - 1985	Research and Teaching Assistant, Center for Limnology and Department of Zoology, University of Wisconsin-Madison.
1985	Research Associate, Center for Limnology, University of Wisconsin- Madison.
1985 - 1991	Assistant Professor of Zoology and Extension Fisheries Specialist, North Carolina State University.
1986 - present	Fisheries, Wildlife and Conservation Biology Faculty, North Carolina State University.
1989 - 1990, 2001	Acting Zoology Department Extension Leader.
1991 - 1998	Associate Professor of Zoology and Extension Fisheries Specialist, North Carolina State University.
1998 - present	Professor of Applied Ecology (formerly Zoology, Biology) and Extension Fisheries Specialist, North Carolina State University.
2001 - 2005	Zoology Director of Graduate Programs.
2019 - present	Professor Emeritus, Department of Applied Ecology, North Carolina State University.

Professional Memberships:

American Fisheries Society
AFS Early Life History Section
AFS Education Section
NC Chapter, American Fisheries Society
Ecological Society of America
ESA Aquatic Ecology Section

Professional Service:

Nomination Committee, AFS, 2016-present
Nomination Committee, Southern Division of AFS, 2016-present.
Northern Regional Advisory Committee to the NC Marine Fisheries Comm., 2012-present.
Striped Bass Committee, Southern Division of AFS, 2005-present.
Small Impoundments Committee, Southern Division of AFS, 2002-2016.
Faculty advisor for NCSU student subunit of AFS, 1996-present.
Lake Norman Advisory Committee for the NC Wildlife Resources Comm., 2005-2013.

Education and Outreach Committee, NC Chapter of AFS, 2005-2010.
Awards Committee Chair, NC Chapter of AFS, 2001-2005.
Inland Regional Advisory Committee to the NC Marine Fisheries Comm., 2000-2012.
Fisheries Resources Grant review panel (UNC Sea Grant), 2000-2004.
National Trout Unlimited Embrace-A-Stream review panel, 2000-2003.
Finance Committee, NC Chapter of AFS, 2000-2002.
Nominating Committee, NC Chapter of AFS, 1995-1996, 2000-2001, 2013, 2015.
Education Committee, NC Chapter of AFS, 1996-1999.
Environmental Concerns Committee, NC Chapter of AFS, 1991-1995.
Publications Overview Committee, American Fisheries Society, 1991-1992.
President, North Carolina Chapter, American Fisheries Society, 1990-1991.
President, North Carolina Fisheries Workers Association, 1990-1991.
American Fisheries Society Campus Network Representative, 1989-1996.
Board of Directors, North Carolina Wildlife Federation, 1988-1993.
Associate Editor, North American Journal of Fisheries Management, 1989-1991.
Ballot Committee, Southern Division of the American Fisheries Society, 1988.
Program Committee, 1986 Annual Meeting of the American Fisheries Society.

Awards

- 2015 Best Student Paper Award (coauthor), NC Chapter, American Fisheries Society.
- 2008 Service Award, NC State Student Fisheries Society
- 2006 Richard L. Noble Best Student Paper Award (coauthor), NC Chapter, American Fisheries Society.
- 2006 Distinguished Service Award, NC Chapter, American Fisheries Society
- 2005 Best Paper Award (coauthor), 8th Annual NC State University Zoology and Botany Graduate Student Symposium.
- 2003 Honorable Mention, Best Student Paper Award (coauthor), American Fisheries Society Southern Division Meeting.
- 2001 Inducted into Triangle Fly Fishers Trout Unlimited Chapter Hall of Fame.
- 2001 W. Don Baker Memorial Award for Best Paper Overall (coauthor), NC Chapter, American Fisheries Society.
- 2001 Best Student Paper Award (coauthor), NC Chapter, American Fisheries Society.
- Finalist in Most Significant Paper competition (coauthor) in the Transactions of the American Fisheries Society, Vol. 126 (1997).
- 1998 Best Student Paper Award (coauthor), Tidewater Chapter, American Fisheries Society.
- 1995 George and Rhoda Kris Study Leave Award, NC State University.
- Co-author, Science Citation Classic (Miller et al. 1988, CJFAS 45:1657-1670).
- Honorable Mention, Best Student Paper Award Competition (coauthor), 1991 American Fisheries Society Meeting.
- 1990 Best Paper Award (coauthor), American Fisheries Society Southern Division.
- Most Significant Paper in the Transactions of the American Fisheries Society, Vol. 116 (1987).
- Honorable Mention, Best Student Paper competition, 1984 American Fisheries Society Meeting.

- Best Student Paper Award, 1982 American Fisheries Society Meeting.

Research Interests:

Biological and anthropogenic impacts on survival, growth and distribution of fishes, including: Predator-prey interactions and food web dynamics in aquatic systems; direct and indirect fish responses to hypoxia; bioenergetics modeling of predation and habitat effects; impacts and management of introduced species; factors driving variation in fish tissue mercury concentration, and intersex condition in fishes.

Current and Pending Grants and Contracts:

Aquatic Species Restoration and Research at the Eastern Aquatic Conservation Facility at Yates Mill (NC). W.G. Cope, J.F. Levine, C.B. Eads, T.J. Kwak, J.A. Rice, J.M. Burkholder and R.J. Richardson, PIs. National Fish and Wildlife Foundation – North Carolina and Virginia River and Waters Program. 2016-2020. \$1,120,000.

Refereed Research Publications (* indicates student author):

86. Bradley*, C.E. **J.A. Rice**, and D.D. Aday. 2018. Modeling the Effects of Vital Rate Manipulation and Management Scenarios to Predict Population Impact of Restoration Programs on an Unrecovered Coastal Population of Striped Bass. *North American Journal of Fisheries Management* 38:639-649. DOI: 10.1002/nafm.10062.
85. Grieshaber*, C.A., T.N. Penland, T.J. Kwak, W. G. Cope, R.J. Heise, J.M. Law, D. Shea, D.D. Aday, J.A. Rice, S.W. Kullman. 2018. Relation of fish intersex to contaminants in riverine sport fishes. *Science of the Total Environment* 643:73-89. DOI: 10.1016/j.scitotenv.2018.06.071.
84. Bradley*, C.E., **J.A. Rice**, D.D. Aday, J.E. Hightower, J. Rock, and K.J. Lincoln. 2018. Juvenile and adult Striped Bass mortality and distribution in an unrecovered coastal population. *North American Journal of Fisheries Management* 38:104-119. DOI: 10.1002/nafm.10036.
83. Henson*, M.N., D.D. Aday, **J.A. Rice**, and C.A. Layman. 2018. Assessing the influence of Tilapia on sport species in North Carolina reservoirs. *Transactions of the American Fisheries Society* 147:350–362. DOI: 10.1002/tafs.10031.
82. Henson*, M.N., **J.A. Rice**, and D.D. Aday. 2018. Thermal tolerance and survival of Nile Tilapia *Oreochromis niloticus* and Blue Tilapia *Oreochromis aureus* under rapid and natural temperature declination rates. *Transactions of the American Fisheries Society* 147:278–286. DOI: 10.1002/tafs.10023.
81. Campbell, L.A. and **J.A. Rice**. 2017. Development and field application of a model predicting effects of episodic hypoxia on short-term growth of Spot *Leiostomus xanthurus*. *Marine and Coastal Fisheries Dynamics, Management, and Ecosystem Science* 9:504–520. DOI: 10.1080/19425120.2017.1362492.

80. Deslauriers, D., S.R. Chipps, J.E. Breck, **J.A. Rice**, and C.P. Madenjian. 2017. Fish Bioenergetics 4.0: An R-based modeling application. *Fisheries* 42:11, 586-596. DOI: 10.1080/03632415.2017.1377558.
79. Lee Pow*, C.S.D., K. Tilahun, K. Creech, J.M. Law, W.G. Cope, T.J. Kwak, **J.A. Rice**, D.D. Aday, and S. Kullman. 2017. Windows of Susceptibility and Consequences of Early Life Exposures to 17 β -estradiol on medaka (*Oryzias latipes*) Reproductive Success. *Environmental Science & Technology*. 51:5296-5305. DOI: 10.1021/acs.est.7b01568.
78. Owensby*, D.P., **J.A. Rice**, and D.D. Aday. 2017. Mortality, Dispersal, and Habitat Use of Stocked Juvenile Muskellunge *Esox masquinongy* in Two Western North Carolina Rivers. *North American Journal of Fisheries Management*. *North American Journal of Fisheries Management* 37(1):108-121. DOI: 10.1080/02755947.2016.1245222.
77. Lee Pow*, C., M. Law, T. Kwak, W.G. Cope, **J.A. Rice**, S. Kullman, and D.D. Aday. 2017. Endocrine Active Contaminants in Aquatic Systems and Intersex in Common Sport Fishes. *Environmental Toxicology and Chemistry* 36(4):959-968. DOI: 10.1002/etc.3607.
76. Lincoln*, K.J., D.D. Aday, and **J.A. Rice**. 2016. Potential Mechanisms Underlying a Perceived White Bass *Morone chrysops* Decline in a Southeastern Reservoir. *Transactions of the American Fisheries Society* 145:1035-1046. DOI: 10.1080/00028487.2016.1195444.
75. Brown*, D.T., D.D. Aday, and **J.A. Rice**. 2015. Responses of coastal Largemouth Bass *Micropterus salmoides* to episodic hypoxia. *Transactions of the American Fisheries Society* 144:655-666. DOI: 10.1080/00028487.2015.1024801.
74. Brown*, D.T., **J.A. Rice**, C.D. Suski, and D.D. Aday. 2015. Dispersal patterns of coastal Largemouth Bass in response to tournament displacement. *North American Journal of Fisheries Management* 35:431-439. DOI: 10.1080/02755947.2015.1009660.
73. Sackett, D.K., C. Lee Pow*, M.J. Rubino, D.D. Aday, W.G. Cope, S. Kullman, **J.A. Rice**, T.J. Kwak, and M. Law. 2015. Sources of Endocrine Disrupting Compounds in North Carolina Waterways: A Geographic Information Systems Approach. *Environmental Toxicology and Chemistry* 34(2):437-445. DOI 10.1002/etc.2797.
72. Campbell*, L.A. and **J.A. Rice**. 2014. Effects of hypoxia-induced habitat compression on growth of juvenile fish in the Neuse River Estuary, North Carolina. *Marine Ecology Progress Series* 497: 199-213. DOI: 10.3354/meps10607.
71. Bethke*, B.J., **J.A. Rice**, and D.D. Aday. 2014. White Perch in Small North Carolina Reservoirs: What Explains Variation in Population Structure? *Transactions of the American Fisheries Society* 143:77-84. DOI: 10.1080/00028487.2013.830989.

70. Cerino*, D., A.S. Overton, **J.A. Rice**, and J.A. Morris Jr. 2013. Bioenergetics and Trophic Impacts of the Invasive Indo-Pacific Lionfish. *Transactions of the American Fisheries Society* 142:1522-1534. DOI: 10.1080/00028487.2013.811098.
69. Sackett*, D.K, D.D. Aday, and **J.A. Rice** and W.G. Cope. 2013. Maternally transferred mercury in wild largemouth bass, *Micropterus salmoides*. *Environmental Pollution* 178:493-497. DOI: 10.1016/j.envpol.2013.03.046.
68. Feiner*, Z.S., **J.A. Rice**, A.J. Bunch, and D.D. Aday. 2013. Trophic niche and diet overlap between invasive white perch and resident white bass in a southeastern reservoir. *Transactions of the American Fisheries Society* 142:912–919. DOI: 10.1080/00028487.2013.788563.
67. **Rice, J. A.**, J. S. Thompson, J. A. Sykes, and C. T. Waters. 2013. The role of metalimnetic hypoxia in striped bass summer kills: consequences and management implications. Pages 121-145 in J. S. Bulak, C. C. Coutant, and J. A. Rice, editors. *Biology and management of inland striped bass and hybrid striped bass*. American Fisheries Society, Symposium 80, Bethesda, Maryland.
66. Feiner*, Z.S., **J.A. Rice**, and D.D. Aday. 2013. Trophic niche of invasive white perch and potential interactions with established reservoir species. *Transactions of the American Fisheries Society* 142:628–641. DOI: 10.1080/00028487.2013.763854.
65. Thompson, J.S. and **J.A. Rice**. 2013. The relative influence of temperature and forage availability on growth of age 1-5 striped bass in two southeastern reservoirs. Pages 93-120 in J. S. Bulak, C. C. Coutant, and J. A. Rice, editors. *Biology and management of inland striped bass and hybrid striped bass*. American Fisheries Society, Symposium 80, Bethesda, Maryland.
64. Sackett*, D.K, W.G. Cope, **J.A. Rice**, and D.D. Aday. 2013. The influence of fish length on tissue mercury dynamics: implications for natural resource management and human health risk. *International Journal of Environmental Research and Public Health* 10: 638-659. DOI:10.3390/ijerph10020638.
63. Sackett*, D.K, D.D. Aday, **J.A. Rice**, and W.G. Cope. 2013. Validation of a predictive model for fish tissue mercury concentrations. *Transactions of the American Fisheries Society* 142:380-387. DOI:10.1080/00028487.2012.747990.
62. Feiner*, Z.S., D.D. Aday, and **J.A. Rice**. 2012. Phenotypic shifts in white perch life history strategy across stages of invasion. *Biological Invasions* 14(11): 2315-2329. DOI 10.1007/s10530-012-0231-z.
61. Morris*, J.A. Jr., K.W. Shertzer, and **J.A. Rice**. 2011. A stage-based matrix population model of invasive lionfish with implications for control. *Aquatic Invasions*. 13:7-12. (*Published online June 2010*).

60. Sackett*, D.K., D.D. Aday, **J.A. Rice**, W.G. Cope, and D. Buckwalter. 2010. Does proximity to coal-fired power plants influence fish tissue mercury? *Ecotoxicology*. 19:1601-1611.
59. Thompson*, J.S., **J.A. Rice**, and D.S. Waters. 2010. Striped bass habitat selection rules in reservoirs without suitable summer habitat offer insight into consequences for growth. *Transactions of the American Fisheries Society*. 139:1450-1464.
58. Godbout*, J.D., D.D. Aday, **J.A. Rice**, M.R. Bangs, and J.M. Quattro. 2009. Morphological models for identifying largemouth, spotted and hybrid largemouth-spotted bass. *North American Journal of Fisheries Management*. 29:1425-1437.
57. Sackett*, D.K., D.D. Aday, **J.A. Rice**, and W.G. Cope. 2009. A statewide assessment of mercury dynamics in North Carolina waterbodies and fish. *Transactions of the American Fisheries Society*. 138:1328-1341.
56. Breitburg, D. L., J.K. Craig, R.S. Fulford, K.A. Rose, W.R. Boynton, D. Brady, B.J. Ciotti, R.J. Diaz, K.D. Friedland, J.D. Hagy III, D.R. Hart, A.H. Hines, E.D. Houde, S.E. Kolesar, S.W. Nixon, **J.A. Rice**, D.H. Secor, and T.E. Targett. 2009. Nutrient Enrichment and Fisheries Exploitation: Interactive Effects on Estuarine Living Resources and Their Management. *Hydrobiologia*. 629:31-47.
55. Cope, W.G., R.B. Bringolf, S. Mosher, **J.A. Rice**, R.L. Noble, and H.C. Edwards. 2008. Controlling nitrogen release from farm ponds with a subsurface outflow device: implications for improved water quality in receiving streams. *Agricultural Water Management*. 95:737-742.
54. Craig, J.K., **J.A. Rice**, L.B. Crowder, and D.A. Nadeau. 2007. Density-dependent growth and survival in an estuary-dependent fish: an experimental approach with juvenile spot *Leiostomus xanthurus*. *Marine Ecology Progress Series*. 343:251-262.
53. Thompson*, J.S., D.S. Waters, **J.A. Rice**, and J.E. Hightower. 2007. Seasonal fishing and natural mortality of striped bass in a southeastern reservoir. *North American Journal of Fisheries Management*. 27:681-694.
52. Pine*, W.E., T.J. Kwak, and **J.A. Rice**. 2007. Modeling management scenarios and the effects of an introduced apex predator on a coastal riverine fish community. *Transactions of the American Fisheries Society*. 136:105-120.
51. Bestgen, K.R., D.W. Beyers, **J.A. Rice**, and G.B. Haines. 2006. Factors affecting recruitment of young Colorado pikeminnow: synthesis of predation experiments, field studies and individual-based modeling. *Transactions of the American Fisheries Society*. 135:1722-1742.
50. Fulford*, R.S., **J.A. Rice**, and F.P. Binkowski. 2006. Examination of sampling bias for larval yellow perch in southern Lake Michigan. *Journal of Great Lakes Research*. 32:434-441.

49. Craig, J.K., B.J. Burke, L.B. Crowder, and **J.A. Rice**. 2006. Prey growth and size-dependent predation in juvenile estuarine fishes: experimental and modeling analyses. *Ecology*. 87(9): 2366-2377.
48. Fulford*, R.S., **J.A. Rice**, T.J. Miller, and F.P. Binkowski. 2006. Elucidating patterns of size-dependent predation on larval yellow perch (*Perca flavescens*) in Lake Michigan: an experimental and modeling approach. *Canadian Journal of Fisheries and Aquatic Sciences*. 63(1): 11-27.
47. Fulford*, R.S., **J.A. Rice**, T.J. Miller, F.P. Binkowski, J.M. Dettmers, and B. Belonger. 2006. Foraging selectivity by larval yellow perch (*Perca flavescens*): implications for understanding recruitment in small and large lakes. *Canadian Journal of Fisheries and Aquatic Sciences*. 63(1): 28-42.
46. Shimps*, E.L., **J.A. Rice**, and J.A. Osborne. 2005. Hypoxia tolerance in two juvenile estuary-dependent fishes. *Journal of Experimental Marine Biology and Ecology*. 325(2):146-162.
45. Pine*, W.E. III, T.J. Kwak, D.S. Waters, and **J.A. Rice**. 2005. Diet Selectivity of Introduced Flathead Catfish in Coastal Rivers. *Transactions of the American Fisheries Society*. 134(4):901-909.
44. McNatt*, R.A., and **J.A. Rice**. 2004. Hypoxia induced growth rate reduction in two juvenile estuary dependent fishes. *Journal of Experimental Marine Biology and Ecology*. 311(1):147-156.
43. Pine*, W.E., K.H. Pollock, J.E. Hightower, T.J. Kwak, and **J.A. Rice**. 2003. A review of tagging methods for estimating fish population size and components of mortality. *Fisheries* 28:10-23.
42. **Rice, J.A.** 2002. Cascading effects of human impacts on fish populations in the Laurentian Great Lakes. pp. 257-272, *In* L.A. Fuiman and R.G. Werner, eds., *Fishery Science: The Unique Contributions of Early Life Stages*. Blackwell Science Ltd., Oxford, UK.
41. Beyers, D.W., and **J.A. Rice**. 2002. Evaluating stress in fish using bioenergetics-based stressor-response models. Pages 289-320 *In* S.M. Adams (ed.). *Biological Indicators of Aquatic Ecosystem Stress*. American Fisheries Society, Bethesda, MD.
40. Burke*, B.J., and **J.A. Rice**. 2002. A linked foraging and bioenergetics model for southern flounder. *Transactions of the American Fisheries Society* 131:120-131.
39. Heyer*, C.J., T.J. Miller, F.P. Binkowski, E.M. Caldaroni, and **J.A. Rice**. 2001. Maternal effects as a recruitment mechanism in Lake Michigan yellow perch (*Perca flavescens*). *Canadian Journal of Fisheries and Aquatic Sciences* 58:1477-1487.

38. Wannamaker*, C.M., and **J.A. Rice**. 2000. Effects of hypoxia on movements and behavior of selected estuarine organisms from the southeastern United States. *Journal of Experimental Marine Biology and Ecology* 249 (2):145-163.
37. Ahrenholz, D.W., D.D. Squires **J.A. Rice**, S.W. Nixon, and G.R. Fitzhugh. 2000. Periodicity of increment formation in otoliths of over-wintering post-larval and pre-juvenile Atlantic menhaden (*Brevoortia tyrannus*). *Fishery Bulletin* 98:421-426.
36. **Rice, J.A.**, J.A. Quinlan*, S.W. Nixon, W.F. Hettler, S.M. Warlen, and P.M. Stegmann. 1999. Spawning and transport dynamics of Atlantic menhaden: inferences from characteristics of immigrating larvae and predictions of a hydrodynamic model. *Fisheries Oceanography* 8 (Suppl. 2): 93-110.
35. Beyers, D.W., **J.A. Rice**, W.H. Clements, and C.J. Henry. 1999. Estimating physiological cost of chemical exposure: integrating energetics and stress to quantify toxic effects in fish. *Canadian Journal of Fisheries and Aquatic Sciences* 56(5):814-822.
34. Beyers, D.W., **J.A. Rice**, and W.H. Clements. 1999. Evaluating biological significance of chemical exposure to fish using a bioenergetics-based stressor-response model. *Canadian Journal of Fisheries and Aquatic Sciences* 56(5):823-829.
33. Neal*, J.W., **J.A. Rice**, and R.L. Noble. 1999. Evaluation of two sizes of hybrid striped bass for introduction into small ponds. *North American Journal of Aquaculture* 61:74-78.
32. Neal*, J.W., R.L. Noble, and **J.A. Rice**. 1999. Fish community response to hybrid striped bass introduction in small warmwater impoundments. *North American Journal of Fisheries Management* 19:1044-1053.
31. **Rice, J.A.**, L.B. Crowder, and E.A. Marschall. 1997. Predation on juvenile fishes: dynamic interactions between size-structured predators and prey. p. 333-356 *In* R.C. Chambers and E.A. Trippel (eds), *Early Life History and Recruitment in Fish Populations*. Chapman and Hall, London.
30. Crowder, L.B., D.D. Squires, and **J.A. Rice**. 1997. Non-additive effects of terrestrial and aquatic predators on juvenile estuarine fish. *Ecology* 78:1796-1804.
29. Fitzhugh, G.R., S.W. Nixon, D.W. Ahrenholz, and **J.A. Rice**. 1997. Temperature effects on otolith microstructure and birthmonth estimation from otolith increment patterns in Atlantic menhaden. *Trans. Am. Fish. Soc.* 126:579-593.
28. Letcher*, B.H., and **J.A. Rice**. 1997. Prey patchiness and larval fish growth and survival: inferences from an individual-based model. *Ecological Modeling* 95:29-43.
27. Letcher*, B.H., **J.A. Rice**, L.B. Crowder, and F.P. Binkowski. 1997. Size- and species-dependent variability in consumption and growth rates of larvae and juveniles of three freshwater fishes. *Can. J. Fish. Aquat. Sci.* 54:405-414.

26. Letcher*, B.H., **J.A. Rice**, and L.B. Crowder. 1996. Size-dependent effects of continuous and intermittent feeding on starvation time and mass loss in starving yellow perch larvae and juveniles. *Transactions of the American Fisheries Society*. 125:14-26.
25. Letcher*, B.H., **J.A. Rice**, L.B. Crowder, and K.A. Rose. 1996. Variability in survival of larval fish: disentangling components with a generalized individual-based model. *Can. J. Fish. Aquat. Sci.* 53:787-801.
24. Ahrenholz, D.W., G.R. Fitzhugh, **J.A. Rice**, S.W. Nixon, and W.C. Pritchard. 1995. Confidence of otolith ageing through the juvenile stage for Atlantic menhaden (*Brevoortia tyrannus*). *Fishery Bulletin* 93:209-216.
23. Fitzhugh*, G.R. and **J.A. Rice**. 1995. Error in back-calculation of lengths of juvenile southern flounder, *Paralichthys lethostigma*, and implications for analysis of size-selection. p. 227-246 in: D.H. Secor, J.M. Dean, and S.E. Campana (eds.). *Recent Developments in Fish Otolith Research*. University of South Carolina Press, Columbia, South Carolina.
22. Schael*, D.M., **J.A. Rice**, and D.J. Degan. 1995. Spatial and temporal distribution of threadfin shad in a Southeastern reservoir. *Transactions of the American Fisheries Society*. 124:804-812.
21. Crowder, L.B., R.A. Wright*, K.A. Rose, T.H. Martin*, and **J.A. Rice**. 1994. Direct and indirect effects of southern flounder predation on a spot population: experimental and model analyses. p. 61-77 In D.J. Stouder, K.L. Fresh, and R.J. Feller (eds.) *Theory and Application in Fish Feeding Ecology*. University of South Carolina Press, Columbia South Carolina.
20. **Rice, J.A.**, L.B. Crowder, and K.A. Rose. 1993. Interactions between size-structured predator and prey populations: experimental test and model comparison. *Trans. Am. Fish. Soc.* 122:481-491.
19. **Rice, J.A.**, 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: inferences from an individual-based size-dependent predation model. *Can. J. Fish. Aquat. Sci.* 50:133-142.
18. Miller*, T.J., L.B. Crowder, and **J.A. Rice**. 1993. Ontogenetic changes in behavioral and histological measures of visual acuity in three species of fish. *Env. Biol. Fish.* 37:1-8.
17. 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. p. 237-255 In D.L. DeAngelis and L.J. Gross (eds.) *Individual-Based Approaches in Ecology*. Routledge, Chapman and Hall, New York. 544 pp.
16. Miller*, T.J., L.B. Crowder, **J.A. Rice**, and F.P. Binkowski. 1992. Body size and the

- ontogeny of the functional response in fishes. *Can. J. Fish. Aquat. Sci.* 49:809-812.
15. **Rice, J.A.** 1990. Bioenergetics modeling approaches to evaluate consequences of stress in fishes. *American Fisheries Society Symposium* 8:80-92.
 14. Jackson*, J.R., J.M. Phillips*, R.L. Noble, and **J.A. Rice**. 1990. Relationship of planktivory by shad and diet shifts by young-of-year largemouth bass in a southern reservoir. *Proc. Annu. Conf. Southeast. Assoc. Fish and Wildl. Agencies.* 44:114-125. (1990 AFS Southern Division Best Paper Award)
 13. Luecke, C., **J.A. Rice**, L.B. Crowder, and S.E. Yeo. 1990. Recruitment mechanisms of bloater in Lake Michigan: an analysis of the predatory gauntlet. *Can. J. Fish. Aquat. Sci.* 47:524-532.
 12. 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. *Can. J. Fish. and Aquat. Sci.* 45:1657-1670. (*Science Citation Classic*)
 11. **Rice, J.A.** 1987. Reliability of age and growth rate estimates derived from otolith analysis. Pages 167-176 *In* Robert C. Summerfelt (ed.), *Age and Growth of Fish*. Iowa State University Press, Ames Iowa.
 10. **Rice, J.A.**, L.B. Crowder, and F.P. Binkowski. 1987. Evaluating potential sources of mortality for larval bloater: starvation vs. predation. *Can. J. Fish. Aquat. Sci.* 44:467-472.
 9. **Rice, J.A.**, L.B. Crowder, and M.E. Holey. 1987. Exploration of mechanisms regulating larval survival in Lake Michigan bloater: a recruitment analysis based on characteristics of individual larvae. *Trans. Am. Fish. Soc.* 116:703-718. (Most Significant Paper Award, 1987)
 8. Crowder, L.B., M.E. McDonald, and **J.A. Rice**. 1987. Understanding recruitment of Lake Michigan fishes: the importance of size-based interactions between fish and zooplankton. *Can. J. Fish. Aquat. Sci.* 44 (Suppl. 2):141-147.
 7. Kitchell, J.A., C.H. Boggs, **J.A. Rice**, J.F. Kitchell, A. Hoffman and J. Martinell. 1986. Anomalies in naticid predatory behavior: a critique and experimental observations. *Malacologia* 27:291-298.
 6. **Rice, J.A.**, L.B. Crowder and F.P. Binkowski. 1985. Evaluating otolith analysis for bloater *Coregonus hoyi*: do otoliths ring true? *Trans. Am. Fish. Soc.* 114:532-539.
 5. **Rice, J.A.**, and P.A. Cochran. 1984. Independent evaluation of a bioenergetics model for largemouth bass. *Ecology* 65:732-739.
 4. Boggs, C.H., **J.A. Rice**, J.A. Kitchell, and J.F. Kitchell. 1984. Predation at a snail's pace: what's time to a gastropod? *Oecologia* 62:13-17.

3. **Rice, J.A.**, J.E. Breck, S.M. Bartell, and J.F. Kitchell. 1983. Evaluating the constraints of temperature, activity and consumption on growth of largemouth bass. *Env. Biol. Fish.* 9:263-275.
2. Cochran, P.A., and **J.A. Rice**. 1982. A comparison of bioenergetics and direct field estimates of cumulative seasonal food consumption by largemouth bass (*Micropterus salmoides*). Pages 88-96 *In* G. Cailliet and C. Simenstad (eds.), *Gutshop '81: fish food habits studies*. Washington Sea Grant, Seattle, Washington, USA.
1. Kitchell, J.A., C.H. Boggs, J.F. Kitchell, and **J.A. Rice**. 1981. Prey selection by naticid gastropods: experimental tests and application to the fossil record. *Paleobiology* 7:533-552.

Books:

Bulak, J.S., C.C. Coutant, and **J.A. Rice**, editors. 2013. *Biology and management of inland striped bass and hybrid striped bass*. American Fisheries Society, Symposium 80, Bethesda, Maryland.

Book Chapters, Reviews and Editorials:

Rice, J.A., J.S. Thompson, J.A. Sykes, and C.T. Waters. 2013. The role of metalimnetic hypoxia in striped bass summer kills: consequences and management implications. Pages 121-145 *in* J. S. Bulak, C. C. Coutant, and J. A. Rice, editors. *Biology and management of inland striped bass and hybrid striped bass*. American Fisheries Society, Symposium 80, Bethesda, Maryland.

Thompson, J.S. and **J.A. Rice**. 2013. The relative influence of temperature and forage availability on growth of age 1-5 striped bass in two southeastern reservoirs. Pages 93-120 *in* J. S. Bulak, C. C. Coutant, and J. A. Rice, editors. *Biology and management of inland striped bass and hybrid striped bass*. American Fisheries Society, Symposium 80, Bethesda, Maryland.

Rice, J.A. 2002. Cascading effects of human impacts on fish populations in the Laurentian Great Lakes. pp. 257-272 *In* L.A. Fuiman and R.G. Werner, eds. *Fishery Science: The Unique Contributions of Early Life Stages*. Blackwell Science, Oxford, England.

Rice, J.A. 1999. Coping with Uncertainty. *Fisheries* 24(7): 44.

Rice, J.A. 1998. Evolution of the Process-Oriented Approach to Recruitment Dynamics in Fishes. *Stages* 19(2):10-12.

Rice, J.A. 1992. Physiological Ecology and Community Structure (symposium review). *Bulletin of the Ecological Society of America* 73(4):269-270.

Technical Reports:

Lee Pow, C., C. A. Grieshaber, D. D. Aday, S. W. Kullman, W. G. Cope, T. J. Kwak, J. M. Law,

- and J. A. Rice. A comprehensive examination of endocrine disrupting compounds and intersex fish in North Carolina water bodies. Federal Aid in Sport Fish Restoration Project F-99-R Final Report, Submitted to Division of Inland Fisheries, North Carolina Wildlife Resources Commission, Raleigh.
- Lincoln, K.J., D.D. Aday, and **J.A. Rice**. 2014. Potential Mechanisms Underlying a Perceived White Bass *Morone chrysops* Decline in a Southeastern Reservoir. Final Report. Federal Aid in Fish Restoration Project F-101. North Carolina State University, Raleigh, NC, USA. 61 pp.
- Brown, D.T., J.A. **Rice**, and D.D. Aday. 2014. Responses of Largemouth Bass to Seasonal Hypoxia and Tournament Displacement in a Coastal System. Final Report. Federal Aid in Fish Restoration Project F-100-R. North Carolina State University, Raleigh, NC, USA. 98 pp.
- Bethke, B.J., **J.A. Rice**, and D.D. Aday. 2012. Unpredictable outcomes of an invader in small reservoirs. Final Report. Federal Aid in Fish Restoration Project F-68-12. North Carolina State University, Raleigh, NC, USA. 50 pp.
- Brey, M.K., Z.S. Feiner, J.D. Godbout, D.D. Aday, and **J.A. Rice**. 2012. Trophic Interactions and Reservoir Food Web Dynamics. Final Report. Federal Aid in Sport Fish Restoration Project F-68-08 North Carolina State University, Raleigh, NC, USA. 303 pp.
- Sackett, D.K., **J.A. Rice**, and D.D. Aday. 2011. The influence of fish length on tissue mercury dynamics: implications for natural resource management and human health risk. Final Report. Federal Aid in Fish Restoration Project F-68-13. North Carolina State University, Raleigh, NC, USA. 47 pp.
- Craig, J.K. and **J.A. Rice**. 2008. Estuarine residency, movements, and exploitation of southern flounder (*Paralichthys lethostigma*) in North Carolina. Final Report. North Carolina Sea Grant, Fishery Research Grant 05-FEG-15. North Carolina State University, Raleigh, NC, USA. 39 pp.
- Thompson, J.S., **J.A. Rice**, D.S. Waters, J. C. Taylor, J.E. Hightower, L.A. Davias, and P.S. Rand. 2005. Energetics of reservoir striped bass populations: Phase 1 Final Report. Federal Aid in Fish Restoration Project F-68-04. North Carolina State University, Raleigh, NC, USA. 329 pp.
- Kwak, T.J., W.E. Pine, D.S. Waters, **J.A. Rice**, J.E. Hightower, and R.L. Noble. Population Dynamics and Ecology of Introduced Flathead Catfish: Phase 1 Final Report. Federal Aid in Sport Fish Restoration Project F-68-01. North Carolina State University, Raleigh, NC, USA. 217 pp.
- Bestgen, K.R., D.W. Beyers, G.B. Haines, and **J.A. Rice**. 1997. Recruitment models for Colorado squawfish: tools for evaluating relative importance of natural and managed processes. Colorado Squawfish Recovery Program Project Final Report. Colorado State

University Larval Fish Laboratory, Fort Collins, CO, USA. 54 pp.

Jackson, J.R., **J.A. Rice**, R.L. Noble, and S.C. Mozley. 1991. Mechanisms of reservoir fish community dynamics. Federal Aid in Fish Restoration Project F-30-1 Final Report. North Carolina Agricultural Research Service, North Carolina State University, Raleigh, NC, USA. 104 pp.

Extension Publications:

Rice, J.A. and M. Fisk II, eds. Pond management guide, 3rd Edition. 2018. NC State Extension and NC Wildlife Resources Commission. 39 pp.

Rice, J.A., J.W. Neal, and R.L. Noble. 2000. Hybrid striped bass performance and management impacts in small warmwater impoundments. pp. 203-212 *in* R.M. Timm and S.L. Dann (eds.) Leading the Way Toward Sustainability: Extension in the New Millennium. Proceedings of the 9th National Extension Wildlife, Fisheries, and Aquaculture Conference in Portland, ME, 1999. National Resources and Environment Unit, CSREES/USDA, Washington, D.C. 312 p.

Rice, J.A. 2000. Quantitative Evaluation of the Effectiveness of a Pond Management Video Tape. pp. 273-278 *in* R.M. Timm and S.L. Dann (eds.) Leading the Way Toward Sustainability: Extension in the New Millennium. Proceedings of the 9th National Extension Wildlife, Fisheries, and Aquaculture Conference in Portland, ME, 1999. National Resources and Environment Unit, CSREES/USDA, Washington, D.C. 312 p.

Rice, J.A., R.L. Noble, and R.L. Curry, eds. Pond management guide, 2nd Edition. 1999. NC Cooperative Extension Service and NC Wildlife Resources Commission. 29 pp.

Rice, J.A. 1996. Zebra mussels and aquaculture: what you should know. North Carolina Sea Grant Program. 4 p.

Kay, S.H, and **J.A. Rice**. 1992. Using grass carp for aquatic weed management. N.C. Cooperative Extension Service. 4 p.

Rice, J.A., R.L. Noble, and F.T. McBride, eds. Pond management guide. 1990. NC Wildlife Resources Commission and NC Agricultural Extension Service. 27 pp.

North Carolina Natural Resources: An Inventory and Conservation Issues. 1990. Written and edited by the NCAES Natural Resources Work Group (**J.A. Rice**, member).

Rice, J.A., and J.M. Hinshaw. 1989. North Carolina Aquaculture Directory. NC Agricultural Extension Service.

Other Extension Communication Products:

Rice, J.A. 2002. Pond Management: Good Fishing in the Balance. 4-H Wildlife Project web-based publication (www.nc4h.org/enrichment/wildlife/13-15-pondman.pdf).

Rice, J.A., B.J. Burke, and W.S. Payne. 1999. Extension Wildlife, Fisheries and Aquaculture Web Site, NC Cooperative Extension Service. <http://www.ces.ncsu.edu/nreos/wild/>.

Rice, J.A. 1994. Managing your pond for better fishing (23-min. video tape). N.C. Cooperative Extension Service.

Cope, W.G., **J.A. Rice,** S.L. Bryant and F.A. Harris. 2003. Aquatic Nuisance Species Poster. N.C. Cooperative Extension Service.

Popular Articles:

Rice, J.A. 1994. A Recommended Dose of LWD. Friend of Wildlife, North Carolina Wildlife Federation. Fall 1994:16.

Rice, J.A. 1994. The Holiday Dinner Dilemma. Friend of Wildlife, North Carolina Wildlife Federation. January/February 1994:13.

Rice, J.A. 1993. Are You a Member of a (Gasp!) Special Interest Group? Friend of Wildlife, North Carolina Wildlife Federation. September/October 1993:14.

Rice, J.A. 1993. The Web of Life: How Strong is our Safety Net? Friend of Wildlife, North Carolina Wildlife Federation. January 1993:15.

Rice, J.A. 1992. Fish Stocking and Species Introductions: Blessing or Curse? Friend of Wildlife, North Carolina Wildlife Federation. 40(3):14-15.

Rice, J.A. 1991. From Russia With Lenok. Friend of Wildlife, North Carolina Wildlife Federation. 39(3):8-10.

Rice, J.A. 1991. Up Close and Personal With the Private Landowner. Friend of Wildlife, North Carolina Wildlife Federation. 38(6):20.

Rice, J.A. 1991. Are You Nervous? Friend of Wildlife, North Carolina Wildlife Federation. 38(2):13.

Rice, J.A. 1990. Living Within Our Means. Friend of Wildlife, North Carolina Wildlife Federation. 37(4):14-15.

Rice, J.A. 1990. The Rhyme and Reason of Regulations. Friend of Wildlife, North Carolina Wildlife Federation. 37(1):14-15.

Rice, J.A. 1989. Life in the Catacombs. The Flyline, North Carolina Council of Trout Unlimited. 2:14.

Rice, J.A. 1988. Situational litterbugging and the case for credibility. Friend of Wildlife, North Carolina Wildlife Federation. 35(6):11.

Rice, J.A. 1988. Planning for tomorrow's fisheries today. *Friend of Wildlife, North Carolina Wildlife Federation*. 35(2):6.

Rice, J.A. 1988. A Rare Opportunity. *The Flyline, North Carolina Council of Trout Unlimited*. 1:16.

Rice, J.A. 1988. Special places. *The Flyline, North Carolina Council of Trout Unlimited*. 1:8.

Rice, J.A. 1987. What's in a fish? *Friend of Wildlife, North Carolina Wildlife Federation*. 34(5):6.

Rice, J.A. 1987. Water, extraordinary, ordinary water. *Friend of Wildlife, North Carolina Wildlife Federation*. 33(6):11.

Rice, J.A. 1986. Plant a seed for the future - take a kid fishing! *Friend of Wildlife, North Carolina Wildlife Federation*. 33(4):4.