

## **CURRICULUM VITAE – SHORT**

**Kenneth A. Rose**

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### **Professional and Academic Credentials**

#### *Education*

State University of New York at Albany. Biology and Mathematics BS 1975

University of Washington. Fisheries MS 1981

University of Washington. Fisheries PhD 1985

#### *Professional Experience*

2001 - present Professor, Louisiana State University

1998 - 2001 Associate Professor, Louisiana State University

1987 - 1998 Scientist, Oak Ridge National Laboratory

1983 - 1987 Consultant, Martin Marietta Environmental Systems

Adjunct Faculty: Universities of South Alabama, Tennessee, and Michigan

### **Selected Publications (from a total exceeding 90)**

Butler, M.J., J.H. Hunt, W.F. Herrnkind, K.A. Rose, and T. Dolan. 2005. Recruitment in degraded marine habitats: a spatially-explicit, individual-based model for spiny lobster.

*Ecological Applications* 15: 902-918.

Runge, J.A., P.J.S. Franks, W.C. Gentleman, B.A. Megrey, K.A. Rose, F.E. Werner, and B. Zakardjian. 2004. Diagnosis and prediction of variability in secondary production and fish recruitment processes: developments in physical-biological modeling. Pages 413-473, IN: Global Coastal Ocean: Multi-Scale Interdisciplinary Processes (A.R. Robinson and K.H. Brink, editors), Volume 13, The Sea, Harvard University Press.

Rose, K.A. 2005. Lack of relationship between fish population responses and their life history traits: inaccurate models, incorrect analyses, or importance of site-specific factors. *Canadian Journal of Fisheries and Aquatic Sciences* 62: 886-902.

Haas, H.L., K.A. Rose, B. Fry, T.J. Minello, and L.P. Rozas. 2004. Brown shrimp on the edge: linking habitat to survival using an individual-based simulation model. *Ecological Applications* 14: 1232-1247.

Rose, K.A., and J.H. Cowan. 2003. Data, models, and decisions in US marine fisheries management: lessons for ecologists. *Reviews for Ecology, Evolution and Systematics* 34: 127-151.

Rose, K.A., C.A. Murphy, S.L. Diamond, L.A. Fuiman, and P. Thomas. 2003. Using nested models and laboratory data for predicting population effects of contaminants on fish: a step towards a bottom-up approach for establishing causality in field studies. *Human and Ecological Risk Assessment* 9:231-257.

Rose, K.A., J.H. Cowan, K.O. Winemiller, R.A. Myers, and R. Hilborn. 2001. Compensatory density-dependence in fish populations: importance, controversy, understanding, and prognosis. *Fish and Fisheries* 2: 2930327.

Clark, J.S., S. Carpenter, M. Barber, S. Collins, A. Dobson, J. Foley, D. Lodge, M. Pascual, R. Pielke, W. Pizer, C. Pringle, W. Reid, K. Rose, O. Sala, W. Schlesinger, D. Wall, and D. Wear. 2001. Ecological forecasts: an emerging imperative. *Science* 293: 657-660.

Kimmerer, W., J.H. Cowan, L.W. Miller, and K.A. Rose. 2001. Analysis of an estuarine striped bass population: effects of environmental conditions during early life. *Estuaries* 24: 557-575.

Haas, H., C. Lamon, K.A. Rose, and R. Shaw. 2001. Environmental and biological factors associated with the stage-specific abundance of brown shrimp (*Penaeus aztecus*) in Louisiana: applying a new combination of statistical techniques to long-term monitoring data. *Canadian Journal of Fisheries and Aquatic Sciences* 58: 2258-2270.

Rose, K.A. 2000. Why are quantitative relationships between environmental quality and fish populations so elusive? *Ecological Applications* 10: 367-385.

Cowan, J.H., K.A. Rose, and D. DeVries. 2000. Is density-dependent growth in young-of-the-year fishes a question of critical weight? *Reviews in Fish Biology and Fisheries* 10: 61-89.

Tyler, J.A., and K.A. Rose. 1997. Effects of individual habitat selection in a heterogeneous environment on fish cohort survivorship: a modelling analysis. *Journal of Animal Ecology* 66:122-136

Breitburg, D., K. Rose, and J. Cowan. 1999. Linking water quality to larval survival: predation mortality of fish larvae in an oxygen-stratified water column. *Marine Ecology Progress Series* 178:39-54.

Rose, K.A., J.H. Cowan, M.E. Clark, E.D. Houde, and S-B Wang. 1999. Individual-based modeling of bay anchovy population dynamics in the mesohaline region of Chesapeake Bay. *Marine Ecology Progress Series* 185:113-132

Tyler, J.A., and K.A. Rose. 1994. Individual variability and spatial heterogeneity in fish population models. *Reviews in Fish Biology and Fisheries* 4:91-123.

Rose, K.A., J.H. Cowan, E.D. Houde, and C.C. Coutant. 1993. Individual-based modeling of environmental quality effects on early life stages of fish: a case study using striped bass. *American Fisheries Society Symposium* Volume 14:125-145.

### **Selected Invited Presentations**

*One fish two fish, red fish, blue fish: It sounds so simple so why are fish population dynamics so complex?* (Public presentation) and *Fish population dynamics and fisheries management as complex systems* (seminar). University of Alaska's Complex Systems Lecture Series, Anchorage, Alaska, April 2005.

Predicting sublethal effects of contaminants on fish populations: "from hundredths of seconds to hundreds of years". 131st Annual Meeting of the American Fisheries Society, Baltimore, August 2002.

Special Plenary Talk: Multidisciplinary and collaborative research: solution to a crisis or business as usual? 133rd Annual Meeting of the American Fisheries Society, Quebec City, Canada, August 2003.

Population modeling and its application to Delta smelt in the San Francisco estuary. CALFED Scientific Workshop on Delta Smelt, Santa Cruz, CA, August 2003.

Individual and matrix projection modeling of fish population responses to multiple stressors. Second Meeting of the Technical Review Panel of the Environmental Water Account, California-Federal (CALFED) Bay-Delta Restoration Program, Sacramento, CA, October 2002.

Global climate change effects on freshwater and marine fish: predicting individual, life stage, population, food web, and regional responses. Symposium on Fisheries in a Changing Climate, Annual Meeting of the American Fisheries Society, Phoenix, AZ, August 2001.

Major technical roadblocks to the quantitative assessment of adverse environmental impacts: reinventing the wheel or cutting edge science. Symposium on Defining and Assessing Adverse Environmental Impact, Annual Meeting of the American Fisheries Society, Phoenix, AZ, August 2001.

Using linked simulation models and laboratory studies to determine contaminant effects on fish populations. Annual Meeting of Society for Environmental Toxicology and Chemistry, Baltimore, MD, November 2001.

Global climate change effects on freshwater and marine fish: predicting individual, life stage, population, food web, and regional responses. Symposium on Fisheries in a Changing Climate, Annual Meeting of the American Fisheries Society, Phoenix, AZ, August 2001.

Major technical roadblocks to the quantitative assessment of adverse environmental impacts: reinventing the wheel or cutting edge science. Symposium on Defining and Assessing Adverse Environmental Impact, Annual Meeting of the American Fisheries Society, Phoenix, AZ, August 2001.

A review of the use of individual-based models as upper trophic level modeling tools. Workshop on Strategies for Coupling Higher and Lower Trophic Level Marine Ecosystem Models. Ninth

Annual Meeting of the North Pacific Marine Science Organization (PICES), Hokkaido, Japan, October 2000.

Forecasting fish population dynamics and fisheries, NSF-funded Workshop on Ecological Forecasting, National Center for Ecological Synthesis and Analysis, Santa Barbara, CA, October 2000.

### **Selected Professional Activities**

Fellow, American Associate for the Advancement of Science.

Associate Editor, Transactions of the American Fisheries Society (1995-97), Ecological Applications (1997-2000), Environmetrics (ongoing).

Member, Finfish (formerly Reef Fish) Stock Assessment Panel (1998-ongoing), and the Ecosystem Scientific and Statistical Committee, Gulf of Mexico Fisheries Management Council.

Invited Expert, panel member at the EPA Public Meeting of Technical Experts on Section 316(b) of the Clean Water Act, Washington, DC, May 2001.

Invited participant to Electric Power Research Institute's Science Advisory Panel planning meeting on Year 2000 Projects on 316(b) Issues, Washington, DC, December 1999.

Member, Independent Science Board of the CALFED Bay Authority and Review Panel of the CALFED Environmental Water Account, 2001-ongoing.

Member, Science Review Team of the Modeling Workshop, part of the Greater Everglades Ecosystem Restoration Program, Ft. Lauderdale, FL, May 2002.

Member of the Science Advisory Committee of the Alabama Center for Estuarine Studies (an Environmental Protection Agency Center of Excellence), which evaluates annual submissions of research proposals for funding and sets long-term goals for the Center, 1998-2002.

Reviewer of manuscripts for over 25 Journals; Reviewer of proposals for National Science Foundation, and over 15 other state and federal agencies.

Member of: Association for the Advancement of Science (AAAS), Ecological Society of America, American Fisheries Society, International Society for Ecological Modeling, International Environmetrics Society

Co-author on over 120 abstracts and presentations made by others.