

BIOGRAPHICAL SKETCH OF LOUIS J. GROSS

Departments of Ecology and Evolutionary Biology and Mathematics

The Institute for Environmental Modeling

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Date and Place of Birth: January 6, 1952; Philadelphia, Pennsylvania

Professional Preparation

Drexel University Mathematics with honors BS 1974

Cornell University Applied Mathematics Ph.D. 1979

Professional Appointments:

1997- present Professor, Departments of Ecology and Evolutionary Biology and Mathematics, University of Tennessee, Knoxville, TN

1998 - present Director, The Institute for Environmental Modeling, University of Tennessee

1992- 1997 Professor, Department of Mathematics and Graduate Program in Ecology, University of Tennessee, Knoxville, Tennessee

1985-1992 Associate Professor, Department of Mathematics and Graduate Program in Ecology, University of Tennessee, Knoxville, Tennessee

1987 Distinguished Visitor (Summer), Mathematics and Botany Departments, University of California, Davis, California

Publications Related to Proposal:

Mellott, L. E., M. W. Berry, E. J. Comiskey, and L. J. Gross. 1999. The design and implementation of an individual-based predator-prey model for a distributed computing environment. *Simulation Theory and Practice* **7**:47-70.

Gross, L. J. and D. L. DeAngelis. 2002. Multimodeling: new approaches for linking ecological models. Chapter 40, pp. 467-474, in *Predicting Species Occurrences: Issues of Accuracy and Scale*, (Scott, J. M., P. J. Heglund, M. Morrison, M. Raphael, J. Haufler, B. Wall, editors). Island Press, Covello, CA.

Gustafson, E., J. Nestler, L. Gross, K. Reynolds, D. Yaussy, T. Maxwell, and V. Dale. 2003. Evolving Approaches and Technologies to Enhance the Role of Ecological Modeling in Decision-Making. P. 135-164 in: *Ecological Modeling for Resource Management*, V. Dale (ed.). Springer-Verlag, NY.

DeAngelis, D. L., L. J. Gross, E. J. Comiskey, W. M. Mooij, M. P. Nott and S. Bellmund. 2003. The Use of Models for a Multiscaled Ecological Monitoring System. Chapter 6 (P. 167-188) in: D. Busch and J. Trexler, eds. *Ecological Monitoring of Ecoregional Initiatives: Interdisciplinary Approaches for Determining Status and Trends of Ecosystems*. Island Press, Washington, DC.

Immanuel, A., M. W. Berry, M. Palmer, and L. J. Gross. 2004. A parallel implementation of ALFISH: simulating hydrological compartmentalization effects on fish dynamics in the Florida Everglades. *Simulation Modelling Practice and Theory* (to appear).

Five Additional Publications:

Curnutt, J. L., E.J. Comiskey, M. P. Nott and L. J. Gross. 2000. Landscape-based spatially explicit species index models for Everglades restoration. *Ecological Applications* **10**:1849-1860.

Gaff, H., D. L. DeAngelis, L. J. Gross, R. Salinas and M. Shorosh. 2000. A dynamic landscape model for fish in the Everglades and its application to restoration. *Ecological Modelling* **127**:33-52

Gross, L. J. 2000. Education for a biocomplex future. *Science* **288**:807

Comiskey, E. J., O. L. Bass, Jr., L. J. Gross, R. T. McBride, and R. Salinas. 2002. Panthers and forests in South Florida: an ecological perspective. *Conservation Ecology* **6**(1): 18. [online] URL: <http://www.consecol.org/vol6/iss1/art18>

Brewer, C. A. and L. J. Gross. 2003. Training ecologists to think with uncertainty in mind. *Ecology* **84**:1412-1414.

Synergistic Activities:

Society for Mathematical Biology. President (2003-2005). Scientific Committee member for Annual Meetings (1999, 2000), Annual Meeting Chair (2002). Education Committee member (1999-2002). President-Elect (2002).

Co-director. Courses and Workshops on Mathematical Ecology (seven total from 1986-2000 with total budget over \$800,000 and more than 1000 participants). International Centre for Theoretical Physics, Trieste, Italy.

Organizer and Instructor for numerous short courses on life science education including NSF Chatauqua Course on Quantitative Life Science Education: Preparing Fearless Biologists. Memphis, Tennessee, June 1999. NIH Short Courses on the Mathematics of Biological Complexity. Knoxville, Tennessee, June, October and December 2000; July 2002, March, 2003.

Ecological Society of America, Theoretical Ecology Section. Vice Chair, 2000-2001; Chair, 2001-2002.

National Research Council. Chair, Committee on Integrating Education with Biocomplexity Research. 2001-2003. Member, Mathematics and Computer Science Panel for Bio2010: Transforming Undergraduate Education for Future Research Biologists, 2001-2002. Member, Committee on the Selection and Use of Models in the Regulatory Decision Making Process, 2004-2005

Collaborators in past 48 months: O. Bass (USGS), S. Bellmund (USGS), A. Berkowitz (IES), M. Berry (UTK), C. Brewer (U MT), H. Buggman (Swiss Fed Inst. Tech), J. Chick (USGS), E. Carr (UTK), E. Comiskey (UTK), V. Dale (ORNL), D. DeAngelis (USGS), S. Duke-Sylvester (UTK), D. Fleming (USGS), H. Ewing (IES), E. Gustafson (USDA), T. Hallam (UTK), K. Hogan (IES), A. Immanuel (ORNL), F. Keesing (Bard), W. Loftus (USGS), T. Maxwell (U VT), R. T. McBride (USFWS), W. Mooij (Neth. Inst. Ecology), J. Nestler (US Army), M. Nott (Inst. Bird Pop.), J. Oris (Miami U.), M. Palmer (UTK), M. A. Palmer (U MD), R. W. Pearcy (UC Davis), K. Reynolds (USDA), J. E. Trexler (FL Int. U), R. E. Ulanowicz (U MD), W. F. Wolff (KFA), D. Wang (UTK), J. Wright (Cornell), D. Yaussy (USDA).

Graduate Advisors: Simon A. Levin (Princeton), Brian F. Chabot (Cornell)

Ph.D. Students and Post-doctoral Associates Directed: Brian Beckage (U VT), Mark Bevelhimer (ORNL), John Curnutt (USGS), Holly Gaff (Dynatec, Inc.), Milena Holmgren (Wageningen), Hem Ram Joshi (Xavier U.), Hang-Kwang Luh (Oregon St. U.), Seema Nanda (UTK), M. Philip Nott (Inst. Bird Pop.), Larry Pounds (ORNL), Rene' Salinas (UTK), Dali Wang (UTK), Paul Wetzel (Mt. Holyoke) Yegang Wu (S FL. Water Manage. District).

Total graduate students directed: 14. Total Post-doctoral associates: 12.