

Dr. Jennifer S. Rehage
Assistant Professor
Earth and Environment Department
Florida International University
University Park, ECS 337
11200 SW 8th Street
Miami, FL 33199

rehagej@fiu.edu
Phone: (305) 348-3804
Fax: (305) 348-6137

Professional education and appointments

Academic positions

Assistant Professor, Earth & Environment, FIU, Miami, FL	Starting Fall 2009
Assistant Professor, Oceanographic Center, Nova Southeastern University, Dania, FL. (www.nova.edu/ocean)	2006-2008
Postdoctoral Fellow, U.S. Geological Survey, Homestead, FL (Advisor: W.F. Loftus)	2004-2006
Postdoctoral Fellow, Biological Sciences, FIU, Miami, FL (Advisor: Joel C. Trexler)	2003-2004
Research Assistant, Environmental Science and Policy, University of California, Davis, CA.	2001-2003
National Science Foundation Fellow, Biological Sciences, University of Kentucky, Lexington, KY	1999-2001

Academic Training

Ph.D.	Ecology, Evolution and Behavior Section, Biological Sciences, University of Kentucky Lexington, KY, July 2003. Dissertation: Traits underlying invasiveness: A comparison of widespread and endemic species in the genus <i>Gambusia</i> (Poeciliidae). Advisor: Andrew Sih, University of California, Davis, CA
B.S.	Environmental Studies, Florida International University Miami, FL, December 1995. Minors in Biology and Chemistry.

Ongoing Research Projects

Interactions and dynamics of invasive fishes across Everglades habitats. We aim to understand how anthropogenic activity may alter the outcome of species interactions. Biological invasions provide an excellent model system for the study of species interactions and novel selection pressures. Invasions bring into contact species that have no common evolutionary history, and thus lack adaptive responses to an invader. We are interested in examining how both the invader and members of the invaded community respond to and are affected by these novel interactions (i.e., novel prey, predators, and competitors) in both ecological and evolutionary timescales. We are also particularly interested in examining the role of behavior as an underlying mechanism mediating species interactions in the context of anthropogenic disturbance. A. Porter, K. Dunlop, and D. Lopez have or currently working on this area.

Response of ecotonal fish communities to hydrological disturbance. We are examining the response of ecotonal fish communities to hydrologic disturbance related to water management practices and restoration efforts in the southern Everglades. Current research focuses on understanding the spatiotemporal dynamics of the fish communities of ecotonal and estuarine habitats in response to key ecosystem drivers (freshwater inflow and salinity). In the near future, we aim to expand our research in this region of the Everglades to examine how spatial and temporal variation in hydrology affects species interactions. In particular, we are interested in examining the context dependency of predator-prey interactions. Our central question is how does hydrologic disturbance (both natural and anthropogenic) modify predator-prey interactions among fishes inhabiting mangrove and marsh habitats along the ecotone, and what are the implications for food web structure and nutrient fluxes. This research is affiliated with the Florida Coastal Everglades Long-term Ecological Research program (<http://fce.lternet.edu/>) and funded by the Comprehensive Everglades Restoration Plan (www.evergladesplan.org). L.M. McCarthy, B. Gallagher, J.P. Perea, and R. Boucek are working in this area.

Publications

Rehage, J.S., K.L. Dunlop, and W.F. Loftus. In review. Antipredator responses by native mosquitofish to non-native cichlids: an examination of the role of prey naiveté.

Rehage, J.S. and W.F. Loftus. 2007. Seasonal fish community variation in mangrove creeks in the southwestern Everglades: an examination of their role as dry-down refuges. *Bulletin of Marine Science* 80:625-645.

Rehage, J.S. and J.C. Trexler. 2006. Assessing the net effect of anthropogenic disturbance on aquatic communities in wetlands: Community structure relative to distance from canals. *Hydrobiologia* 569:359-373.

Rehage, J.S., B.K. Barnett, and A. Sih. 2005. Foraging behavior and invasiveness: Do invasive *Gambusia* exhibit higher feeding rates and broader diets than their non-invasive relatives? *Ecology of Freshwater Fish* 14: 352-360.

Rehage, J.S., B.K. Barnett, and A. Sih. 2005. Behavioral responses to a novel predator and competitor of invasive mosquitofish and their non-invasive relatives (*Gambusia* sp.). *Behavioral Ecology and Sociobiology* 57: 256-266.

Rehage, J.S. and A. Sih. 2004. Dispersal behavior, boldness and the link to invasiveness: A comparison of four *Gambusia* species. *Biological Invasions* 6: 379-391.

Rehage, J.S., S.G. Lynn, J.I. Hammond, B.D. Palmer, and A. Sih. 2002. Effects of larval exposure to Triphenyltin on the survival, growth, and behavior of larval and juvenile *Ambystoma barbouri*. *Environmental Toxicology and Chemistry* 21: 807-815.

Teaching

EVR3011 Environmental Resources and Pollution

Fall 2008

EVR4026 Biotic Resources

Spring 2009

Marine Protected Areas (course participant and co-instructor along with Ligia Colladio, FIU, Biology, <http://www.marinemacroalgae.com>)