

## **Multiple Lines of Defense Assessment Team**

John Lopez, Ph.D. (Chair)	Coastal Scientist
Carlton Dufrechou, AICP	Planner Engineer
Mark Hester, Ph.D.	Biologist (wetland plants)
Paul Keddy, Ph.D.	Wetland plant ecologist
Paul Kemp, Ph.D.	Oceanographer
Barry Kohl, Ph.D.	Geologist
Subhash Kulkarni PE	Structural Engineer
Alex McCorquodale, Ph.D. PE	Engineer (hydrologic modeler)
Martin O'Connell, Ph.D.	Biologist (fish)
Bryan Rogers, BS	GIS & Documentation support
Natalie Snider, MS	Wetland Ecologist
Joe Suhayda, Ph.D.	Coastal Oceanographer (hydrologic modeler)

## **VITA - John Anthony Lopez, Ph.D.**

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### **Personal**

John and his wife currently reside in Livingston Parish after losing their home in Slidell to Hurricane Katrina. John was born in New Orleans. He has lived for 20 years in Orleans Parish, 12 years in Jefferson Parish and 13 years in St. Tammany Parish.

### **Education**

**Doctorate Engineering and Applied Sciences 2003** University of New Orleans

4.0 GPA Coastal Science and Engineering, Advisor: Dr. Shea Penland  
Familiar with theodolite surveying, vibracoring, YSI, salinometers, plant identification, core description

Dissertation Title – Chronology and Analysis of Environmental Impacts within the Pontchartrain Basin of the Mississippi Delta Plain: 1718 - 2002

**Fellow 2000** Loyola University Institute of Environmental Communications

**M.S.** Geology, University of Southern California 1981 3.4 GPA

**B.S.** Geology, Louisiana State University 1976 3.0 GPA

Non-degree Studies: Business Law and Political Science (Tulane & UNO)

### **Awards**

- 2005 Orville T. Magoon Service Award from NOAA
- 2005 Team Achievement Award Louisiana - Coastal Area Study from State of Louisiana and the US Army Corps of Engineers
- 2004 Pirogue Award from the Pontchartrain Research Committee
- 2004 Coastal America Partnership Award from Coastal America
- 2003 Award of Appreciation from STRONGER
- 2002 Coastal Stewardship Award from the Coalition to Restore Coastal Louisiana
- 2001 Certificate of Appreciation from the Jefferson Parish Marine Fisheries Advisory Board
- 2001 Certificate of Merit from the Division of Environmental Sciences of the AAPG
- 2000 Certificate of Appreciation from the Division of Environmental Sciences of the AAPG
- 1998 Special Appreciation Award from the Lake Pontchartrain Basin Foundation
- 1996 Recognition and Reward from Amoco Technology Research Center
- 1995 New Orleans Geological Society President's Award
- 1991 Recognition and Reward from Amoco Production Company
- 1990 Certificate of Appreciation from the Lake Pontchartrain Basin Foundation
- 1977 Graduate Student Teacher Award University of Southern California
- 1974 Getty Academic Scholarship - Louisiana State University

### **Significant Professional Accomplishments**

- 2006** *Invited Speaker at the 2<sup>nd</sup> Presidents Forum Meeting Coastal Challenges - Safer Growth in Coastal Louisiana*
- 2006** *Workshop held to consider a white paper drafted by John titled "The Multiple Lines of Defense Strategy to Sustain Coastal Louisiana"*
- 2005 to present** *member of the Navigation Task Committee for COPRI Waterways Committee of the American Society of Civil Engineers*
- 2005** *Established Delta Science LLC as a professional consulting service (President)*
- 2005** *Invited speaker at the National Mensa Society meeting*
- 2003 to 2004** *Developed and co-wrote the Barrier Islands Restoration project for the Near- Term LCA Ecosystem Restoration Study*
- 2003 to 2006** *Chair of the draft committee for the Lake Pontchartrain Basin Foundation to revise the Comprehensive Habitat Management Plan for the Pontchartrain Basin*
- 2002 – 2004** *Project Manager for construction of Artificial reefs in Lake Pontchartrain*
- 2002** *Documented Louisiana barrier island breaching patterns and developed barrier island restoration design criteria*
- 1999 – 2003** *President of the North Shore Beach (Homeowners) Association*
- 1999 – 2003** *Director with STRONGER (State Review of oil and Natural Gas Regulations)*
- 2001 – 2004** *Co-chaired the Lake Pontchartrain Artificial Reef Working Group, which constructed five artificial reefs in Lake Pontchartrain.*
- 2000** *Chaired the Division of Environmental Geosciences Convention Committee for the AAPG convention*
- 1998** - *Vice-Chair for the Division of Environmental Geoscientists of the American Association of Petroleum Geologists*
- 1998** - *Elected Chair of the Board of Trustees for the Save Our Lake Endowment.*
- 1998** *Published a paper on the role of geoscientists as natural system managers.*
- 1996 to 2005** *Lake Pontchartrain Basin Foundation Board of Directors.*
- 1995** *Published an assessment of oil and gas drilling in Lake Pontchartrain.*
- 1994 to present** - *Served on the Technical Advisory Committee of LPBF.*
- 1993 and 1994** - *Chaired the Saltwater Intrusion and Wetland Loss Committee for the Comprehensive Management Plan of the LPBF.*
- 1990 to present** *Initiated and chaired the Pontchartrain Research Committee (PRC) composed of Wetland Researchers and Environmental Managers. The PRC committee has held seven "Basics of the Basin" symposiums focusing on environmental and management issues of the Pontchartrain Basin.*
- 1989** *John's investigation of faulting in Lake Pontchartrain led to the discovery of active geologic faults and re-interpretation of the Baton-Rouge Denham Springs fault system.*

### **Work Experience**

- 2005 to Present** *Director- Coastal Sustainability Program for the Lake Pontchartrain Basin Foundation*
- 2005 to present** *President of Delta Science, LLC*
- 2005 to present** *Adjunct Professor at the University of New Orleans*

**2001 to 2005** U.S. Army Corps of Engineers

Coastal Restoration Branch – Project Management for the Coastal Wetlands Planning, Protection and Restoration Act Program and the Louisiana Coastal Area Program

**1999 – 2000** University of New Orleans

\*\*\* Instructor for 4000 level courses in Geology and Geophysics

\*\*\* Instructor for LaSIP program giving technical presentations on faulting

**1978 – 1999** AMOCO (New Orleans)

\*\*\* 20 years oil and gas exploration and development in the Gulf Coast

\*\*\* Specialized in fault interpretation and south Louisiana tectonics

\*\*\* Instructor for numerous Amoco technology proprietary seminars

\*\*\* 6 years personnel recruiting experience

\*\*\* Principle in development of cutting edge seismic technology

\*\*\* Taught professional short course at industry conventions

\*\*\* Extensive risk and business analysis experience

\*\*\* Responsible for Amoco's participation in "Adopt a Beach" program

### **Boating / Water Experience**

Coast Guard Auxiliary Boating Safety course

30 years personal boating experience: including flat boats, outboard fishing boats, inboard cruisers, Familiar with GPS, VHF radio, depth finders

Trained in line-of-sight navigation and charting, Certified scuba diver

### **Memberships**

Coalition to Restore Coastal Louisiana

Charter Member of Division of Environmental Geosciences of the American Association of Petroleum Geologists & Certified Petroleum Geologist # 5560

**Technical Publications -- John A. Lopez, Ph.D.**  
**February 2006**

Lopez, J. A., 2006, The Multiple Lines of Defense Strategy to Sustain Coastal Louisiana, Lake Pontchartrain Basin Foundation at [saveourlake.org](http://saveourlake.org)

Lopez, J.A., C. Dufrechou, A.Rheams, J.Mastrototaro, R. Dubois, M.Segura, I.Georgiou, P. Keddy, M. Poirrier, M. Schexnayder and J. Rives 2006. (Sue Hawes, Liaison from the U.S. Army Corps of Engineers) *Comprehensive Habitat Management Plan for the Pontchartrain Basin in southeastern Louisiana*. Restore America's Estuaries. The 3rd National Conference on Coastal and Estuarine Habitat Restoration. Forging the National Imperative December 9-13, New Orleans, Louisiana.

Lopez, J. A. co-author\*, 2005, Comprehensive Habitat Management Plan fore the Pontchartrain Basin, peer-reviewed, Lake Pontchartrain Basin Foundation,  
\* chaired a technical committee that drafted the report and was a primary author

Whitmore, Kelly, J.A. Lopez and M.A. Poirrier, 2004, An Assessment of the Characteristics and Communities of the Lake Pontchartrain Artificial Reefs, Environmental State of the State Conference, 2004, University of New Orleans

Lopez, J.A., 2004, Wetland Loss in the Pontchartrain Basin (PB) attributed to the Construction of Artificial Levees along the Mississippi River in Southeast Louisiana, Basics of the Basin Research Symposium 2004, University of New Orleans, Proceedings p. 29

Lopez, J. A., 2004, The Lake Pontchartrain Artificial Reef Program Deployment from 2000 to 2004, final report submitted to the LA Dept of Wildlife and Fisheries and the Lake Pontchartrain Basin Foundation

Lopez, J.A. 2003, Chronology and Analysis of Environmental Impacts within the Pontchartrain Basin of the Mississippi Delta Plain: 1718 – 2002, Dissertation University of New Orleans

Lopez, J. A., 2002, History of Environmental Impacts in the Pontchartrain Basin (Louisiana) Since European Settlement in 1718, Basics of the Basin Research Symposium 2002, University of New Orleans, Proceedings p. 43

Partyka, G., J. Gridley and J.A. Lopez, 1998, Interpretational Applications of Spectral Decomposition, Society of Exploration Geophysicists - Leading Edge

Lopez, J. A., G. Partyka, N. Haskell, S. Nissen, 1997, Identification of Deltaic Facies with 3-D Seismic Coherency and Spectral Decomposition Cube: A Study From South Marsh Island Area, Gulf of Mexico, 1997 Gulf Coast Association of Geological Societies also published in proceedings for the International Geophysical Conference and Exposition , Istanbul , Turkey 1997

Lopez, J. A., S. Penland and J. Williams, 1997, Confirmation of Active Geologic Faults in Lake Pontchartrain in Southeast Louisiana, 1997 Gulf Coast Association of Geological Societies

- Lopez, J. A., 1997, Salt Tectonism of the U.S. Gulf Coast Basin, American Association of Petroleum Geologists – Electronic CD format publication
- Lopez, J. A., 1996, 3-D Seismic Coherency Mapping: A Technological Breakthrough, American Association of Petroleum Geologists Convention Proceedings abst.
- Lopez, J.A., Haskell, S. Nissen and M. Bahorich, 1995, 3-D Seismic Coherency and the Imaging of Sedimentologic Features, in transactions for “Predictive High Resolution Sequence Stratigraphy” Norsk Petroleum forening/NPF, Stavanger, Norway Nov, 1995, Elsevier Pub.
- Bahorich, M., J.A. Lopez, A. Poole, S. Nissen, and N. Haskell, 1995, Stratigraphic and Structural Interpretation with 3-D Coherence, 1995, Society of Exploration Geophysicists, 65th Annual mtg. transactions
- Bahorich, M, S. Nissen, N. Haskell, T. Donlon, M. Bahorich and J.A. Lopez, 1995, 3-D Seismic Coherency Techniques Applied to the Delineation of Slump Features, Society of Exploration Geophysicists, 65th Annual mtg. transactions, co-authored with S. Nissen, N. Haskell, T. Donlon, and M. Bahorich.
- Lopez, J. A., 1995, Salt Tectonism of the U. S. Gulf Coast Basin, Map published by the New Orleans Geological Society, New Orleans LA
- Lopez, J. A., 1989, Distribution of Structural Styles in the Northeastern Gulf of Mexico, Gulf Coast Section of Society of Economic Paleontologists and Mineralogists P. 101
- Lopez, J. A., 1991, Origin of Lake Pontchartrain and the 1987 Irish Bayou Earthquake, Gulf Coast Section - Society of Economic Paleontologists and Mineralogists Foundation in Quaternary Framework and Environmental Issues, P. 103
- Lopez, J. A. 1990, Temporal Resolution of Depositional Processes in the Gulf Coast Tertiary, Gulf Coast Section - Society of Economic Paleontologists and Mineralogists Foundation in Sequence Stratigraphy as an Exploration Tool, P. 217
- Lopez, J. A., 1990, Structural Styles of Growth Faults in the U.S. Gulf Coast Basin, London Geological Society Spec Pub. #50 p 203-219
- Erlich, W., J.A. Coleman, J.A. Lopez and M. Lober, 1986, Dolomite Detachments: Exception or Rule, American Association of Petroleum Geologists, Bull V. 70 P. 576
- Erlich, W., J.A. Coleman, J.A. Lopez and M. Lober, 1986, Ouachita/Appalachian Suture: A transpressional Zone, American Association of Petroleum Geologists, Bull V. 71 P. 563, abst.
- Lopez, J.A., 1983, Appalachian Thrust Model, 1985, American Association of Petroleum Geologists, Bull. V. 69, p. 80, abst.
- Lopez, J.A. and W. M. von Henneberg, 1983, Geology of Boutte Field, New Orleans Geological Society, Geology of Southeast Louisiana Oil and Gas Fields, V. III

# Martin T. O'Connell

## Current Position

Director - Nekton Research Laboratory  
Pontchartrain Institute for Environmental Sciences  
and  
Assistant Professor and Graduate Coordinator  
Department of Earth and Environmental Sciences  
University of New Orleans  
New Orleans, LA 70148

## Personal Data

Birth date: 9 February 1966; Stamford, Connecticut      Family Status: Married

## Education

B.Sc. (1988) Siena College, Loudonville, NY  
M.Sc. (1991) Virginia Polytechnic Institute and State University  
Ph.D. (2000) University of Southern Mississippi

## Recent Professional Experience

- Graduate Coordinator - Department of Earth and Environmental Sciences (2006 - present)
- Assistant Professor - Department of Earth and Environmental Sciences (2006 - present)
- Director - Nekton Research Laboratory, Pontchartrain Institute for Environ. Sciences (present)
- Post-Doctoral Researcher - University of New Orleans (June 2000 - May 2003)
- Instructor and Teaching Asst. - University of Southern Mississippi (Sept.1994 - June 2000)

## Courses Taught

- Estuarine Environmental Science (graduate and undergraduate level) – Univ. New Orleans
- Natural Resource Management (graduate and undergraduate level) – Univ. New Orleans
- Introduction to Environmental Sciences (undergraduate level) - Univ. New Orleans
- Connectivity in Aquatic Environments (online undergraduate course) - Univ. New Orleans
- Fisheries Administration: Ecological Approaches (undergraduate level) - Univ. New Orleans
- Biology of Fishes Lecture (graduate and undergraduate level) - Univ. New Orleans
- Biology of Fishes Laboratory (graduate and undergraduate level) - Univ. New Orleans
- Independent Research in Biological Sciences (undergraduate level) - Univ. New Orleans
- Animal Behavior Laboratory (graduate and undergraduate level) - Univ. Southern Mississippi
- Freshwater Biology Lecture (graduate and undergraduate level) - Univ. Southern Mississippi
- Freshwater Biology Laboratory (graduate and undergraduate level) - Univ. Southern Miss.
- Ichthyology Laboratory (graduate and undergraduate level) - Univ. Southern Mississippi
- Populations & Communities Lab (graduate and undergraduate level) - Univ. Southern Miss.

## Professional Membership

- American Fisheries Society
- American Society of Ichthyologists and Herpetologists
- Association of Southeastern Biologists
- Ecological Society of America
- Society for Conservation Biology (including New Orleans Chapter)
- Southeastern Fishes Council
- Southeastern Louisiana Ecology and Evolutionary Biology Group
- Estuarine Research Federation

## **Reviewing Activities**

- Copeia
- Environmental Biology of Fishes
- Transactions of the American Fisheries Society
- American Fisheries Society, Book Chapter Review
- Southeastern Fishes Council, Book Review
- Southeastern Naturalist
- Ecology
- Gulf and Caribbean Research
- Gulf of Mexico Science
- Estuaries

## **Skills and Technical Training**

- Collection and identification of freshwater fishes, freshwater insects, and freshwater mussels
- Collection, transfer, treatment, and laboratory maintenance of fishes
- Curation of fishes including data base management, specimen maintenance, and loan processing
- Collection of fish blood for serological analysis
- Spatial and land-use analyses (including digitizing and ground-proofing with GPS)
- Operation and maintenance of hydrological data loggers including retrieval and analysis of data
- Operation and maintenance of fish electro-shocking equipment
- Trained as a writing tutor and worked at a university-level writing center
- Water quality analyses: operation of dissolved oxygen, salinity, and current velocity meters
- Software experience: ArcInfo, ArcView, ArcExplorer, BlackBoard, CANOCO, Dbase, EcoSim, JMP, Matlab, MSAccess, MSEXcel, MSWord, MSPowerPoint, MVSP, Primer, QuattroPro, SAS, and SPSS
- Completed USEPA training programs in Quality Assurance Management, Data Quality Objectives, and Quality Management Plans/Quality Assurance Project Plans (December 2002)

## **Awards and Grants**

- Collection and comparison of fishery-independent and fishery-dependent data of Lake Pontchartrain fishery stocks post-hurricanes Katrina and Rita. M. T. O'Connell and A.M. Uzee-O'Connell. \$452,153. Louisiana Department of Wildlife and Fisheries. (July 2007).
- Post-Hurricane Katrina survey for the blackmouth shiner (*Notropis melanostomus*) at historical localities in Mississippi. M. T. O'Connell and A.M. Uzee-O'Connell. \$25,000. United States Fish and Wildlife Service (January 2007).
- Identifying fishery resources and species that would be lost to Louisiana if the Chandeleur Islands are destroyed by hurricane activity. M. T. O'Connell and A.M. Uzee-O'Connell. \$91,965. National Oceanic and Atmospheric Administration (August 2005).
- Status of rare diadromous fishes in two Pontchartrain Basin watersheds: the Tangipahoa River and Bayou Lacombe systems. M. T. O'Connell and A.M. Uzee-O'Connell. \$82,161. National Oceanic and Atmospheric Administration (August 2005).
- Determining essential habitat for larval and juvenile blue crabs (*Callinectes sapidus*) using remote sensing and satellite data (second year). L. A. Lyncker (student awardee) and M.T. O'Connell (advisor). \$24,000. National Aeronautics and Space Administration (July 2005).

- Assessing nearshore nursery habitats for rare fishes and other nekton species at the Chandeleur Islands: are restored habitats as good as natural habitats? M. T. O'Connell and A.M. Uzee-O'Connell. \$86,433. National Oceanic and Atmospheric Administration (October 2005).
- Determining essential habitat for larval and juvenile blue crabs (*Callinectes sapidus*) using remote sensing and satellite data. L. A. Lyncker (student awardee) and M.T. O'Connell (advisor). \$24,000. National Aeronautics and Space Administration (July 2005).
- Asian Carp in the Mississippi River: Their impact on native fish species and predicted dispersal within the system. V.A. Barko, M.T. O'Connell, and J.H. Chick. \$36,662. United States Geological Service (January 2005).
- Analysis of spotted seatrout (*Cynoscion nebulosus*) feeding habits within Louisiana Bay Systems. M.T. O'Connell and Jason P. Turner. \$122,379. Louisiana Department of Wildlife and Fisheries (November 2004).
- A survey for aquatic organisms of Lake Pontchartrain. M.T. O'Connell. \$285,026 (two years). Louisiana Department of Wildlife and Fisheries (September 2004).
- Development and implementation of a comprehensive plan for mercury in the Lake Pontchartrain Estuary. M.T. O'Connell. \$91,924 (sub-contract to Tulane University). National Oceanic and Atmospheric Administration (October 2004).
- Quantifying the importance of Chandeleur Islands and Biloxi Marsh marine habitats to commercial and recreational fishery productivity in Lake Pontchartrain (Year 2). M.T. O'Connell and Jason P. Turner. \$109,000. National Oceanic and Atmospheric Administration (October 2004).
- Quantifying the importance of Chandeleur Islands and Biloxi Marsh marine habitats to commercial and recreational fishery productivity in Lake Pontchartrain. M.T. O'Connell. \$125,603. National Oceanic and Atmospheric Administration (October 2003).
- Total mercury, methylmercury, and other toxic metals in the Lake Pontchartrain Basin W.H. Patrick and M.T. O'Connell. \$85,648 (sub-contract to LSU). National Oceanic and Atmospheric Administration (October 2003).
- Movement and population expansion of an exotic cichlid along an artificial corridor: active travel or advection of "waif" individuals? M.T. O'Connell. \$700. Jordan Endowment Award, American Cichlid Association (August 2002).
- Sustainability and health of recreational and commercial fish species in the Lake Pontchartrain Basin. M.T. O'Connell and R.C. Cashner. \$82,370. National Oceanic and Atmospheric Administration (May 2002).
- Southeastern Division, American Society of Ichthyologists and Herpetologists Award for Student Presentation in Ichthyology. M.T. O'Connell. 1998 Annual Meeting of the Association of Southeastern Biologists, Monroe, Louisiana.
- Survey for the blackmouth shiner (*Notropis melanostomus*) in the Upper Pascagoula River Drainage, Mississippi. Ross, S.T. and M.T. O'Connell. \$2500. Mississippi Department of Wildlife, Fisheries, and Parks (May 1995).

### **Selected Publications**

- O'Connell, M.T. with T.D. Shepherd, A.M. Uzee-O'Connell, and Ransom A. Myers. 2007. Long-term declines in two apex predators, bull sharks (*Carcharhinus leucas*) and alligator gar (*Atractosteus spatula*), in Lake Pontchartrain, an oligohaline estuary in southeastern Louisiana. *Estuaries and Coasts* 30 (4): 1–8.
- O'Connell, M.T. with R.C. Cashner and C.S. Schieble. 2006. "Fish assemblage instability and hydrologic influences in Lake Pontchartrain, Louisiana (USA), a degraded oligohaline estuary" in *Coastal Environment and Water Quality* (eds. Y. Jun Xu and

- Vijay P. Singh). Water Resources Publication (LLC), Highlands Ranch, CO. 519 pp.
- Barko, V.A. with D. P. Herzog and M.T. O'Connell. 2006. Response of fishes to re-established floodplain connectivity along a temperate North American River. *Wetlands* 26 (1): 244-257.
- O'Connell, M.T. with C.D. Franze, E.A. Spalding, and M.A. Poirrier. 2005. Biological Resources of the Louisiana Coast: Part 2. Coastal Animals and Habitat Associations. *Journal of Coastal Research* 44: 146-161.
- O'Connell, M.T. with A.M.U. O'Connell and J. D. Williams. 2005. Assessment of rarity of the blackmouth shiner *Notropis melanostomus* (Cyprinidae) based on museum and recent survey data. *Southeastern Naturalist* 4(2): 246-260.
- Chávez-López, R., with J. Franco-López, A. Morán-Silva, and M.T. O'Connell. 2005. Long-term fish assemblage dynamics of the Alvarado Lagoon Estuary, Veracruz, Mexico. *Gulf and Caribbean Research* 17: 145-156.
- O'Connell, M.T. with R.C. Cashner and C.S. Schieble. 2004. Fish assemblage stability over fifty years in the Lake Pontchartrain Estuary; comparisons among habitats using Canonical Correspondence Analysis. *Estuaries* 27(5): 807-817.
- O'Connell, M.T. 2003. The direct exploitation of prey on an inundated floodplain by cherryfin shiners, (*Lythrurus roseipinnis*) in a low order, blackwater stream. *Copeia* 2003 (3): 635-645.
- O'Connell, M.T. with R.C. Cashner and G.N. Fuentes. 2002. Application of a diffusion model to describe a recent invasion; observations and insights concerning early stages of expansion for the introduced Rio Grande cichlid, *Cichlasoma cyanoguttatum*, in southeastern Louisiana. *Aquatic Invaders* 13 (4): 13-21.
- O'Connell, M.T. 2002. Dangerous Wildlife in the Southeast: A Guide to Safe Encounters at Home and in the Wild, by F. Lynn Bachleda - Book Review. *Southeastern Fishes Council Proceedings* 43:20.
- Ross, S.T. with M.T. O'Connell, D.M. Patrick, C.A. Latorre, W.T. Slack, J.G. Knight, and S.D. Wilkins. 2001. Stream erosion and densities of *Etheostoma rubrum* (Percidae) and associated riffle-inhabiting fishes – biotic stability on a variable habitat template. *Copeia* 2001 (4): 916-927.
- Ross, S.T. with W.M. Breneman, W.T. Slack, M.T. O'Connell, and T.L. Peterson. 2001. *The Inland Fishes of Mississippi*. University Press of Mississippi. 624 pp.
- O'Connell, M.T. and R.C. Cashner. 2000. Drought conditions attract rare visitors in Lake Pontchartrain. *Lake Pontchartrain Basin Foundation Bulletin* 10 (2): 1-3.
- O'Connell, M.T. and R.J. Neves. 1999. Evidence of immunological responses by a host fish (*Ambloplites rupestris*) and two non-host fishes (*Cyprinus carpio* and *Carassius auratus*) to glochidia of a freshwater mussel (*Villosa iris*). *Journal of Freshwater Ecology* 14 (1): 71-78.
- O'Connell, M.T. with S.T. Ross, J.A. Ewing, and W.T. Slack. 1998. Distribution and habitat affinities of the blackmouth shiner (*Notropis melanostomus*) in Mississippi, including eight newly discovered localities in the Upper Pascagoula River Drainage. *Southeastern Fishes Council Proceedings* 36: 1-6.
- Slack, W.T. and M.T. O'Connell. 1998. Design for a portable, modular stream enclosure / enclosure device. *Journal of Freshwater Ecology* 13 (2): 193-206.
- Slack, W.T. with M.T. O'Connell, T. L. Peterson, J. A. Ewing and S.T. Ross. 1996. Ichthyofaunal and habitat associations of disjunct populations of southern redbelly dace, *Phoxinus erythrogaster* (Teleostei: Cyprinidae) in Mississippi. *American Midland Naturalist* 137 (2): 251-265.

## **Invited Seminars**

- O'Connell, M.T. 2007. Estuarine and urban fisheries post-Katrina: managing in Hell. 137<sup>th</sup> Annual Meeting of the American Fisheries Society, San Francisco, California, 6 September 2007.
- O'Connell, M.T., R.C. Cashner, and C.S. Schieble. 2006. Fish assemblage instability and hydrologic influences in Lake Pontchartrain, Louisiana (USA), a degraded oligohaline estuary. 25<sup>th</sup> Annual Meeting of the American Institute of Hydrology, Baton Rouge, Louisiana, 22 May 2006.
- O'Connell, M.T. and O.T. Lorenz. 2006. Response of an invasive fish, the Rio Grande cichlid (*Herichthys cyanoguttatus*), to the impacts of hurricanes Katrina and Rita. Presentation for the Louisiana Aquatic Invasive Species Task Force, 7 March 2006, Baton Rouge, Louisiana.
- O'Connell, M.T. 2005. Freshwater invasive fishes in estuarine habitats. Symposium on Coastal Invasive Species: Impacts, Management and the Role of Modified Habitats. 18<sup>th</sup> International Conference of the Estuarine Research Federation, 19 October 2005, Norfolk, Virginia.
- O'Connell, M.T. 2005. Invasive fishes of southeastern Louisiana. Barataria-Terrebonne National Estuary Program Invasive Species Workshop, 17 April 2005, Algiers, Louisiana.
- O'Connell, M.T. 2004. Past, current, and future ecological research at UNO's Pontchartrain Institute for Environmental Sciences. Department of Biological Sciences Seminar Series, University of New Orleans.
- O'Connell, M.T. 2004. Saving the World with Fish Collection Data: evaluating long-term assemblage changes, modeling the expansion of invasive species, and assessing conservation status of rare fishes. Invited Seminar, Arkansas State University.
- O'Connell, M.T. 2003. An update on introduced fishes in Louisiana and the threat of invasional meltdown. Invited Plenary Seminar, Environmental State of the State Meeting VIII, University of New Orleans, 10 October 2003, New Orleans.
- O'Connell, M.T. 2003. The role of large river fish species in the spatial and temporal dynamics of estuarine fish assemblages. Invited Seminar, Fifth Bennett Symposium, 25 May 2003, University of Southern Mississippi, Hattiesburg.
- O'Connell, M.T. 2003. O cichlid, where art thou? An update on the distribution of the introduced Rio Grande cichlid, *Cichlasoma cyanoguttatum*, in southeastern Louisiana. Invited Seminar, Aquatic Nuisance Species Task Force Meeting, 13 May 2003, New Orleans.
- O'Connell, M.T. 2003. Fish Assemblage Dynamics in Lake Pontchartrain Over Fifty Years. Invited Seminar, Southeastern Louisiana University.
- O'Connell, M.T. 2002. Application of a diffusion model to describe a recent invasion; how habitat, advection, and anthropogenic factors influence the expansion of the introduced Rio Grande cichlid, *Cichlasoma cyanoguttatum*, in southeastern Louisiana. Invited Seminar, Southeastern Louisiana University.
- O'Connell, M.T. 2000. Test of an individual-based model to compare fish foraging efficiency between floodplain and low water habitats. Department of Biological Sciences Seminar Series, University of New Orleans.

## **Other Presentations**

- O'Connell, M.T. and A.M. Uzee-O'Connell. 2007. Response of fishes to multiple stressors:

floodwall failures, invasive species, and mismanagement – part one: fish condition. Annual Meeting of the American Society of Ichthyologists and Herpetologists, St. Louis, Missouri.

- O'Connell, M.T. with A.M. Uzee-O'Connell, V.A. Barko, and J.H. Chick. 2007. Silver carp (*Hypophthalmichthys molitrix*) and bighead carp (*H. nobilis*) in the Mississippi River Basin; occurrence data and dispersal patterns. Missouri Natural Resources Conference, Osage Beach, MO.
- O'Connell, M.T. with C.S. Schieble, K.G. Blanke, J. Van Vrancken, M.J. Dillender, and A.M.U. O'Connell. 2006. Lake Pontchartrain fish assemblage response to Hurricanes Katrina and Rita. Annual Meeting of the American Society of Ichthyologists and Herpetologists, New Orleans, Louisiana.
- O'Connell, M.T. with A.M.U. O'Connell, V.A. Barko, and J.H. Chick. 2006. Silver carp (*Hypophthalmichthys molitrix*) and bighead carp (*H. nobilis*) in the Mississippi River Basin; occurrence and dispersal patterns. 14th International Conference on Aquatic Invasive Species, Key Biscayne, Florida, 16 May 2006.
- Turner, J.P. and M.T. O'Connell. 2006. Fortunate foresight: Establishing patterns of resource utilization in Lake Pontchartrain consumers for Post-Hurricane Katrina ecological impact assessments. 13th Ocean Sciences Meeting, 20-24 February, Honolulu, Hawaii.
- Barko, V.A., D.P. Herzog, and M.T. O'Connell. 2006. Response of fishes to floodplain connectivity during and following a 500-year flood event in the unimpounded Upper Mississippi River. International Conference on Rivers and Civilizations, La Crosse, Wisconsin.
- Barko, V.A., D.P. Herzog, and M.T. O'Connell. 2006. Response of fishes to floodplain connectivity during and following a 500-year flood event in the unimpounded Upper Mississippi River. Annual Meeting of the American Society of Ichthyologists and Herpetologists, New Orleans, Louisiana.
- Turner, J.P. and M.T. O'Connell (presenter). 2005. Retrospective determination of habitat use in juvenile pinfish (*Lagodon rhomboides*) using multi-tracers. 18<sup>th</sup> International Conference of the Estuarine Research Federation, 19 October 2005, Norfolk, Virginia.
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- O'Connell, M.T. 2005. Estuarine habitats as possible corridors for the dispersal of freshwater invasive fishes. Annual Meeting of the American Society of Ichthyologists and Herpetologists, Tampa, Florida.
- O'Connell, M.T. 2004. Occurrence of an introduced freshwater fish, the Rio Grande cichlid (*Cichlasoma cyanoguttatum*), in estuarine habitats of southeastern Louisiana, USA; can we assume that estuaries are effective barriers to expansion? 13th International Conference on Aquatic Invasive Species, Ennis, Ireland, September, 2004.
- O'Connell, M.T. 2004. Identifying anthropogenic sources of fish assemblage instability in Lake Pontchartrain, Louisiana (USA), a degraded oligohaline estuary. Estuarine and Coastal Sciences Association and Estuarine Research Federation International Conference, Ballina, Australia.
- O'Connell, M.T. 2004. Fish assemblage dynamics and ecological instability in Louisiana's Lake Pontchartrain: 'Eco-triage' for a degraded estuary. Annual Meeting of the American

- O'Connell, M.T. with G.N. Fuentes and R.C. Cashner. 2002. Application of a diffusion model to describe a recent invasion; introduced Rio Grande cichlids, *Cichlasoma cyanoguttatum*, in southeastern Louisiana. Annual Meeting of the American Society of Ichthyologists and Herpetologists, Kansas City, Missouri.
- O'Connell, M.T. with G.N. Fuentes and R.C. Cashner. 2002. The Rio Grande Cichlid (*Cichlasoma cyanoguttatum*) an invasive species established in Southeastern Louisiana. 11th International Conference on Aquatic Invasive Species, Washington, D.C., February, 2002.
- Cashner, R.C. with M.T. O'Connell, M.A. Poirrier, and J. H. Humphries. 2001. Impact of a prolonged period of low rainfall on the aquatic community in the Lake Pontchartrain Estuary, Louisiana, USA. International Symposium on the Role of Drought in Aquatic Ecosystems, Albury, Australia.
- O'Connell, M.T. 2000. Small streams and forests: the direct benefits of a forested floodplain to fishes of a low order, blackwater stream. Annual Meeting of the American Fisheries Society, St. Louis, Missouri.
- Ross, S.T. with M.T. O'Connell, W.T. Slack and D. M. Patrick. 2000. Habitat and the Conservation of Riffle Inhabiting Fishes: Population and Assemblage Responses to Temporal and Spatial Habitat Change. AFS-SD/SFC Symposium: Conservation of the Freshwater Nongame Aquatic Fauna in the Southeast—Challenges for the New Millennium, Savannah, Georgia.
- O'Connell, M.T. 1999. Brief seasonal floods as direct sources of increased food for fishes in low order, blackwater streams. Annual Meeting of the American Society of Ichthyologists and Herpetologists, University Park, Pennsylvania.
- O'Connell, M.T. and R.J. Neves. 1999. Immunoelectrophoretic analysis of the immunological responses of host and non-host fishes to glochidia and juveniles of a freshwater mussel. Annual Meeting of the Association of Southeastern Biologists, Wilmington, North Carolina.
- O'Connell, M.T. 1998. Does the temporary habitat of an inundated floodplain offer increased food resources to fishes in a low order, blackwater habitat? Annual Meeting of the Association of Southeastern Biologists, Monroe, Louisiana.
- O'Connell, M.T. with S. T. Ross, J. A. Ewing, and W.T. Slack.. 1996. Habitat affinities of blackmouth shiners (*Notropis melanostomus*) from eight newly discovered localities in the Upper Pascagoula River Drainage, Mississippi. Annual Meeting of the American Society of Ichthyologists and Herpetologists, New Orleans, Louisiana.
- O'Connell, M.T. and S.T. Ross. 1995. Population dynamics of the endangered Bayou Darter (*Etheostoma rubrum*) in Bayou Pierre, Mississippi. Annual Meeting of the American Fisheries Society, Tampa, Florida.

### **Professional Service**

- Guest Editor for *Southeastern Naturalist* – Association of Southeastern Biologists (May 2007 – present)
- Elected Chair Student Awards Committee - American Society of Ichthyologists and Herpetologists (July 2007)
- Selected to Award of Excellence Committee – American Fisheries Society (August 2006)
- Selected to Meeting Resolutions Committee - American Society of Ichthyologists and

### Herpetologists (July 2006)

- Managing Editor for *Proceedings of the Southeastern Fishes Council* – Southeastern Fishes Council (July 2005 – present)
- Elected member of Nominating Committee - American Society of Ichthyologists and Herpetologists (July 2004 – June 2005)
- President - Southeastern Division of the American Society of Ichthyologists and Herpetologists (June 2003 – June 2004)
- Vice President - Southeastern Division of the American Society of Ichthyologists and Herpetologists (June 2002 – June 2003)
- Secretary-Treasurer - Southeastern Division of the American Society of Ichthyologists and Herpetologists (June 2001 – June 2002)

### Public Service

- 2001 – Served on Lake Pontchartrain Conservation Area Planning Team (Nature Conservancy)
- 2002 – Volunteered services/fisheries expertise in assessment of City Park fishery resources
- 2003 to 2004 – Served on Louisiana Governor's Aquatic Nuisance Species Task Force
- 2003 to 2004 – Advised Lake Pontchartrain Basin Foundation's Artificial Reef Working Group
- 2004 – Volunteered to survey fish diversity on Nature Conservancy lands near Talisheek Bay
- 2004 – Lectured fourth-graders on Louisiana fishes at Louise S. McGehee School
- 2004 – Served as judge for Louisiana Board of Regents High School Science Fair, New Orleans
- 2004 to 2006 – Currently serving on Restoration of Bayou St. John Technical Subcommittee
- 2004 to 2006 – Currently serving on Restoration of Bayou St. John Education Subcommittee
- 2005 to 2006 – Currently serving on BTNEP Invasive Species Action Plan Team
- 2006 – Served on CREST research proposal review panel
- 2006 – Invited to review grant proposals for the NMFS Cooperative Research Program
- 2007 – Served on CREST research proposal review panel
- 2007 – Served on Multiple Lines of Defense Assessment Team, Lake Pont. Basin Foundation
- 2007 – Elected to Gulf and South Atlantic Regional Panel on Aquatic Invasive Species

### Graduate Students (names – project titles)

- Sunny J. Brogan (M.Sc. student) – Redfish habitat use in an urban fishery.
- Scott P. Eustis (M.Sc. student) – Assemblage composition of shrimp trawl bycatch.
- M. Chad Ellinwood (M.Sc. student) – Response and recovery of fish assemblages to hurricane impacts at the Chandeleur Islands, Louisiana

### Graduate Students Co-Advised in the Department of Biological Sciences (names – project titles)

- O. Thomas Lorenz (Ph.D. student) – Abiotic effects, intraspecific aggression, and source-sink dynamics of the introduced Rio Grande cichlid (*Herichthys cyanoguttatus*) in Louisiana (2007 Sigma Xi Research Award)
- Lissa A. Lyncker (M.Sc. student) – Assessing essential habitat for larval and juvenile blue crabs (*Callinectes sapidus*) using remote sensing data
- Jeffrey M. Van Vrancken (M.Sc. student) – Temporal and spatial changes in freshwater fish

#### assemblages of the Pontchartrain Basin

- Molly J. Dillender (M.Sc. student) – Analysis of spotted seatrout (*Cynoscion nebulosus*) feeding habits within Louisiana bay systems

#### **Former Graduate Students Co-Advised in the Dept. of Bio. Sciences (names – project titles)**

- Kenneth G. Blanke (M.Sc. student) – Does diversity, abundance, and resilience of aquatic organisms differ among seagrass species at the Chandeleur Islands, Louisiana? (ASIH Storer Award Winner, 2006)

#### **Undergraduate and High School Students Advised in Independent Research (names – project titles)**

- Christina Kemp – Life history aspects of the invasive Rio Grande cichlid
- Daniel Sambola – Temperature responses of the Rio Grande cichlid in canals of the GNOMA
- Jeffrey Van Vrancken – Spawning and salinity tolerance of the invasive Rio Grande cichlid
- Cynthia Lagos – Assessment of fishing activity data from Lake Pontchartrain, 2000 - 2001
- Mariel Lusco – Life history aspects of blue catfish occurring in estuarine habitats
- Melanie Jackson – Preliminary assessment and computerization of the UNO Vertebrate Collection (Australian exchange student)
- Brad O’Connell – Ecology of the green turtle; assessment of coastline and marine habitats (Australian exchange student)
- Susan Griffee – Comparison of brown shrimp, white shrimp, and blue crab densities collected from the Biloxi Marshes and the Chandeleur Islands
- Laura Alexander – Ecology and population density of the invasive monk parakeet in the GNOMA
- Cassie O’Dell – Diet, parasite load, and other life history aspects of blue catfish in an urban fishery
- Dannielle Grimes – Observations of invasive fish species and their behavior
- Elia Cortez – Post-Katrina observations of squirrels in City Park
- Angela Hernandez – Fish condition analyses of Bayou St. John fishes
- Jessica Tingstrom – Fish condition analyses of fishes collected from City Park lagoons
- Jennifer Lanier – Assessment of fishing activity data from Lake Pontchartrain, 2003 - 2005
- Jen Sun (high school student) – Comparison of fish health among five Lake Pontchartrain localities
- Caylie Sadin (high school student) – Cleaning behavior in *Lucania parva* and *Cyprinodon variegatus*

#### **Graduate Student Committees (names – project titles)**

- Louis D. Britsch (Ph.D. student) – Geomorphic development of the Atchafalaya Backwater Area
- Dawn Allenbach (Ph.D. student) – Fluctuating asymmetry (FA) in fishes

#### **Off-Campus Graduate Student Committees (names – project titles – university)**

- John P. Spaeth (M.Sc. student) – Competition and resource use among ecologically similar fish species in south Mississippi – University of Southern Mississippi

## References

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