

**Michael Lewis Parsons**  
**Florida Gulf Coast University**  
**Department of Marine and Ecological Sciences**  
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**Education**

Bachelor of Science in Biology-Geology from University of Rochester, NY; May, 1990.  
 Ph.D. in Oceanography and Coastal Sciences (minor in Environmental Studies) at Louisiana State University; December, 1996.

**Research Interests**

diatom/dinoflagellate taxonomy	phytoplankton ecology
harmful algal blooms (incl. <i>Karenia brevis</i> )	coral reef ecology
eutrophication	paleoecology
hurricane sedimentation	ciguatera

**Employment History**

Acting Director, Coastal Watershed Institute, Florida Gulf Coats University, August 2008 – July, 2009.

Associate Professor, Department of Marine and Ecological Sciences, Florida Gulf Coast University, January, 2007 to present.

Assistant Director, Tropical Conservation Biology and Environmental Science Masters Program, University of Hawai‘i at Hilo, August, 2004 to January, 2007.

Associate Professor, Marine Science Department, University of Hawai‘i at Hilo, August, 2004 to January, 2007.

Assistant Professor, Marine Science Department, University of Hawai‘i at Hilo, August, 1999 to July, 2004.

Marine Option Program Coordinator, January, 2003 to January, 2007.

Post-doctoral Fellow, Louisiana Universities Marine Consortium, November, 1996 to July, 1999.

Graduate Assistant, Louisiana Universities Marine Consortium, August, 1996 to October, 1996.

Instructor, ADVANCE Program, Louisiana Universities Marine Consortium, July, 1996.

Teaching Assistant, Louisiana Universities Marine Consortium, June, 1996.

Graduate Assistant, Department of Oceanography and Coastal Sciences, Louisiana State University, September, 1994-May, 1996.

State of Louisiana Board of Regents Doctoral Fellow, Louisiana State University, 1990-1994.

**Grants and Contracts Awarded (last 5 years)**

Biological Oceanography of the Southwest Florida Continental Shelf (PI). Florida Institute of Oceanography. March 25, 2009 – April 10, 2009; \$5,000.

Ecology of the Florida Keys and Florida Bay: A Collaborative Undergraduate Research and Education Expedition (PI). Florida Institute of Oceanography. October 6, 2008 – October 23, 2008; \$7,400.

Florida Gulf Coast University Office of Research and Sponsored Programs Graduate Fellowship Award; August 2008 – July 2009; \$10,000.

Freshwater Inflow and Estuarine Production in the Caloosahatchee River and Estuary (Co-PI). US Department of Education. July 1, 2008 – October 31, 2009; \$191,593.

Bioavailability and sources of nutrients and the linkages to nuisance red drift algae (Co-PI). City of Sanibel in Partnership with Lee County, Florida. May 21, 2008 – August 21, 2010; \$769,083.

Enhancement of Public Health Preparedness for Dealing with Bioterrorism: New Biocides and Decontaminating Agents for Biodefense (Co-PI). USF Florida Biodefense Research Consortium. May 19, 2008 – May 18, 2010; \$366,625.

Elise B. Newell Seminar Series (PI). Florida Sea Grant. Spring, 2008; \$600.

Responses to Variation in Seasonal Freshwater Inflow to the Caloosahatchee Estuary (Co-PI). South Florida Water Management District. January 11, 2008 – January 10, 2009; \$50,000.

Monitoring of Red Tide in the northwestern Everglades and adjacent coastal areas. Florida Fish and Wildlife Research Institute. April 15, 2007 – October 31, 2008; \$45,000.

Florida Gulf Coast University Office of Research and Sponsored Programs Internal Grant Program; August 2007 – July 2008; \$5,000.

Ecology of the Florida Keys and Florida Bay: A Collaborative Undergraduate Research and Education Expedition (Co-PI). Florida Institute of Oceanography. October 30, 2007 – November 30, 2007; \$7,400.

Benthic invertebrate community dynamics of the southwest Florida continental shelf (Co-PI). Florida Institute of Oceanography. October 4, 2007 – October 20, 2007; \$5,000.

Center for Oceans and Human Health: Establishment of the Pacific Research Center for Marine Biomedicine (Co-PI). NSF and NIEHS, 04/30/04 - 12/31/06, \$204,300 (Parsons).

EPSCoR Research Infrastructure Improvement (RII): Investing in Multidisciplinary University Activities (Co-PI). NSF, 04/01/03 – 12/31/06, \$1,250,000 (Parsons, approximate).

Assessment of anthropogenic impacts on two coral reef sites on the Big Island of Hawai'i (PI). Environmental Protection Agency, 9/15/03 - 9/14/05, \$137,500.

On improving the screening capabilities for ciguatera in Hawaii (PI). Hawaii Sea Grant, 03/01/03 – 08/31/05, \$76,500.

Studying the linkages between water quality, fishing pressures, and management practices: a case study at Wai Opae (PI). Hawaii Coral Reef Initiative, 10/01/03 – 12/31/04, \$40,000.

*Pseudo-nitzschia* bloom dynamics and domoic acid accumulation in oysters from low salinity waters (Co-PI). Ecology and Coastal Oceanography of Harmful Algal Blooms (ECOHAB) Program, 10/01/03 – 09/30/06, \$54,551 (PI of taxonomy section, total budget = ~\$450,000). Awarded, but funding was turned down due to conflict of interest (Quay Dortch, the PI, became Program Director of ECOHAB).

University of Hawai'i at Hilo EPSCoR REAP. Is ciguatera influenced by epiphytic diatoms? October 2003 - September 2004, \$20,000, PI.

### **Selected Recent Publications (out of 25 total)**

- Anderson, D.M., Burkholder, J.M., Cochlan, W.P., Glibert, P.M., Gobler, C.J., Heil, C.A., Kudela, R., Parsons, M.L., Rensel, J.E., Townsend, D.W., Trainer, V.L., and G.A. Vargo. Accepted. Harmful algal blooms and eutrophication: Examples of linkages from selected coastal regions of the United States. Harmful Algae.
- Parsons, M.L., Walsh, W.J., Settlemier, C.J., White, D.J., Ballauer, J.M., Ayotte, P.M., Osada, K.M., and B. Carman. 2008. A multivariate assessment of the coral ecosystem health of two embayments on the lee of the island of Hawai'i. Marine Pollution Bulletin 56:1138-1149.
- Bienfang, P.K., Parsons, M.L., Bidigare, R.R., Laws, E.A., and P.D.R. Moeller. 2008. Ciguatera Fish Poisoning: A Synopsis from Ecology to Toxicity. In: Walsh, P.J., Smith, S.L., Fleming, L.E., Solo-Gabriele, H.M., Gerwick, W.H. (Eds.). Oceans and Human Health. Elsevier, Inc., Academic Press, Burlington, MA., pp. 257 – 270.
- Parsons, M.L. and L.B. Preskitt. 2007. A survey of epiphytic dinoflagellates from the coastal waters of the island of Hawai'i. Harmful Algae 6:658-669.
- Rabalais, N.N., Turner, R.E., Sen Gupta, B.K., Platon, E., and M.L. Parsons. 2007. Sediments Tell the History of Eutrophication and Hypoxia in the Northern Gulf of Mexico. Ecological Applications 17(5) Supplement:S129-S143.
- Parsons, M.L., Dortch, Q., Turner, R.E., and N.N. Rabalais. 2006. Reconstructing the development of eutrophication in Louisiana salt marshes. Limnology and Oceanography, 51:534-544.
- Vaillancourt, R.D., Marra, J., Seki, M.P., Parsons, M.L., and R.R. Bidigare. 2003. Impact of a cyclonic eddy field on phytoplankton community structure and photosynthetic competency in the subtropical North Pacific Ocean. Deep Sea Research I 50: 829-847.
- Parsons, M.L., Dortch, Q., and R.E. Turner. 2002. Sedimentological evidence for an increase in *Pseudo-nitzschia* (Bacillariophyceae) abundance in response to coastal eutrophication. Limnology and Oceanography, 47: 551-558.
- Parsons, M.L., Scholin, C.A., Miller, P.E., Doucette, G.J., Powell, C.L., Fryxell, G.A., Dortch, Q., and T.M. Soniat. 1999. *Pseudo-nitzschia* in Louisiana coastal waters: molecular probe field trials, genetic variability, and domoic acid analyses. J. Phycology, 35: 1368-1378.
- Parsons, M.L. 1998. Salt marsh sedimentary record of the landfall of Hurricane Andrew on the Louisiana coast: diatoms and other paleoindicators. J. Coastal Research, 14: 939-950.

**First Author Presentations at International, National, or Regional meetings (last 5 years)**

- Parsons, M.L., Q. Dortch, W. Morrison, N.N. Rabalais, R.E. Turner, and A. Maier-Brown. Phytoplankton dynamics in the plume of the Mississippi River: responses to nitrogen enrichment, silica limitation, and phosphorus limitation (with new data analysis). Ocean Sciences Meetings, Orlando, Florida, March 3 – 7, 2008.
- Parsons, M.L., C.J. Settlemyer, J.M. Ballauer. Observations on the epiphytic relationship between *Gambierdiscus* spp. and several macroalgal host species. Fourth Symposium on Harmful Algae in the U.S., Woods Hole, Massachusetts, October 29 – November 2, 2007.
- Parsons, M.L., Q. Dortch, W. Morrison, N.N. Rabalais, R.E. Turner, and A. Maier-Brown. Phytoplankton dynamics in the plume of the Mississippi River: responses to nitrogen enrichment, silica limitation, and phosphorus limitation. AGU Chapman Conference, Rovinj, Croatia, October 8-12, 2007.
- Parsons, M.L. Anthropogenic impacts on water quality at Kealakekua and Honokohau Bays. Hawaii Aquatics Conference, Gateway Center, NELHA, Hawaii, November 5, 2006.
- Parsons, M.L. Modeling the population dynamics of *Gambierdiscus* in the coastal waters of Hawaii. ASLO/AGU National Ocean Sciences 2006 Meeting, Honolulu, HI, February 21, 2006.
- Parsons, M.L. The autecology of *Gambierdiscus* in the coastal waters of Hawaii. 3<sup>rd</sup> Symposium on Harmful Algae in the U.S., Pacific Grove, CA, October 6, 2005.
- Parsons, M.L. Ciguatera on the Big Island of Hawai'i. **Invited** presentation, Cyamus National Meeting, Royal Kona Resort, March 6, 2003.

**Teaching Experience**

- Associate Professor, Florida Gulf Coast University, spring, 2007 to present (Introduction to Marine Systems, Marine Ecology, Estuarine Ecology\*, Harmful Algae\*)
- Associate Professor, University of Hawai'i at Hilo, fall, 2004 to fall, 2007 (Marine Option Program Seminar, Oceanography Lab, Marine Monitoring and Analysis, Pelagic Ecology, Coastal Eutrophication, Conservation Biology and Environmental Science\*, TCBES Field and Laboratory Methods\*, TCBES Experimental Design\*).
- Assistant Professor, University of Hawai'i at Hilo, fall, 1999 to spring, 2004 (Marine Option Program Seminar, Marine Biology, Oceanography, Oceanography Lab, Marine Monitoring and Analysis, Pelagic Ecology, Algal Culturing Techniques, Senior Thesis Research, Marine Science Seminar).
- Instructor, Louisiana Universities Marine Consortium, summer, 1998 (Introduction to Marine Science).
- Co-instructor (with Karen Steidinger and Carmelo Tomas), Harmful Algae in the Gulf of Mexico, Texas Department of Parks and Wildlife, Corpus Christi, Texas, June 22-26, 1998.
- Instructor, ADVANCE Program, Louisiana Universities Marine Consortium, July, 1996.
- Teaching Assistant, Introduction to Marine Science, Louisiana Universities Marine Consortium, June, 1996.
- Guest Lecturer, Marine and Estuarine Plankton, Louisiana State University, February, 1995.

\* Graduate level courses

**Field Experience**

research vessels: 40+ days total time aboard the R.V. Pelican from 1992-1998 conducting sediment pigment analysis, sediment core collection, and phytoplankton analysis; 5+ days total time aboard the R.V. Acadiana from 1992-1998 conducting phytoplankton analysis and trawling; 60+ days total time aboard the R.V. Four Winds 1999-2006 instructing students and conducting water and phytoplankton analyses.

small boats: 10+ one-day boat trips into the coastal marshes of Louisiana to collect sediment cores for Ph.D. dissertation research from 1992-1996; 30+ one-day boat trips to coral reef sites around the Big Island of Hawai'i for SCUBA-based research; 20+ one-day boat trips to estuarine and nearshore locations in the 10,000 Islands, coastal waters of southwest Florida, and Caloosahatchee River for drift algae, phytoplankton, and water quality research.

helicopters: seven days of multiple take-offs and landings in the Florida Everglades to collect periphyton samples, October, 1995.

snorkeling/SCUBA: 50+ biweekly fieldtrips to collect water and macrophyte samples around the Big Island of Hawaii, July 2001 – 2006; 5+ seasonal fieldtrips to collect water and macrophyte samples in the Florida Keys.