

Jerry A. McLelland
Curriculum Vitae

Gulf Benthic Taxonomy Assessment, LLC

111 Cotton Creek Dr, Hattiesburg, MS 39402

Phone: 228-257-9207

Email: mudcritters@gmail.com

Web page: <http://www.gulfbenthos.com>

Education

- 1968 Hattiesburg High School, Hattiesburg, MS
- 1974 B.Sc. Biology, The University of Southern Mississippi
- 1978 M.Sc. Biology, The University of Southern Mississippi
- 2008 Ph.D. Coastal Sciences, The University of Southern Mississippi

Military

- 1969-1974 U.S. Naval Reserve, Petty Officer, Honorable discharge

Recent Employment

- 1988-2014 Research Associate, Invertebrate Zoology Section; USM-Gulf Coast Research Laboratory, Ocean Springs, MS (part time since June, 2007)
- 2007-current Independent taxonomic consultant, proprietor of Gulf Benthic Taxonomy Assessment, LLC, Hattiesburg, MS

Involvement in Funded Research - (with approximate level of funding)

- 1989-90 U.S. National Park Service. "Effects of an oil spill on the sand beach and near shore macroinfauna populations of Horn Island, Miss." (Co-P.I. with R.W. Heard - \$63,000)
- 1989-91 U.S. National Park Service. "Effects of dredge spoil beach renourishment on the macroinfauna populations of Perdido Key, Florida." (Field coordinator and Co-P.I. with R.W. Heard, C. Rakocinski, and S.E. LeCroy - \$436,000)
- 1993 U.S. National Park Service. "Assessment of the initial impact from oil spill tar balls on the beach and near-shore macroinvertebrate communities of the barrier islands of Mississippi Gulf Islands National Seashore." (Co-P.I. with R.W. Heard)
- 1993-95 U.S. National Park Service. "An ecological and faunal baseline inventory study of intertidal and shallow subtidal benthic habitats within the Gulf Islands National Seashore potentially at risk during future oil spills." (Co-P.I. with R.W. Heard, C. Rakocinski, and S.E. LeCroy - \$125,000)
- 1994-95 U.S. National Park Service. "An inventory of pond fauna of the Gulf Island National Seashore with trophic and parasitological observations." (Co-P.I. with R. W. Heard and Jan Boyd - \$10,000)
- 1995 U.S. National Park Service. "An assessment of the impact of a coal spill on the

- macrobenthic invertebrate community of a unique 'Old Bay Channel' habitat off Fort Pickens, Santa Rosa Island, Florida." (Co-P.I. with R.W. Heard - \$7,500)
- 1996 Brown & Mitchell, Inc., Gulfport, MS. "Benthic Assessment for West Pier Expansion of the Mississippi State Port of Gulfport." (Co-P.I. with R.W. Heard and C. Rakocinski - \$7,000)
- 1998 Michael Baker, Inc., Coraopolis, PA. "Assessment of Benthic Habitats Within the Proposed Broadwater Marina/ President Casino Expansion Site, Gulfport, Mississippi" (Co-P.I. with C.F. Rakocinski, S.E. LeCroy and R.W. Heard - \$18,000)
- 1998 U.S. National Park Service. "Post Hurricane Opal Ecological Observations on Some Coastal Ponds Located Within the Boundaries of the Gulf Islands National Seashore on Santa Rosa Island and Perdido Key, Florida" (Co-P.I. with R.W. Heard - \$19,500)
- 1998 Brown & Mitchell, Inc., Gulfport, MS. "An Assessment of the Macrobenthic Community of a Wetlands Mitigation Project near Bayou Portage, Hancock County, MS" (Co-P.I. with S.E. LeCroy and R.W. Heard - \$5,000)
- 1999 Dyncorp I & ET, Inc., Alexandria, VA. "Identification of Macroinvertebrates from 27 Core Samples" (Co-P.I. with R.W. Heard - \$8,000)
- 1999 U.S. National Park Service. "Post Hurricane Georges Inventory of Submerged Aquatic Vegetation, Macro-invertebrates and fishes of the Ponds on Peti Bois, Horn and Ship Islands (Gulf Islands National Seashore)" (Co-P.I. with R.W. Heard - \$13,700)
- 2000 Mississippi Department of Marine Resources. "Biological Criterion for the Determination of Inflow Requirements for the Pascagoula River Estuary [Mississippi Tidelands Project, FY97-5-3]" (Co-P.I. with C. Rakocinski and R.Heard - \$72,300)
- 1999-2000 Brown & Mitchell, Inc., Gulfport, MS. "An Assessment of the Effects of Sand Removal and Renourishment on the Macrobenthic Community of the Public Beach at Long Beach, MS" (Co-P.I. with S.E. LeCroy and R.W. Heard - \$5,000)
- 1999-2001 U.S. Environmental Protection Agency. "Macrobenthic Community Assessment of 160 EPA Furnished Sediment Samples from the EPA Region II REMAP Monitoring program Collected During July - September, 1999." Co-P.I. with R.W. Heard and C. Rakocinski - \$48,000)
- 1999-2001 Florida Fish & Wildlife Service. "An assessment of the macroinvertebrate faunal assemblages of Choctawhatchee Bay in relation to the feeding behavior, seasonal occurrence, and spatial distribution of a well established, genetically distinct, population of the Gulf Sturgeon, *Acipenser oxyrinchus desotoi* Vladykov, 1955" (Co-P.I. with R.W. Heard - \$12,000)
- 2000-2001 U.S. Environmental Protection Agency. "Macrobenthic Community Assessment of between 50 and 1000 EPA Furnished Sediment Samples from the Coastal 2000 Monitoring Program Collected during August 2000 through September 2001" (Co-P.I. with R.W. Heard and C. Rakocinski - \$30,000)
- 2003 South Carolina Department of Natural Resources, Charleston, SC. "Taxonomic

- evaluation of archived Polychaeta specimens for the Southeastern Regional Taxonomic Center". (P.I. - \$10,724)
- 2004 Florida Fish & Wildlife Service. "Analysis of Benthic Macro-invertebrates from Northern Florida Shallow Coastal Areas Where Gulf Sturgeon, *Acipenser oxyrinchus desotoi*, Are Believed to Forage" (P.I. - \$14,395)
- 2005 Florida Fish & Wildlife Service. "Analysis of Benthic Macro-invertebrates Collected from Gulf Sturgeon Foraging Grounds in Northern Florida Shallow Coastal Areas: Year 2" (P.I. - \$13,385)
- 2005-2007 Conoco-Phillips, Inc. "Analysis of Decapod Larvae from Plankton Samples Collected by Dauphin Island Sea Laboratory: Compass Port Project" (Co-P.I. with R.W. Heard - \$230,404)

Presentations - as author or contributor.

- 1976 Presentation at Mississippi Academy of Sciences, "Distribution of planktonic Chaetognatha in the northern Gulf of Mexico with range extensions of two species", by J. McLelland. Abstract published in Journal of the Mississippi Academy of Sciences 21 (suppl):69.
- 1987 Presentation at Mississippi Academy of Sciences, "Aspects of phytoplankton productivity and community dynamics in Ocean Springs Harbor", by J. McLelland. Abstract published in Journal of the Mississippi Academy of Sciences 32 (suppl):3.
- 1988 Presentation at Mississippi Academy of Sciences, "The deep-water Chaetognatha of the Gulf of Mexico", by J. McLelland. Abstract published in Journal of the Mississippi Academy of Sciences 33 (suppl):81.
- 1990 Poster presentation at the Mississippi Academy of Sciences. "The surf zone fauna of the Mississippi barrier islands; a visual representation", by R. Patten, R.W. Heard, J.A. McLelland, L.H. Melton and S.H. Walker. Abstract published in Journal of the Mississippi Academy of Sciences 35(suppl):90. Poster presented by R. Patten.
- 1991 Poster presentation at the Mississippi Academy of Sciences. "Changes in macroinvertebrate communities along four 800 meter offshore transects at Perdido Key, Florida", by C. Rakocinski, R. Heard, S. LeCroy, J. McLelland, and T. Simons. Abstract published in Journal of the Mississippi Academy of Sciences 36 (suppl):55. Poster presented by C. Rakocinski.
- 1991 Presentation at the Gulf Estuarine Research Society. "Seaward change and zonation of the sandy-shore macrofauna at Perdido Key, Florida, U.S.A", by C. Rakocinski, R. Heard, S. LeCroy, J. McLelland, and T. Simons. Presented by C. Rakocinski at the joint spring meeting of GERS/SEERS, April 11-13, Gulf Breeze, FL.
- 1992 Presentation at Mississippi Academy of Sciences, "Effects of a small-scale oil spill on the near-shore macroinvertebrate communities of Horn Island, Mississippi", by J. McLelland, R. Heard, and D. Hard. Abstract published in Journal of the Mississippi Academy of Sciences 37.
- 1992 Presentation at the Mississippi Academy of Sciences. "Community structure of the sandy-shore macrofauna at Perdido Key, Florida, U.S.A.: initial impact from beach

- restoration”, by C. Rakocinski, R. Heard, S. LeCroy, J. McLelland, and T. Simons. Abstract published in *Journal of the Mississippi Academy of Sciences* 37.
- 1992 Presentation at the Gulf Estuarine Research Society. “Community structure of the sandy-shore macrofauna at Perdido Key, Florida, U.S.A.: initial impact from beach restoration”, by C. Rakocinski, R. Heard, S. LeCroy, J. McLelland, and T. Simons. Presented by C.R. at GERS spring meeting, 3 April, 1992, Port Aransas, Texas
- 1994 Presentation at the Mississippi Academy of Sciences. “Responses by benthic macrofauna to beach and profile nourishment at Perdido Key Florida: Benthic recovery”, by C. Rakocinski, R. Heard, S. LeCroy, J. McLelland, and T. Simons. Abstract published in *Journal of the Mississippi Academy of Sciences* 38.
- 1999 Poster presentation at the North American Benthological Society, “A preliminary report of aquatic insects from the Cayman Islands”, by D. Bass, R. Heard, and J. McLelland. Abstract published in *Bulletin of the North American Benthological Society* 16(1): 229. Abstract no.483. Poster presented by D. Bass
- 2004 Presentation at Gulf Sturgeon Science and Management meeting held in Big Branch, LA, “Analysis of northern Florida shallow coastal benthos associated with Gulf Sturgeon Foraging”, by J. McLelland.
- 2015 Presentation at the Migratory Bird Action Plan Team meeting held in Thibodaux, LA, “Caminada Headland Beach benthic survey”, by J. McLelland

Research and Teaching

Research Interests:

- Ecology and food-web dynamics of benthic macro-invertebrates from intertidal, shallow subtidal and fouling communities.
- Taxonomy and zoogeography of Chaetognatha, Polychaeta, Tanaidacea, Cumacea, Isopoda, Bryozoa, Hydroida, Ophiurida, and Sipunculida from the eastern Atlantic, Caribbean Sea and Gulf of Mexico.
- Systematics and distribution of deep-water Tanaidacea

Teaching Experience:

- 1974 Laboratory instructor for the Invertebrate Zoology course taught spring semester at USM, Hattiesburg, MS
- 1975 Laboratory teaching assistant for the Vertebrate Zoology and Ichthyology course taught during the summer at GCRL, Ocean Springs, MS
- 1976 Instructor for Advanced Biology at Ocean Springs High School, Ocean Springs, MS
- 1980 Laboratory teaching assistant for the General Biology and Zoology courses taught fall semester at Louisiana State University, Baton Rouge, LA
- 1985 Instructor for the mini-course, “Invisible Biology of the Sea” at the J.L. Scott Marine Education Center, Biloxi, MS
- 1992 Adjunct professor of General Biology (BIO 1134) taught fall semester at the Jeff Davis campus of Gulf Coast Community College, Gulfport, MS

- 1997 Instructor in Applied Coastal Planktology (BSC 692), spring semester at GCRL, Ocean Springs, MS.
- 1998 Instructor for a workshop in polychaete taxonomy at the North American Oligochaete Conference, October meeting of the Florida Association of Benthologists held at Long Key, FL
- 1999 Instructor in Applied Coastal Planktology (BSC 692), spring semester at GCRL, Ocean Springs, MS.
- 2002 Assistant laboratory instructor and field guide for two special topics courses (COA 690): Fauna of Exposed Beaches and Fauna of Submerged Aquatic Vegetation (COA 690)
- 2003-13 Instructor for Barrier Island Ecology (COA 690), Summer Field Program at Gulf Coast Research Laboratory, Ocean Springs, MS.
- 2013 Instructor for the Polychaete Taxonomy Workshop held by the Florida Association of Benthologist at the University of Tampa, FL. Topic: Scolecida, the simple polychaete worms.
- 2014-16 Lectures on near-shore benthic, sand-beach, lagoon and inland pond communities of barrier islands for the Barrier Island Ecology (COA 690), Summer Field Program at Gulf Coast Research Laboratory, Ocean Springs, MS.

Publications

- McLelland, J.A. 1978. The summer distribution of Chaetognatha in the northeastern Gulf of Mexico. M.S. Thesis. University of Southern Mississippi, Hattiesburg. 173 p.
- _____. 1980. Notes on the northern Gulf of Mexico occurrence of *Sagitta friderici* Ritter-Zahony (Chaetognatha). Gulf Research Reports 6(4):343-348.
- Perry, H.M. and J.A. McLelland. 1981. First recorded observance of the dinoflagellate *Prorocentrum minimum* (Pavillard) Schiller 1933 in Mississippi Sound and adjacent waters. Gulf Research Reports 7(1):83-85.
- Perry, H.M. and J.A. McLelland. 1981. Blooms continue to cause red tides in coastal waters of Mississippi. Coastal Oceanography & Climatology News. 4(1):1-2.
- McLelland, J.A. 1984. Observations on chaetognath distributions in the northeastern Gulf of Mexico during the summer of 1974. Northeast Gulf Science 7(1):49-59.
- _____. 1989. *Eukrohnia calliops*, a new species of Chaetognatha from the northern Gulf of Mexico with notes on related species. Proceedings of the Biological Society of Washington 102(1):33-44.
- _____. 1989. An illustrated key to the Chaetognatha of the northern Gulf of Mexico with notes on their distribution. Gulf Research Reports 8(2):145-172.
- McLelland, J.A. & H.M. Perry. 1989. Records of deep-water Chaetognatha from the northern Gulf of Mexico. Gulf Research Reports 8(2):181-187.
- McLelland, J.A. & R. W. Heard. 1991. Notes on some chaetognaths from Pine Cay, Turks and Caicos Islands (British West Indies). Gulf Research Reports 8(3):227-235.
- Spotte, S., R.W. Heard, P. Bubucis, R.R. Manstan, and J.A. McLelland. 1991. Pattern and coloration of *Periclimenes rathbunae* from the Turks and Caicos Islands, with comments

- on host associations in other anemone shrimps of the West Indies and Bermuda. *Gulf Research Reports* 8(3):301-311.
- Gaston, G.R., J.A. McLelland, & R.W. Heard. 1992. Feeding biology, distribution, and ecology of two species of benthic polychaetes: *Paraonis fulgens* and *Paraonis pygoenigmatica* (Polychaeta: Paraonidae). *Gulf Research Reports* 8(4):395-399.
- Rakocinski, C.F., R.W. Heard, S.E. LeCroy, J.A. McLelland and T. Simons. 1993. Seaward change and zonation of the sandy-shore macrofauna at Perdido Key, Florida, USA. *Estuarine Coastal and Shelf Science*. 36:81-104.
- McLelland, J.A. & G.R. Gaston. 1994. Two new species of *Cirrophorus* (Polychaeta: Paraonidae) from the northern Gulf of Mexico. *Proceedings of the Biological Society of Washington* 107(4):524-531.
- McLelland, J.A., R.W. Heard, & J.D. Hardy, Jr. 1992 (1994). Arrow worms (Chaetognatha) from the near-shore waters of Tobago. *Caribbean Marine Studies* 3:33-40
- Gaston, G.R. & J.A. McLelland. 1996. *Aricidea (Allia) bryani*, a new species of Polychaete (Polychaeta: Paraonidae) from the northern Gulf of Mexico. *Gulf Research Reports* 9(3): 189-195.
- Alvarez-Cadena, J.N., E. Suárez-Morales, & J.A. McLelland. 1996. Observations on an isolated population of *Sagitta hispida* Conant (Chaetognatha) in a tropical lagoon system of northeast Yucatan (Mexico). *Gulf Research Reports* 9(3): 197-204.
- Rakocinski, C.F., R.W. Heard, S.E. LeCroy, J.A. McLelland and T. Simons. 1996. Responses by macrobenthic assemblages to extensive beach restoration at Perdido Key, Florida, U.S.A. *Journal of Coastal Research* 12(1): 326-353.
- McLelland, J.A. & G.H. Meyer. 1998. *Ekleptostylis heardi* n.sp. (Diastylidae), a new cumacean from South Atlantic waters. *Proceedings of the Biological Society of Washington* 111(2): 278-287.
- Rakocinski, C.F., S.E. LeCroy, J.A. McLelland and R.W. Heard. 1998. Nested spatio-temporal scales of variation in sandy-shore macrobenthic community structure. *Bulletin of Marine Science* 63:343-362.
- Suárez-Morales, E., J. McLelland, and J. Reid. 1999. The planktonic copepods of coastal saline ponds of the Cayman Islands with special reference to the occurrence of *Mesocyclops ogunnus* Onamabiro, an apparently introduced Afro-Asian cyclopoid. *Gulf Research Reports* 11:51-55.
- Rakocinski, C.F., S.E. LeCroy, J.A. McLelland and R.W. Heard. 2000. Possible sustained effects of hurricanes Opal and Erin on the macrobenthos of nearshore habitats within the Gulf Islands National Seashore. *Gulf and Caribbean Research* 12:19-30.
- Rakocinski, C. F. and J. A. McLelland. 2007. Macroinfauna. Chapter 11 IN *Grand Bay National Estuarine Research Reserve: An Ecological Characterization* (Peterson, M.S., G.L. Waggy and M.S. Woodrey, editors). Grand Bay National Estuarine Research Reserve, Moss Point, Mississippi. pp 172-190.
- McLelland, J.A. 2007. Family Pseudotanaidae Sieg, 1976. In: Larsen, K. & Shimomura, M. (Eds.). *Tanaidacea* (Crustacea: Peracarida) from Japan III. The deep trenches; the Kurile-Kamchatka Trench and Japan Trench. *Zootaxa*, 1599: 1-149.
- McLelland, J.A. 2008. A systematic and taxonomic review of the family Pseudotanaidae (Crustacea: Peracarida: Tanaidacea) based primarily on morphometric cladistic analyses. PhD Dissertation, University of Southern Mississippi, Hattiesburg. 284 p.

Hernández-Florez, R.M., J.A. McLelland and E. Suárez-Morales. 2009. Planktonic Chaetognatha of the Gulf of Mexico. *In*: Felder, D.L. & Camp, D.K. (Eds.). Gulf of Mexico Origin, Waters, and Biota. Texas A&M University Press, College Station, TX. Chapter 69: 1165-1172.

Private Consulting Work

- 2001 Polychaete Identifications, Puerto Rico - Air and Water Research, Inc., Gainesville, FL
- 2000 Chaetognath Identifications, Tampa Bay, Florida - Mote Marine Laboratory, Sarasota, FL
- 2000 Isopod Identifications, Tampa Bay, FL - Ken Stuck, GCRL, through contract with Mote Marine Laboratory, Sarasota, FL
- 2008-16 Analysis of macrobenthic samples from La Vaca Bay, TX - Through contracts with ATKINS, Inc., Tampa, FL, and Freese & Nichols, Inc., Austin, TX
- 2009 Survey of Turkey Creek area, Gulfport, MS, and macrobenthic sample analysis – Through contract with Environmental Management Services, Hattiesburg, MS
- 2009-12 Intertidal macrobenthic community analysis of MS public beaches - Through contract with Mississippi Department of Wildlife, Fisheries and Parks, Museum of Natural Science, Jackson, MS
- 2010 Benthic ecological and baseline survey of borrow pits associated with dredging activities adjacent to St. Andrew Bay, Panama City, FL - With Marine Taxonomy Associates (Panama City, FL) through contract with Florida Department of Environmental Protection, Tallahassee, FL
- 2011 Analysis of Benthic Macro-invertebrates of Choctawhatchee Bay in Relation to Relocation Sites of Telemetered Gulf Sturgeon (*Acipenser oxyrinchus desotoi*) and Available Habitats – With Gulf Benthic Taxonomy Assessment (Ocean Springs, MS) through contract with NOAA Fisheries, St. Petersburg, FL
- 2011 Analysis of macrobenthic samples from Weeks Bay, AL, collected by Alabama Department of Environmental Management – With Gulf Benthic Taxonomy Assessment (Ocean Springs, MS) through contract with Mississippi Department of Environmental Quality, Jackson, MS (administered by Tetra Tech, Inc., Owings Mills, MD)
- 2012 Analysis of macrobenthic samples from St. Louis Bay, MS, collected by Mississippi Department of Environmental Quality - With Gulf Benthic Taxonomy Assessment (Ocean Springs, MS) through contract with Mississippi DEQ

(administered by Tetra Tech, Inc., Owings Mills, MD)

- 2013 Analysis of macrobenthic samples from a hurricane canal off Galveston Bay, TX - With Gulf Benthic Taxonomy Assessment (Ocean Springs, MS) through contract with ATKINS, Inc., Tampa, FL
- 2013 Caminada headlands beach pre-construction benthic organism survey (Fourchon, LA) – With Gulf Benthic Taxonomy Assessment (Ocean Springs, MS) through contract with Louisiana Universities Marine Consortium (LUMCON)
- 2013-15 Quality Assurance/Quality Control (QA/QC) for taxonomic identifications of macroinvertebrates from samples collected in Tampa Bay, FL – With Gulf Benthic Taxonomy Assessment (Ocean Springs, MS) through contract with Terra Environmental Services, Inc., Tampa, FL
- 2014 Analysis of macrobenthic samples from Mobile River, AL – With Gulf Benthic Taxonomy Assessment (Ocean Springs, MS) through contract with Payne Environmental Service, Inc., Mobile, AL
- 2014 2014 Caminada Headland Beach benthic organism survey: year 2 – With Gulf Benthic Taxonomy Assessment (Hattiesburg, MS) through contract with Louisiana Universities Marine Consortium (LUMCON)
- 2014-15 Benthic taxonomic assessment for the Mississippi Coastal Assessment (“MCA”) program – With Gulf Benthic Taxonomy Assessment (Hattiesburg, MS) through contract with Mississippi Department of Environmental Quality (“MDEQ”), Jackson, MS
- 2014 Benthic faunal community assessment of Turkey Creek within the SediMite cap area adjacent to the Cavenham Forest Industries (CFI) facility of Gulfport, MS – With Gulf Benthic Taxonomy Assessment (Hattiesburg, MS) through contract with Environmental Management Service, Inc., Hattiesburg, MS
- 2015 Caminada Headland Beach benthic organism survey: year 3 – With Gulf Benthic Taxonomy Assessment (Hattiesburg, MS) through contract with Barataria-Terrebonne Estuary Foundation, Thibodaux, LA
- 2015 Benthic infaunal assessment and taxonomic characterization of the Shell Chemical Plant LP Mobile site discharge outfall on the Chickasaw Creek, Mobile, AL – With Gulf Benthic Taxonomy Assessment (Hattiesburg, MS) through contract with Payne Environmental Service, Inc., Mobile, AL

2015-16 Quality Assurance/Quality Control (QA/QC) for taxonomic identifications of macroinvertebrates extracted from NCCA benthic samples from the Gulf of Mexico coastline – With Gulf Benthic Taxonomy Assessment (Hattiesburg, MS) through contract with Tetra Tech, Inc., Owings Mills, MD