

## Coastal Ecosystems Group (CEG) Grants, Publications, and Graduate Advising

Time period: Jan 2007 – July 2010

### Overview of CEG activities

#### **Grants:**

Total funding allocated to CEG members = \$6,132,234, 65 projects, average grant = \$94,342

2010 TOTAL \$2,237,905, 14 projects, average grant = \$159,850 (partial year)

2009 TOTAL \$1,216,270, 16 projects, average grant = \$76,016

2008 TOTAL \$ 957,187, 16 projects, average grant = \$59,824

2007 TOTAL \$1,720,872, 19 projects, average grant = \$90,572

Summary: average grant size is increasing, CEG investigators average 2-3 grants/yr

#### **Publications:**

Total papers published = 87, \*student authored publications = 17 (19.5%)

2010 TOTAL = 15, \*student authored = 5 (partial year)

2009 TOTAL = 29, \*student authored = 4

2008 TOTAL = 17, \*student authored = 4

2007 TOTAL = 26, \*student authored = 4

Summary: average publication rate steady, CEG investigators average 2-3 peer-reviewed papers/yr, 20% are student authored papers.

#### **Graduate Students:**

Total Students advised = 38

Number Graduated = 12 M.S., 1 Ph.D.

Number Current = 17 M.S., 8 Ph.D.

Summary: average number of current graduate students is 3. CEG is comprised of 5 junior and 3 senior faculty, student graduation totals expected to increase as more CEG faculty become tenured.

GRANTS (TOTAL FUNDING ALLOCATED TO CEG MEMBERS = \$6,132,234, 65 projects)

**2010 partial (TOTAL \$2,237,905, 14 projects)**

1. **Biber, P.D., Wu, W, & M. Peterson**, NOAA, Northern Gulf Institute Rapid BP funds. “Saltmarsh habitat sampling to delineate potential oil impacts from BP Deepwater Horizon spill.” \$65,925, 2010.
2. **Campbell, J., Biber, P.D., Dillon, K.S. Fulford, R. Rakocinski C.** MS-DMR, CIAP: Colonization and succession of new habitats: Implications for the success of artificial reefs. \$625,738, 2010-2012
3. Hendon, R. Heard, R, **Biber, P.D.**, U.S. Department of Housing and Urban Development, MS State Port Authority: An annotated bibliography of literature on estuarine & marine resources relative to the port of Gulfport restoration program, Mississippi – Task Order 3. \$56,334, (Biber portion \$17,650), 2010
4. **Peterson, MS.** & JR Hendon. U.S. Department of Housing and Urban Development, “Gulf Sturgeon Research and Study Protocol -Task Order 4”, \$34,289, (Peterson portion \$29,240) 2010.
5. **Dillon, K.S.** Effects of the Deepwater Horizon oil/dispersant mixture on heterotrophic bacterial growth and respiration in the northern Gulf of Mexico. PI, NOAA, Northern Gulf Institute Rapid BP funds. \$80,575, 2010.
6. **Dillon, K.S.** And others. A Bottlenose Dolphin Surveillance Team for the Mississippi Sound, Co-PI with several researchers at USM Department of Coastal Sciences, MS DMR/Minerals Management Service, \$993,816, (Dillon portion \$201,000) 2011 – 2014.
7. **Fulford, R.** Robert Griffitt and Harriet Perry NSF “Impacts of the Deepwater Horizon oil spill on larval recruitment and mortality of Blue crabs, *Callinectes sapidus*, in the northern Gulf of Mexico.” (Fulford portion \$133,140) 2010-2011 .
8. **Fulford, R. (PI), M. Peterson** and H. Perry, and **W. Wu** “Assessment of ecosystem services of selected coastal habitat types: Towards a model-based toolset for management planning”. NOAA – Office of Oceanic and Atmospheric Research, Northern Gulf Institute Initiative. (CEG portion \$274,467) 2010-2012.
9. **Fulford, R. M. Peterson** & S. Lorenz. NOAA – Office of Oceanic & Atmospheric Research, Northern Gulf Initiative, “Ecosystem Approach to Management for the Northern Gulf: year 2” (CEG portion \$56,001) 2010-2011
10. **Peterson, MS.** Mississippi-Alabama Sea Grant Consortium, “Fish & invertebrate community structure & food-web dynamics in tidal creeks in an anthropogenically fragmented, coastal landscape”, R/CEH-33-PD. \$10,000. 2010-2011
11. **Peterson, MS,** M. Roberts, & A. Rohnke NOAA, NMFS Protected Species Cooperative Conservation Program, “Identifying feeding habitat for and movement of the juvenile/sub-adult cohort of the Gulf Sturgeon, *Acipenser oxyrinchus desotoi*, in the Pascagoula River estuary, Mississippi.” \$761,398, (Peterson portion \$603,121) 2010-2013.
12. Joanne Lyczkowski-Shultz (NMFS), William Graham & Frank Hernandez (DISL), Malinda Sutor & Mark Benfield (LSU); Harriet Perry & **LeCroy, S.** (GCRL) Identifying linkages between zooplankton dynamics, fishery resources and climate change in the northern Gulf of Mexico. National Oceanic and Atmospheric Administration, Northern Gulf Institute (NGI) Program, GCRL \$171,637, (SEL: 2010 – \$47,709; 2011 – \$42,636, 2012 - \$ ?), 2010 – 2012.
13. **Rakocinski, C.** NOAA – Cooperative Institute, NOAA, U.S. Dept. of Commerce. NOAA Northern Gulf Initiative (NGI): Macrobenthic Indicators of Hypoxia. \$108,186, 2010-??
14. **W. Wu** in collaboration with F. Scatena. “Rapid request for ground-verification of the Luquillo Critical Zone”. NSF. (Wu portion \$32,872) 2010-11.

**2009 (TOTAL \$1,216,270, 16 projects)**

1. **Biber, P.D.** MS-DMR, CIAP: MS.R.745 Native Plant Nursery for Restoration of Mississippi Coastal Vegetation, \$300,000. 2010-2013
2. **Biber, P.D.** MS-DMR Tidelands 2009: Mississippi Native Wetlands Nursery. \$50,000, 2009-2010.
3. Cho, H.J., **Biber, P.D.** NOAA, MS-AL Seagrant Omnibus: Habitat Suitability Index for Submerged Aquatic Vegetation of the Mississippi Coast. \$70,984, (Biber portion \$5000) 2010-2011
4. Waller, R, **B. Comyns** et al. Dept of Commerce. NOAA/NMFS. "South East Area Monitoring and Assessment Program (SEAMAP)". \$469,681; (Comyns portion \$140,904 + SEL = \$5,538), 2009-2010.
5. **Dillon, K.S., M. Peterson and R. Fulford.** Ecosystem-based management: Assessing ecosystem services of oyster reefs using stable isotope signatures, Mississippi DMR Tidelands, \$50,000, 2009 – 2011.
6. **Dillon, K.S.** Characterizing stormwater nitrogen inputs to Mississippi's coastal waters: a landscape approach. PI, Mississippi – Alabama Seagrant. \$100,000, 2010 – 2012.
7. **Dillon, K.S.** and others Examining nitrogen and carbon dynamic and the role of heterotrophic bacteria in hypoxic waters of the Mississippi Bight. Co-PI with several researchers at USM Department of Marine Science, total \$652,300 (Dillon portion \$43,922), 2009 – 2011.
8. **Fulford, R. & K. Dillon.** Mississippi Department of Marine Resources "Determining the ecosystem role of Gulf menhaden, *Brevoortia patronus*, in support of ecosystem-based fisheries management." \$148,000, 2009-2011.
9. **Fulford, R.** NOAA CRP/The Nature Conservancy. "Bay St. Louis, Mississippi Oyster Restoration Project." \$24,730, 2009-2010.
10. **Fulford, R. M. Peterson & S. Lorenz.** NOAA – Office of Oceanic & Atmospheric Research, Northern Gulf Institute "Participation in the development of a prototype Integrated Ecosystem Assessment (IEA) of Northcentral Gulf of Mexico. (CEG portion \$65,000), 2009-2010.
11. **Rakocinski, C.** NOAA – NMFS, U.S. Dept. of Commerce. Investigation of Vital Rate Parameters for Early Stages of Brown Shrimp and Gulf Menhaden Relative to Ocean Warming and Acidification. \$19,952, 2009-2010
12. **Wu, W.** "Assessing the carbon dynamics at the Mississippi coastal forests impacted by Hurricane Katrina". University of Southern Mississippi - Summer Faculty Research Grant for the summer of 2009, \$9,900, 2009.
13. **Wu, W.** "Assessing the water use by trees at the Mississippi coastal forests impacted by Hurricane Katrina". University of Southern Mississippi - Aubrey Keith Lucas and Ella Ginn Lucas Endowment for Faculty Excellence Award, \$2,212, 2009-2010.
14. **W. Wu, M. Kalcic and K. Yeager.** "The impact of accelerated sea level rise on tidal marshes and storm surge". NOAA – Mississippi-Alabama Sea Grant Consortium, Coastal Storms Program, \$100,000, (Wu portion \$58,500), 2009-2010.
15. T. Frisbie (PI), D. Holland, K. Boyd, and **W. Wu** "Evaluation of hurricane evacuation routes' resiliency to storm damage". NASA - Research Opportunities in Space and Earth Sciences Program, \$399,556, (Wu portion \$108,446), 2009-2010.
16. C.T. Driscoll(PI), J.L. Campbell, K. Hayhoe, and **W. Wu.** "Modeling of the hydrochemical responses of high elevation watersheds to climate change and atmospheric deposition". EPA – Science to Achieve Results (STAR) Program, \$800,000, (Wu portion \$84,166), 2009-2013.

**2008 (TOTAL \$957,187, 16 projects)**

1. **Campbell, J., Biber, P.D.** NOAA, LUMCON, CREST: The role of root-associated fungi in saltmarsh restoration success. \$91,855. 2008-2010.

2. **Biber, P.D.** The Nature Conservancy: Seagrass Monitoring in GUIs. \$25,254. 2008-2009.
3. Cho, H.J., Biber, P.D. MS-DMR Tidelands 2008: SAV Restoration at Grand Bay NERR, MS. (Biber portion \$10,019), 2008-2009.
4. Cho, H.J., **Biber, P.D.** May, C.A. NOAA, MS-AL Seagrass: *Ruppia maritima* Restoration using Seedlings in Bayou Cumbest, Grand Bay National Estuarine Research Reserve, Mississippi. (Biber portion \$17,242), 2008-2009.
5. Waller, R, **B. Comyns** et al. Dept of Commerce. NOAA/NMFS. "South East Area Monitoring and Assessment Program (SEAMAP)". \$380,000; (Comyns portion \$114,000. + SEL = \$5,538, 2008-2009.
6. Hoffmayer, E., J.S. Franks and **B.H. Comyns**. Mississippi-Alabama Sea Grant Consortium. "Use of passive acoustics to identify and characterize spotted seatrout spawning habitat in two Mississippi estuaries". \$212,407; (Comyns portion \$70,802), 2008-2009.
7. **Dillon, K.S.** J.Lotz and others. US Marine Shrimp Farming Project: Nitrogen cycling in high intensity, zero exchange shrimp tanks, Co-PI with several researchers at USM Department of Coastal Sciences, United States Department of Agriculture, total ~\$1.2 million, (Dillon portion \$173,351) 2008 – 2010.
8. **Dillon, K.S.** Pascagoula Follow Up Study. PI, First Chemical Corporation/Dupont. \$81,100, 2008 –2012.
9. **Dillon, K.S. & R. Fulford**. Characterizing individual and seasonal variation in tissue-specific C, N, and S stable isotope ratios of spotted sea trout, *Cynoscion nebulosus*, in support of proposals to use stable isotope data to quantify trophic pathways to sport fish, Mississippi – Alabama Seagrass. \$10,000, 2008.
10. **Fulford, R.** & L. Nicholson Mississippi Department of Marine Resources, Tidelands Trust Fund, "Assess coastal river striped bass habitat." \$30,000, 2008-2009.
11. **Peterson, M.S.** & W.T. Slack. State Wildlife Grant Program, Mississippi Museum of Natural Science, "Habitat characteristics and aspects of the reproductive life history of the saltmarsh top-minnow, *Fundulus jenkinsi*, in coastal Mississippi watersheds, with the production of a comparative diagnostic key for young stages of select members of the genus *Fundulus*." (Peterson portion \$172,321). 2008-2010.
12. **Peterson M.S.** 2007 Grand Bay NERR / MS Department of Marine Resources, "Stable isotope analysis of constructed and natural oyster reefs in the Grand Bay NERR." \$5,000., 2008.
13. **Brown-Peterson N.** EcoArray, Inc. "Histological analysis of fathead minnows exposed to nanotubules". \$10,000, 2008.
14. Schaefer, J. & **LeCroy, S.** Improvements to the USM/GCRL Ichthyological Collections, National Science Foundation, \$256,211 total, (SEL portion \$89,106), 2008 – 2011
15. **LeCroy, S.** An Illustrated Identification Guide to the Nearshore Marine and Estuarine Gammaridean Amphipoda of Florida, Volume 5., Florida Department of Environmental Protection, \$41,599, 2008 – 2010
16. **Wu, W.** "Will climate change cause wetland loss on the Mississippi Gulf Coast more than upland land use / land cover change within the next century?". NOAA – Mississippi-Alabama Sea Grant Consortium (MASGC), Project Development Program, \$10,000, 2008-2010.

#### 2007 (TOTAL \$1,720,872, 19 projects)

1. Melissa Pratt-Zossoungbo, **P.D. Biber**. RAND Gulf States Policy Institute: SAV nursery for coastal restoration and education. \$10,000. 2008.
2. **Biber, P.D.** MS-DMR, CIAP: Deer Island Restoration. \$130,019. 2007-2009.
3. **Biber, P.D.** MS-DMR Tidelands 2007: Mississippi Wetlands Plant Nursery. \$25,000, 2007-2008.

4. Waller, R, **B. Comyns** et al. Dept of Commerce. NOAA/NMFS. "South East Area Monitoring and Assessment Program (SEAMAP)". \$236,697; (Comyns portion \$71,009 + SEL = \$5,538, 2007-2008.
5. Waller, R, **B. Comyns, S. LeCroy** et al. Dept of Commerce. NOAA/NMFS. "Winter plankton, spring bluefin tuna larvae, and shark resource survey". This is an expansion on the traditional SEAMAP surveys. \$376,490; (Comyns portion \$112,947 + SEL post-Katrina sample recovery = \$60,013), 2007-2010..
6. **Brown-Peterson, N.J., B.H. Comyns**, and J.S. Franks. Gulf States Marine Fisheries Commission / Atlantic Billfish Research Program. "Reproductive biology, potential spawning and nursery areas and larval identification of blue marlin, *Makaira nigricans*, in the northcentral Gulf of Mexico." Total award: \$233,080, (\$143,328 CEG portion), 2005-2008.
7. **Comyns, B.H.**, J.S. Franks and E Hoffmayer. NOAA/NMFS MARFIN. "Studies on dolphin (*Coryphaena hippurus*) and greater amberjack (*Seriola dumerili*) in the northcentral Gulf of Mexico: early life history and recruitment of larvae and young juveniles to pelagic Sargassum habitat." \$222,046; (Comyns portion \$74,015) 2005-2009.
8. **Dillon, K.S.** Environmental Impacts of Hurricane Katrina, co-PI with several researchers at USM, USM Katrina Research Center, (Dillon portion \$47,800 ), 2007 – 2009.
9. Richard Heard, **Jinx Campbell**, Gary Anderson NSF, pre-PEET grant, "Systematics of the *Tanadacia*.", \$300,000 total, (Campbell portion \$51,214 for CY 2007). 2005–2007.
10. **Campbell, J and P. Biber**. SeaGrant, "The Diversity and Role of Root-Associated Fungi in Saltmarsh and Seagrass Plants and Implications for Restoration Success.", \$141,395, 2006–2008.
11. **Peterson, M.**, H. Perry and **R. Fulford**. NOAA – Office of Oceanic & Atmospheric Research, Northern Gulf Initiative, "Quantifying and assessment of ecosystem services of selected coastal habitat types: Towards a model-based toolset for management planning." (\$318,000 CEG portion), 2007-2010.
12. **Peterson, M.S., K.S. Dillon**, R. Heard & WT Slack. U.S. Fish and Wildlife Service-Katrina funds and USFWS Section 6 Funds, "Gulf sturgeon, *Acipenser oxyrinchus desotoi*, in the Pascagoula drainage, Mississippi: post-Hurricane Katrina assessment of habitat and movement of the juvenile cohort." \$178,000. (Peterson portion \$172,500) 2007-2008.
13. **Peterson, M.**, D. Ruple, R. Calderon, M. Woodrey, & G. Grammer. NOAA Office of Protected Fisheries, Proactive Species Conservation Grant Program, *Fundulus jenkinsi*, Saltmarsh Topminnow: Conservation Planning & implementation." \$436,511, (Peterson portion \$87,559), 2006-2009.
14. **Peterson, M.S.** & A.G. Stricklin NOAA - Coastal Restoration and Enhancement through Science and Technology Program Scholars Program, "Faunal composition and food web dynamics in natural versus constructed intertidal oyster reefs in the northern Gulf of Mexico: a partnership approach to sustainable restoration." \$10,000, 2006-2007.
15. **Peterson, M.S.** NOAA/Nature Conservancy = \$34,165 and NOAA/National Estuarine Research Reserve Program = \$13,750, "Grand Bay intertidal oyster restoration project and study." Total \$47,915. 2006-2007.
16. **Peterson, M.S.** USGS, "Nile tilapia (*Oreochromis niloticus*) in southern Mississippi: current status and potential effects of hurricanes on dispersal." \$2,277, 2006-2007.
17. **Brown-Peterson, N.** National Council for Air and Stream Improvement (NCASI). "Histological analysis of fathead minnow gonadal tissues". \$7075, 2007-2009.
18. **Rakocinski, C, B. Comyns and M. Peterson**. Mississippi Department of Marine Resources, Tidelands Trust Fund. Use of otolith (earbone) microchemistry to determine the importance of specific habitats and regions for juvenile red drum. \$49,000, 2007-2009.
19. **Rakocinski, C, B.H. Comyns, M.S. Peterson**, and A. Shiller. Mississippi-Alabama Sea Grant

Consortium, NOAA, U.S. Dept of Commerce. Use of Otolith Microchemistry of Spotted Seatrout to Identify Stock Source-Areas, Reveal Population Movements, and Determine Interannual Variability in Regional Patterns of Otolith Signatures in Mississippi Coastal Waters. (CEG portion \$205,482), 2007-2009.

CEG PUBLICATIONS 2007-2010: (TOTAL = 87, \*student authored publications = 17)  
note: does not include list of all Bruce Comyns pubs

**2010 partial (TOTAL = 15, \*student authored = 5)**

1. Hyun Jung Cho, **Patrick D. Biber** Michael Poirrier and Jim Garner. 2010. Aquatic plants of the Mississippi gulf river systems. Mississippi Academy of Sciences (in press).
2. Hyun Jung Cho and **Patrick D. Biber**. 2010 Seed Propagation Protocol for Wigeongrass (*Ruppia maritima*). Ecological Restoration 28: 135-137.
3. \*Pratt Zossoungbo, M., **Biber, P.D.** (2010). Mycorrhizal fungal associations with four salt marsh species. Chp 7 In A. Edelstein & D. Bar. (eds.) Handbook of Environmental Research, Nova Science Publishers, Inc.
4. \*Walker AK and **Campbell J**. 2010. Marine fungal diversity: a comparison of natural and created saltmarshes of the north-central Gulf of Mexico. Mycologia 102: 513-521.
5. **Fulford, R.S.** and J.R. Hendon. 2010. Evaluating management actions for spotted sea trout, *Cynoscion nebulosus*, in Mississippi with an age-structured projection model. Gulf and Caribbean Research 22:51-61.
6. **Fulford, R.S.**, D.L. Breitburg, R.I.E. Newell, W.M. Kemp and M. Luckenbach. 2010. Evaluating ecosystem response to oyster restoration and nutrient load reduction with a multispecies bioenergetics model. Ecological Applications 20(4): 915-934.
7. \*Lopez, J.D., **M.S. Peterson**, E.T. Lang, and A.M. Charbonnet. (2010). Endangered Species Research DOI: 10.3354/esr00294. 15p + 3p supplement.
8. \*Lopez, J.D., **M.S. Peterson**, J. Walker, G.L. Grammer, and M.S. Woodrey. (2010). Estuaries and Coasts. DOI: 10.1007/s12237-010-9266-5. 11p.
9. \*Stricklin, A.G., **M.S. Peterson**, J.D. Lopez, C.A. May, C.F. Mohrman, and M.S. Woodrey. (2010). Gulf and Caribbean Research 22:21-27.
10. **Brown-Peterson, N.J.**, D.M. Wyanski, F. Saborido-Rey, B.J. Macewicz and S.K. Lowerre-Barbieri. 2010. Marine and Coastal Fisheries. In press.
11. **Brown-Peterson, N.J.**, D.M. Wyanski, S.K. Lowerre-Barbieri, F. Saborido-Rey, J. Tomkiewicz and B.J. Macewicz. 2010. Proceedings of the 4<sup>th</sup> Workshop on Gonadal Histology of Fishes. <http://hdl.handle.net/10261/24937>. 6 p.
12. Heins, D.C. and **N.J. Brown-Peterson**. 2010. Parasitology 137:1151-1158.
13. Baumberger, R.E. **N.J. Brown-Peterson**, J.K. Reed and R.G. Gilmore. 2010. Copeia 2010: 41-46.
14. Yeager, K.M., R. Brinkmeyer, **C.F. Rakocinski**, P.H. Santschi and K.J. Schindler. 2010. Impacts of dredging activities on the accumulation of dioxins in surface sediments of the Houston ship channel, Texas. Journal of Coastal Research. 26: 743-752. doi: 10.2112/JCOASTRES-D-09-00009.1
15. **Wu, W.**, and C.T. Driscoll, 2010. Impact of climate change on three-dimensional dynamic critical load functions. *Environmental Science & Technology* **44**, 720-726.

**2009 (TOTAL = 29, \*student authored = 4)**

1. Gregory A. Carter, G. Alan Criss, Gabriel A. Blossom & **Patrick D. Biber**. 2009. Decadal-scale changes in seagrass coverage on the Mississippi barrier islands, northern Gulf of Mexico. Nature Preceedings. doi:10.1038/npre.2009.3669.1
2. \*Pratt Zossoungbo, M., **Biber, P.D.** 2009. Inoculation and colonization of four saltmarsh species with vesicular-arbuscular mycorrhizal fungi. Restoration Ecology 27:387-389.
3. Gallegos, C.L., Kenworthy, W.J., **Biber, P.D.**, Wolfe, B.S. 2009. Underwater spectral energy distribution and seagrass depth limits along an optical water quality gradient. In M. Lang and I.

- MacIntyre [eds.], Smithsonian Contribution to the Marine Sciences, No. 38:359-368. Smithsonian Institution Scholarly Press.
4. Cho, H.J., **Biber, P.D.**, and J.D. Caldwell. 2009. Aquatic Plants of the Mississippi Coast. 137p [also online at <http://jcho.masgc.org/>]
  5. Cho, H.J., **Biber, P.D.**, Nica, C. 2009. The rise of *Ruppia* in seagrass beds: changes in coastal environment and research needs. Chp 12 In E.K. Drury and T.S. Pridgen (eds.) Handbook of Environmental Quality, Nova Science Publishers, Inc.
  6. **Biber, P.D.** 2009. Determining Salinity-Tolerance of Giant *Salvinia* using Chlorophyll Fluorescence. Gulf and Caribbean Research. 21:36-39.
  7. **Biber, P.D.**, W.J. Kenworthy and H.W. Paerl. 2009. Eelgrass (*Zostera marina* L.) and shoalgrass (*Halodule wrightii* Asch.) responses to variable light-limitation stress and recovery. Journal of Experimental Marine Biology and Ecology 369:110-117.
  8. **Campbell J**, Marvanová L and Gulis V. 2009. Evolutionary relationships among aquatic anamorphs and teleomorphs II: *Tricladium*, *Varicosporium*. Mycological Research 113: 1322-1334.
  9. \*Walker AK and **Campbell J**. 2009. First records of the seagrass parasite *Plasmodiophora diplantherae* from the north-central Gulf of Mexico. Gulf and Caribbean Research 21: 63-65.
  10. **Campbell J**, Inderbitzin P, Volkmann-Kohlmeier B and Kohlmeier J. 2009. Koralionastetales, a new order of marine Ascomycota in the Sordariomycetes. Mycological Research 113: 373-380.
  11. **Dillon**, K.S. 2009. Shallow injection wells can be source of nutrients to surface waters. In Kruczynski, W. & Fletcher, P (eds.). South Florida Marine Environments: An ecological synthesis. University of Maryland Press. Annapolis, MD (in press).
  12. Grimes, D.J, C.N. Johnson, K.S. **Dillon**, A.R. Flowers, N.F. Noriega III, and T. Berutti. 2009. What genomic sequence information has revealed about *Vibrio* ecology in the ocean – a review. *Microbial Ecology* 58: 447-460.
  13. Breitburg, D.L., J.K. Craig, **R.S. Fulford**, K. A. Rose, W.R. Boynton, D.C. Brady, B.J. Ciotti, R.J. Diaz, K.D. Friedland, J.D. Hagy III, D.R. Hart, A.H. Hines, E.D. Houde, S.E. Kolesar, S.W. Nixon, J.A. Rice, D.H. Secor, and T.E. Taggart. 2009. Nutrient enrichment and fisheries exploitation: interactive effects on estuarine living resources and their management. *Hydrobiologia* 629: 31-47.
  14. \*Grammer, G.L., **N.J. Brown-Peterson**, **M.S. Peterson**, and **B.H. Comyns**. (2009). Gulf of Mexico Science 27(1):62-73.
  15. Headley, M.D., H.A. Oxenford, **M.S. Peterson**, and P. Fanning. (2009). Journal of Applied Ichthyology 25:669-675.
  16. **Peterson**, **M.S.** and M.R. Lowe. (2009) Proceedings of the Gulf and Caribbean Fisheries Institute 61:256-262.
  17. **Peterson**, **M.S.** and M.R. Lowe. (2009). Reviews in Fisheries Science 17(4):505-523.
  18. **Brown-Peterson**, **N.J.**, K.M. Burns and R.M. Overstreet. 2009. Proceedings of the Gulf and Caribbean Fisheries Institute 61: 149-155.
  19. Carter, B.J., R.J. Griffitt, **N.J. Brown-Peterson**, H.R. Hammers and D.S. Barber. 2009. Technical Proceedings - Nanotechnology 2009: Life Sciences, Medicine, Diagnostics, Bio Materials and Composites. CRC Press, Boca Raton, FL. 4 p.
  20. Sun, P., W.E. Hawkins, R.M. Overstreet and **N.J. Brown-Peterson**. 2009. International Journal of Research and Public Health. 6:2307-2331.
  21. **Brown-Peterson**, **N.J.** and D.C. Heins. 2009. Journal of Fish Biology. 74:2299-2312.
  22. Borton, D.L., D.L. Cook, W.K. Bradley, R.E. Philbeck, M.G. Dubé, **N.J. Brown-Peterson** and W.R. Streblov. 2009. Integrated Environmental Assessment and Management 5:270–282.
  23. **LeCroy**, **S.E.**, R. Gasca, I. Winfield, M. Ortiz and E. Escobar-Briones. 2009. Amphipoda of the

- Gulf of Mexico. Pp. 941-972 in: D.L. Felder and D.K Camp, eds. Gulf of Mexico: Its Origins, Waters and Biota. Volume I: Biodiversity. Texas A & M University Press, College Station, Texas, 1312 pp.
24. **LeCroy, S.E.** 2009. Colomastigidae In: J.K. Lowry and A.A. Myers, eds. Amphipoda of the Great Barrier Reef. *Zootaxa* 2260: 348-372.
  25. Myers, A.A. and **S.E. LeCroy**. 2009. Dexaminidae. In: J.K. Lowry and A.A. Myers, eds. Amphipoda of the Great Barrier Reef. *Zootaxa* 2260: 393-424.
  26. Foster, J.M., **S.E. LeCroy**, R.W. Heard and R. Vargas. 2009. Gammaridean Amphipoda of Costa Rica. Pp. 265-274 In: I. Wehrtmann and J. Cortés, eds. Marine Biodiversity of Costa Rica, Central America. *Monographiae Biologicae* 86, Springer, New York, New York, 538 pp. + CD.
  27. **Rakocinski, C.F.** 2009. Linking allometric macrobenthic processes to hypoxia using the Peters mass balance model. *Journal of Marine Biology and Ecology – Special Hypoxia Issue* 381: S13-S20. <http://dx.doi.org/10.1016/j.jembe.2009.07.005>
  28. \*Drury McCall, D., **C.F. Rakocinski** and J. L. Pinckney. 2009. Effects of grass shrimp versus nutrient addition on functional groups of epiphytic algae associated with *Ruppia maritima* growth stages. *Marine Ecology Progress Series* 379: 151-162. doi: 10.3354/meps07877
  29. **Wu, W.**, and C. T. Driscoll, 2009. Application of the PnET-BGC – an integrated biogeochemical model – to assess the surface water ANC recovery in the Adirondack region of New York under three multi-pollutant proposals. *Journal of Hydrology* **378**, 299-312.

**2008 (TOTAL = 17, \*student authored = 4)**

1. **Biber, P.D.** and J.D. Caldwell. 2008. Seed Germination and Seedling Survival of *Spartina alterniflora* Loisel. *American Journal of Agricultural and Biological Science* 3: 633-638.
2. **Biber, P.D.**, C.L. Gallegos, W.J. Kenworthy. 2008. Calibration of a bio-optical model in the North River, NC: a tool to evaluate water-quality impacts on seagrasses. *Estuaries and Coasts* 31: 177-191.
3. Fogel R and **Campbell J.** 2008. Truffles: Gold in the soil. *Inoculum* 59(3): 1-3.
4. Hoch, M.P., K.S. **Dillon**, R.B. Coffin and L.A. Cifuentes. 2008. Sensitivity of bacterioplankton nitrogen metabolism to eutrophication in sub-tropical coastal waters of Key West, Florida. *Marine Pollution Bulletin*. 56: 913 – 926.
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13. **Comyns, B.H., C.F. Rakocinski,, M.S. Peterson** and A. Shiller. 2008. Otolith chemistry of juvenile spotted seatrout (*Cynoscion nebulosus*) reflects local natal regions of coastal Mississippi. *Marine Ecology Progress Series* 371: 243-252. doi: 10.3354/meps07604

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15. \*Zapfe, G.A. and **C.F. Rakocinski**. 2008. Coherent growth and diet patterns in juvenile spot (*Leiostomus xanthurus* Lacepède) reflect effects of hydrology on access to shoreline habitat. *Fisheries Research* 91: 107-111. doi:10.1016/j.fishres.2007.12.014
16. **Rakocinski, C.F.**, C.A. Moncreiff, **M.S. Peterson**, K.E. VanderKooy and T.A. Randall. 2008. Habitat condition and associated macrofauna reflect differences between protected and exposed seagrass landscapes. *Gulf and Caribbean Research* 20: 11-19.
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**2007 (TOTAL = 26, \*student authored = 4)**

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2. **Biber, P.D.** 2007. Hydrodynamic transport of drifting macroalgae (Rhodophyta) through a tidal cut. *Estuarine Coastal and Shelf Science* 74:565-569
3. **Biber, P.D.** 2007. Transport of drifting macroalgae (Rhodophyta) is strongly influenced by flow velocity. *Marine Ecology Progress Series* 343:115-122
4. **Campbell J**, Ferrer A, Raja HA, Sivichai S and Shearer CA. 2007. Phylogenetic relationships among taxa in the Jahnulales inferred from 18S and 28S nuclear ribosomal DNA sequences. *Canadian Journal of Botany* 85: 873-882.
5. Jiao P, Swenson DC, Gloer JB, **Campbell J** and Shearer CA. 2007. Decaspiroones A-E, bioactive Spirodioxynaphthalenes from the freshwater aquatic fungus *Decaisnella thyridioides*. *Journal of Natural Products* 69: 1667-71.
6. **Campbell J.** 2007. Summer Solstice and Fairy Rings. *Inoculum* 58(4): 1-2.
7. **Dillon, K.D.**, J.P. Chanton and L.K. Smith. 2007. Nitrogen Sources and Sinks In A Wastewater Impacted Saline Aquifer Beneath The Florida Keys, USA. *Estuarine, Coastal and Shelf Science* 73: 148-164.
8. Walters, C. and K.S. **Dillon**. 2007. Water Quality. Pages 79-96 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.
9. **Fulford, R.S.**, D.L. Breitburg, R.I.E. Newell, W.M. Kemp and M. Luckenbach. 2007. Effects of oyster population restoration strategies on phytoplankton biomass in Chesapeake Bay: A flexible modeling approach. *Marine Ecology Progress Series* 336: 41-61.
10. **Peterson, M.S.**, G.L. Waggy, and **S. LeCroy**. (2007). Nekton. Pages 197-212 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. 268p.
11. \*Waggy, G.L., **M.S. Peterson**, and **B.H. Comyns**. (2007). *Southeastern Naturalist* 6(4):743-751.
12. Abarca-Arenas, L.G., J. Franco-Lopez, **M.S. Peterson**, **N.J. Brown-Peterson** and E. Valero-Pacheco. (2007). *Fisheries Research* 87:46-57.
13. **Peterson, M.S.**, M.R. Weber, M.L. Partyka, and S.T. Ross. (2007). Aquatic Conservation: Marine and Freshwater Ecosystems 17(6):602-618.
14. \*McDonald, J.L., **M.S. Peterson**, and W.T. Slack. (2007). *Journal of Freshwater Ecology*

- 22(3):461-468.
15. **Peterson, M.S., N.J. Brown-Peterson**, and J.S. Franks. (2007). Gulf and Caribbean Research 19(2):1-3.
  16. **Brown-Peterson, N.J.**, J.S. Franks, **M.S. Peterson**, P. McConney, and B.E. Luckhurst. (2007). Gulf and Caribbean Research 19(2):161-162.
  17. Schofield, P.J., W.T. Slack, **M.S. Peterson**, and D.R. Gregoire. (2007). Southeastern Fishes Council, Proceedings 49:9-15.
  18. **Brown-Peterson, N.J.**, J.S. Franks, **M.S. Peterson**, P. McConney and B. Luckhurst. 2007.. Gulf and Caribbean Research 19(2): 161-162.
  19. **Peterson, M.S., N.J. Brown-Peterson** and J.S. Franks. 2007. Gulf and Caribbean Research 19(2): 1-2.
  20. Abarca-Arenas, L., J. Franco-Lopez, **M.S. Peterson, N.J. Brown-Peterson** and V. Valero-Pacheco. 2007. Fisheries Research 87:46-57.
  21. Brouwer, M., **N.J. Brown-Peterson**, P. Larkin, V. Patel, N. Denslow, S. Manning and T. Hoexum Brouwer. 2007. Journal of Experimental Marine Biology and Ecology. 341:16-31.
  22. **LeCroy, S.E.** 2007. An Illustrated Identification Guide to the Nearshore Marine and Estuarine Gammaridean Amphipoda of Florida. Volume 4. Families Anamixidae, Eusiridae, Hyalellidae, Hyalidae, Iphimediidae, Ischyroceridae, Lysianassidae, Megaluropidae and Melphidippidae. Annual report, Contract No. WM880, Florida Dept. of Environmental Protection, 110 pp.
  23. **Rakocinski, C.F.** and J.A. McLelland. 2007. Macroinfauna. CHAPTER in *Grand Bay National Estuarine Research Reserve: An Ecological Characterization* (Peterson, M.S., G.L. Waggy and M.S. Woodrey, editors) Pp 172-190. Grand Bay National Estuarine Research Reserve, Moss Point, Mississippi.
  24. \*Drury McCall, D. and **C.F. Rakocinski.** 2007. Grass shrimp (*Palaemonetes* spp.) play a pivotal trophic role in enhancing *Ruppia maritima*. *Ecology* 88: 618-624.
  25. \*Drury McCall, D. and **C. F. Rakocinski.** 2007. Grass shrimp (*Palaemonetes* spp.) play a pivotal trophic role in enhancing *Ruppia maritima*. Appendices A – L supplemental to *Ecology* report by the same title, published in digital, Internet-accessible form. *Ecological Archives* E088-041-A(1-12).
  26. **Wu, W.**, C.A.S. Hall, and F. Scatena, 2007. Modeling the impact of recent land cover changes on the stream flows in North-Eastern Puerto Rico. *Hydrological Processes* **21**, 2944-2956. DOI: 10.1002/hyp.6515.

## **Graduate Students Advised (TOTAL 38, Graduated = 12 M.S., 1 Ph.D.)**

### **Biber (3)**

#### Graduated (1):

Melissa Pratt-Zossoungbo (MS, 2006-2008). Thesis title: Mycorrhizal fungi associations with four salt marsh species.

#### Current (2):

Linh Pham (PhD, 2009-2013)

Viviana Mazzei (MS, 2010-2013)

### **Campbell (3)**

Graduated (1): Allison Walker (MS 2005 – 2007). Thesis title:

Current (3): Allison Walker (PhD, 2007-2011)

Amy Salamone (MS 2009-2011), Kate Wire (MS 2009-2011)

### **Comyns (6)**

Students graduated - 1 Ph.D., 3 M.S.

Current students - 1 Ph.D., 1 M.S.

### **Dillon (3)**

#### Graduated (1):

Katie Carpenter, (M.S. 2007 - 2010). Thesis title: Examining the bioavailability of dissolved organic matter and inorganic nutrients to heterotrophic bacteria in Mississippi coastal waters

#### Current (2):

John Henry Francis (MS 2009-2011), Guy "Will" Jeter (MS student 2010-2013)

### **Fulford (7)**

#### Graduated (1):

Jay Dieterich (MS, 2007-2010). Thesis title: Mapping habitat limitation of striped bass, *Morone saxatilis*, in Mississippi coastal rivers in support of stock enhancement.

#### Current (6):

Zach Olsen (PhD, 2010-2015) - Trophic dynamics and feeding behavior of Gulf menhaden (*Brevoortia patronus*).

Rachel Brewton (MS, 2010-2013) – Oyster reef trophic dynamics and ecosystem services.

Brinton Barnes (MS 2010-2013) Importance of trophic production on artificial reefs to fisheries production

Allison Odom (MS, 2008-2011) – Influence of shrimp bycatch reductions on three species of fish in the Gulf of Mexico with different life histories. Cooperative research program w/ NMFS Pascagoula Laboratory.

Sam Clardy (MS part time, 2008-2011) – Reproductive biology of southern kingfish, *Menticirrhus americanus*, in Mississippi. (Anticipated graduation December 2010)

Rebecca Haehn (MS, 2005-2011) – Characterization of spawning periodicity and habitat requirements for horseshoe crabs, *Limulus polyphemus*, on Mississippi barrier islands. (Anticipated graduation August 2010)

### **Peterson (8)**

#### Graduated (3):

Kimberly C. Guynn (M.S. 2004- 2007). Thesis title: A review of mercury in fishes with a detailed treatment of mercury concentrations in the Patagonian toothfish, *Dissostichus eleginoides* Smitt

1898, among three distinct ocean basins.

John D. Lopez (M.S. 2007-2009). Thesis title: Characterization of habitat, abundance, distribution and perspectives on *Fundulus jenkinsi* (saltmarsh topminnow) life history in the north-central Gulf of Mexico.

Jeanne-Marie Havrylkoff (M.S. 2007-2010). Thesis title: Gulf sturgeon of the Pascagoula: Post-Katrina assessment of seasonal usage of the lower estuary.

Current (5):

Alix G. Stricklin (Ph.D. candidate) 2005-2010: Faunal colonization and food web dynamics of natural and restored intertidal oyster beds.

Erik T. Lang (M.S. Candidate). 2008-2011 Reproduction and early development of young marsh topminnows, with emphasis on the saltmarsh topminnow, *Fundulus jenkinsi*.

Michael R. Lowe (Ph.D. student). 2008-2012 Community metrics and trophic dynamics in tidal creeks in an anthropogenically fragmented, coastal landscape.

Bradley Ennis (M.S. student). Fall 2010-.

Travis Holland (M.S. student). (co-chair). Fall 2010-.

**Rakocinski (6)**

Graduated (2):

Sarah E. Turner, (MS 2004-2008). Thesis Title: Trophic relations of juvenile Gray Triggerfish (*Balistes capriscus*) and Planehead Filefish (*Monacanthus hispidus*) within *Sargassum* habitat.

Lauren A. Littleton, (MS 2007-2010), Thesis Title: Differences in feeding performance between hatchery-reared and wild juvenile Spotted Seatrout *Cynoscion nebulosus*.

Current (4):

Kelsey Burns, (Ph.D. 2009-2013), Claire Matten (Ph.D., 2009-2013)

Daneen Menke, (M.S. 2006-2011), Carley Knight, (M.S., 2010-2012)

**Wu (2)**

Current (2):

Lina Fu, (PhD, 2009-2013); Jennifer Frey (MS, 2008-2011).