

# **Charles W. Martin, Ph.D.**

Research Assistant Professor  
Nature Coast Biological Station  
Institute of Food and Agricultural Sciences  
University of Florida  
Cedar Key, FL 32625

Email: [charles.martin@ufl.edu](mailto:charles.martin@ufl.edu)  
[martin.charles.w@gmail.com](mailto:martin.charles.w@gmail.com)  
Phone: (256) 504-1432

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## **CURRICULUM VITAE**

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### **EDUCATION AND EXPERIENCE**

2016-Present	Research Assistant Professor, University of Florida/IFAS Nature Coast Biological Station
2014-2016	Senior Postdoctoral Research Associate, Louisiana State University (Department of Oceanography and Coastal Sciences)
2012-2014	Postdoctoral Research Associate, Louisiana State University (Department of Oceanography and Coastal Sciences)
2011- 2012	Adjunct Faculty/Teaching Associate, Coastal Carolina University (Department of Biology)
2010- 2011	Postdoctoral Research Scientist, Dauphin Island Sea Lab (Marine Conservation Lab)
2010	Ph.D.: Marine Science, University of South Alabama <i>Dissertation Title: "The impacts of invasive Eurasian milfoil (Myriophyllum spicatum) and Nile tilapia (Oreochromis niloticus) in Coastal Alabama"</i> <i>Advisor: John F. Valentine, Ph.D.</i>
2004	B.S.: Biology (minor: Chemistry), University of South Alabama Magna Cum Laude

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### **CAREER INTERESTS**

- Active interest in experimental biology/ecology with a goal of a tenure-track academic position with research, teaching, and/or service responsibilities.
- Specific research interests include:
  - a. Anthropogenic impacts in aquatic ecosystems
  - b. The ecology of invasive species in marine, estuarine, and freshwater environments
  - c. Food web ecology, particularly as it relates to predator-prey interactions of commercially and recreationally important species

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**GRANTS**

- M. Allen, **C Martin**, D. Chagaris, P. Frederick. Pending. Effects of Freshwater Discharge in the Nature Coast Region: Influence of Salinity Changes on Estuarine Resources and Food Webs. 2017 UF Research Opportunity Seed Fund **(\$61,700)**
- D. Chagaris, **C. Martin**, S. Barry, M. Allen, W. Patterson. Pending. Quantifying Lionfish Impacts on Florida's Nature Coast. NOAA Marfin **(\$332,132)**
- Martin, C.**, M. Allen, D. Chagaris, C. Purtlebaugh, S. Lowerri-Barbieri, S. Scyphers. Pending. Assessing and Predicting the Effects of Climate Change on Gulf of Mexico Inshore Fisheries. NOAA Saltonstall-Kennedy PreProposal **(\$275,000)**
- Hooper-Bui, L., **C. Martin**, B. Snyder. Pending. Linking Extensive, In-shore Fisheries and Bio-energy Production to Community Resilience in Plaquemines' and Other Maritime Parishes in Louisiana. National Academy of Sciences Gulf Research Program PreProposal
- Darnell, K., Z. Darnell, D. Smee, **C. Martin**, M. Hall. In Review. Gulf-wide Assessment of Habitat Use and Habitat-Specific Production Estimates of Nekton in Turtlegrass. NOAA RESTORE Act Science Program **(\$199,899 of \$985,841)**
- Hooper-Bui, L., **C. Martin**, M. Polito, L. Stroschein. In Review. Evidence from Food Webs that Mississippi River Diversions Create Working Fisheries. NOAA RESTORE Act Science Program **(\$212,953 of \$1,804,615)**
- Polito, M., A. Engel, L. Hooper-Bui, O. Jensen, P. Lopez-Duarte, **C. Martin**, et al. In Review. Linking Community and Food-Web Approaches to Restoration: An Ecological Assessment of Created and Natural Marshes Influenced by River Diversions. NOAA RESTORE Act Science Program **(\$208,009 of \$2,040,845)**
- Valentine, J., K. Heck, et al. 2015-2018. Alabama Center for Ecological Resilience (ACER) Consortium; Gulf of Mexico Research Initiative RFP-IV **(\$68,210 of \$6,497,054)**
- Rabalais, N., R. Turner, et al. 2015-2018. Coastal Waters Consortium; Gulf of Mexico Research Initiative RFP-IV **(\$163,009 of \$16,113,929)**
- Walters, K., N. Callaway, L. Coen, **C.W. Martin**. 2012-2014. Grand Strand Community Restoration of Tidal Swash Estuaries. Fish America **(\$74,261)**
- Martin, C.W.** and J. J. Dindo. 2011-2012. Impacts of Deepwater Horizon Oil Spill on Coastal Waterfowl. BP Gulf Research Initiative Small Grant for Exploratory Research **(\$14,998)**
- Valentine, J.F., S.P. Powers, M. Drymon, **C.W. Martin**. 2011-2012. Impacts of the Deepwater Horizon Accident on food web structure in the north-central Gulf of Mexico. NGI Gulf Research Initiative **(\$165,416)**

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**PEER REVIEWED PUBLICATIONS**

19. McCann, M., K. Able, F.J. Fodrie, O.P. Jensen, J. Johnson, P. Lopez-Duarte, **C.W. Martin**, J. Olin, M. Polito, B. Roberts, S. Ziegler. In Press. Key taxa in food web responses to stressors: The *Deepwater Horizon* Oil Spill. *Frontiers in Ecology and the Environment*.

18. **Martin, C.W.** In Press. Effects of macrophyte-specific olfactory cues on fish preference patterns. *Aquatic Ecology*.
17. Burks, R.L., J. Bernatis, J. Byers, J. Carter, **C.W. Martin**, B. McDowell, J. van Dyke. In Press. Not all apple snails are golden: A review of the identity, reproductive potential, distribution, biotic ecology, and management of invasive *Pomacea maculata* in the southeastern United States. *Global Advances in the Ecology and Management of Golden Apple Snails*.
16. **Martin, C.W.**, J. Valentine, S. Scyphers, T. Kauffman, J. Dindo. 2016. Preliminary Analysis of the Effects of the Macondo Oil Spill on Coastal Diving Ducks in the Northern Gulf of Mexico. *Journal of Applied Life Sciences* 8(3): 1-9.
15. **Martin, C.W.**, L.C. Hollis, R.E. Turner. 2015. Effects of oil-contaminated sediments on submerged vegetation: an experimental assessment of *Ruppia maritima*. *PLoS ONE* 10(10): e0138797. DOI: 10.1371/journal.pone.018797
14. Scyphers, S.B., S.P. Powers, J.M. Drymon, **C.W. Martin**, P. Schofield, Z.H. Schobernd, R.L. Shipp, T.S. Switzer. 2015. Rapid expansion of an invasive species documented through a social-ecological network. *Conservation Letters* 8(4): 242-250. DOI: 10.1111/conl.12127
13. Able, K.W., P.C. Lopez-Duarte, F.J. Fodrie, O. Jensen, **C.W. Martin**, B. Roberts, J. Valenti, K. O'Connor, and S. Halbert. 2015. Fish assemblages in Louisiana Salt Marshes: Effects of the Macondo Oil Spill. *Estuaries and Coasts* 38(5): 1385-1398. DOI: 10.1007/s12237-014-9890-6
12. **Martin, C.W.** 2014. Naïve prey exhibit reduced antipredator behavior and survivorship. *PeerJ* 2:e665. DOI: 10.7717/peerj.665
11. **Martin, C.W.**, and J.F. Valentine. 2014. Tolerance of the island apple snail (*Pomacea maculata*) to estuarine conditions. *Aquatic Ecology* 48(3): 321-326. DOI: 10.1007/s10452-014-9486-z
10. Fodrie, F.J., K.W. Able, F. Galvez, K.L. Heck, O.P. Jensen, P.C. Lopez-Duarte, **C.W. Martin**, R.E. Turner, and A. Whitehead. 2014. Integrating organismal and population responses of fishes to the Macondo Spill guides research priorities in the Gulf of Mexico. *Bioscience* 64(9): 778-788. DOI: 10.1093/biosci/biu
9. **Martin, C.W.**, and J.F. Valentine. 2014. Sexual and asexual reproductive strategies of invasive Eurasian milfoil (*Myriophyllum spicatum*) in estuarine environments. *Hydrobiologia* 727(1): 177-184. DOI: 10.1007/s10750-013-1798-9
8. Rozas, L.P, **C.W. Martin**, J.F. Valentine. 2013. Effect of reduced hydrological connectivity on use of shallow estuarine habitats by nekton in the Mobile-Tensaw River Delta, Alabama. *Marine Ecology Progress Series* 492: 9-20. DOI: 10.3354/meps10486
7. **Martin, C.W.**, K.M. Bayha, and J.F. Valentine. 2012. Establishment and eradication efforts of the island apple snail *Pomacea insularum* (Gastropoda: Ampullariidae) in Mobile, Alabama (USA). *Gulf of Mexico Science* 2012(1-2): 30-38.
6. **Martin, C.W.**, and J.F. Valentine. 2012. The invasion of Eurasian milfoil (*Myriophyllum spicatum*) in Mobile Bay: evidence that disturbance can facilitate success of an aquatic nuisance species. *Marine Ecology Progress Series* 449: 109-119. DOI: 10.3354/meps09515

5. Puntila, R.I., **C.W. Martin**, and J.F. Valentine. 2012. New design of submersible chronographic tethering device for measuring predation. *Bulletin of Marine Science* 88(4): 1115-1122. DOI: 10.5343/bms.2012.1011
4. **Martin, C.W.**, and J.F. Valentine. 2011. Impacts of a habitat-forming exotic species on estuarine structure and function: an experimental assessment of Eurasian milfoil. *Estuaries and Coasts* 34(2): 364-372. DOI: 10.1007/s12237-010-9274-5
3. **Martin, C.W.** 2011. Shifting paradigms in invasion ecology. *Journal of Ecosystem and Ecography*. 1(2):e101. DOI: 10.4172/2157-7625.1000e101
2. **Martin, C.W.**, M.M. Valentine, and J.F. Valentine. 2010. Competitive interactions between invasive Nile tilapia and native fish: the potential for altered trophic exchange and food web modification. *PLoS ONE* 5(12): e14395. DOI: 10.1371/journal.pone.0014395
1. **Martin, C.W.**, F.J. Fodrie, K.L. Heck Jr., and J. Mattila. 2010. Differential habitat use and antipredator response of juvenile roach (*Rutilus rutilus*) to olfactory and visual cues from multiple predators. *Oecologia* 162: 893-902. DOI: 10.1007/s00442-010-1564-x

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#### MANUSCRIPTS IN REVIEW AND IN PREPARATION

- Martin, C.W.** In Revision. Avoidance of oil contaminated sediments by marsh fishes: impacts of oiling on habitat occupancy patterns. *Marine Ecology Progress Series*.
- Vastano, A., K. Able, O. Jensen, P. Lopez-Duarte, C.W. Martin, and B.R. Roberts. Age Validation and Seasonal Growth Patterns of a Subtropical Marsh Fish: the Gulf Killifish, *Fundulus grandis*. *Environmental Biology of Fishes*.
- Martin, C.W.** Experimental Evidence that habitat-specific chemical cues influence fish preference patterns. *PeerJ PrePrints* 4:e1685v1.
- Valentine, J.F., **C.W. Martin**, M. Drymon, and S.P. Powers. In Preparation. Changes to coastal fish communities following the Deepwater Horizon oil spill.
- Kauffman, T.C., **C.W. Martin**, J.F. Valentine. In Preparation. Alterations to hydrology exacerbates the negative impacts of an estuarine invasive species.
- Ellis, L.E., **C.W. Martin**, S.L. Madsen, and J.F. Valentine. In Preparation. Predator foraging strategy mediates complex prey interactions in an experimental food web.
- Martin, C.W.**, J.F. Valentine, and T.C. Kauffman. In Preparation. Seasonal habitat use of littoral regions by terrestrial consumers in the Mobile-Tensaw Delta, Alabama (USA).

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#### SUPERVISORY/MENTORING EXPERIENCE

- Ph.D. Advisory Committee Member:
  - Riikka I. Puntila (University of Helsinki), 2011-2016
- M.S. Advisory Committee Member:

- Taylor C. Kauffman (University of South Alabama), 2012-Present
- Madeleine Gillis (Coastal Carolina University), 2012-2016
- Thomas Funk (Coastal Carolina University), 2014-Present
- Undergraduate Student Research:
  - Laura E. Ellis (University of Tennessee), 2010 NSF Research Experience for Undergraduates (REU)
  - Taylor C. Kauffman (Texas A&M University), 2010 Undergraduate Internship at Dauphin Island Sea Lab
  - Kristen Gloeckler (Syracuse University), 2010 Undergraduate Internship at Dauphin Island Sea Lab
- Graduate Advisory – Biology 122 Lab Instructors (Coastal Carolina University), 2012

### TEACHING EXPERIENCE

- General Biology II (BIOL 122) lectures (taught 3x) – Coastal Carolina University (Spring 2012)
  - Evaluations: 3.81 out of 4.00 (college average: 3.55 out of 4.0)
- General Biology I lectures (BIOL 121) and laboratories (BIOL 121L) (taught 2x)- Coastal Carolina University (Fall 2011)
  - Lecture evaluations: 3.68 out of 4.00 (college average: 3.53 out of 4.0)
  - Lab evaluations: 3.81 out of 4.00 (college average: 3.54 out of 4.0)
- Salt Marsh Ecosystems (OCS 8900) – Louisiana State University (Spring 2013, Co-Instructor)

### SELECTED PRESENTATIONS

- Walters, K., and C.W. Martin. Structural Complexity Effects on the Initial Similarity in Resident Prey Survival Among Natural and Created Intertidal Oyster Reefs. 18<sup>th</sup> International Conference on Shellfish Restoration, Charleston, SC, November 16-19, 2016 and Benthic Ecology Meeting, Portland, ME, March 16-19, 2016
- Martin, C.W. Effects of Macrophyte-Specific Olfactory Cues on Fish Preference Patterns. Gulf Estuarine Research Society, Pensacola, FL November 2-5, 2016
- Vastano, A., K. Able, O. Jensen, P. Lopez-Duarte, C. Martin, and B. Roberts. Age and Growth of a Subtropical Marsh Fish: the Gulf Killifish, *Fundulus grandis*. Mid-Atlantic Chapter American Fisheries Society, Bordentown, NJ October 27-28, 2016. **Awarded “Best Poster”**
- Martin, C.W. Effects of the Deepwater Horizon Oil Spill on Estuarine Fauna and Flora: Incorporating and Experimental Approach to Determine Coastal Resiliency. Invited Seminar, Louisiana Universities Marine Consortium (LUMCON), August 5, 2016.
- K. O’Shaughnessy, K. Walters, T. Funk, and C. Martin. Ecosystem Restoration along the Grand Strand, SC, USA: the Coastal Oyster Recycling and Restoration Initiative (CORRI). ECOSUMMIT 2016, August 29-September 1, 2016. **Awarded “Outstanding Early Career Researcher Poster Award”**
- Martin, C.W., L.O. Hollis, E.M. Swenson, R.E. Turner. Effects of Deepwater Horizon Oil Exposure on *Ruppia maritima* growth and herbivory. Gulf of Mexico Research Initiative Conference, Tampa, FL, February 1-4, 2016 and Benthic Ecology Meeting, Portland, ME, March 16-19, 2016.

- Martin, C.W. Anthropogenic Impacts in Gulf of Mexico Estuaries: Assessing the Effects of Oil Spills and Introduced Species on Coastal Fauna. Invited Seminar, Dept. of Oceanography and Coastal Sciences, Louisiana State University. June 18, 2015.
- Martin, C.W. and L.C. Hollis. Effects of buried oil on *Ruppia maritima*. Gulf of Mexico Research Initiative Conference, Houston, TX, February 16-19, 2015 and Benthic Ecology Meeting, Quebec City, Quebec, March 4-8, 2015.
- Martin, C.W. Ecology of fishes in a changing world: how olfactory cues can guide behavior. Invited Seminar, Dept. of Renewable Natural Resources, Louisiana State University; Dept. of Biology, University of Louisiana at Lafayette; and Dept. of Biology, Coastal Carolina University. Spring 2014.
- Martin, C.W., O. Jensen, K.W. Able, K.W., P.C. Lopez-Duarte, F.J. Fodrie and B.J. Roberts. High Site Fidelity of the Gulf Killifish (*Fundulus grandis*) in Northern Gulf of Mexico Marshes: An Empirical Approach to Help Address Oil Effects. Gulf of Mexico Research Initiative Conference, Mobile, AL. January 26-29, 2014
- Martin, C.W., K.W. Able, P.C. Lopez-Duarte, F.J. Fodrie, O. Jensen. Behavioral response of marsh fishes to Macondo oil. Gulf of Mexico Research Initiative Conference, Mobile, AL. January 26-29, 2014 and Benthic Ecology Meeting, Jacksonville, FL. March 19-22, 2014
- Martin, C.W. and J.F. Valentine. Sexual and asexual reproductive strategies of Eurasian milfoil in estuaries. Benthic Ecology Meeting, Savannah, GA. March 20-24, 2013.
- Martin, C.W., J.F. Valentine, J.J. Dindo, S.K. Scyphers, and T.C. Kauffman. Polycyclic aromatic hydrocarbon accumulation in coastal Alabama waterfowl after the Deepwater Horizon Oil Spill. ASLO (February 16-22, 2013) and GOMRI (January 18-24, 2013) meetings, New Orleans, LA.
- Martin, C.W. Impacts of Deepwater Horizon oil spill on coastal Alabama fish communities. Invited Seminar, Louisiana State University, May 7, 2012.
- Martin, C.W. Biogeographic spread and impacts of invasive species in coastal Alabama. Invited Seminar, South Carolina Marine Research Institute; Charleston, SC. Oct 17, 2011.
- Martin, C.W. Invasive species impacts in the Mobile-Tensaw Delta *and* Gator tagging 101. Invited Seminar at Teacher Workshop, Dauphin Island Sea Lab. June 2011.
- Martin, C.W. and J.F. Valentine. Apple snail invasion of the Mobile-Tensaw Delta: a risk assessment. Benthic Ecology Meeting, Mobile, AL March 16-20, 2011; and Benthic Ecology Meeting, Norfolk, VA. March 21-24, 2012.
- Martin, C.W., S.L. Madsen, and J.F. Valentine. Changes to coastal fish communities following Deepwater Horizon oil spill. Poster presentation presented at: Northern Gulf Institute Annual Meeting (Mobile, AL) May 17-19, 2011; Benthic Ecology Meeting (Mobile, AL) March 16-20, 2011; and Mississippi-Alabama Bays and Bayous Symposium (Mobile, AL) Dec 1-2, 2010.
- Martin, C.W., F.J. Fodrie, K.L. Heck, and J. Mattila. No place to run: reevaluating the role of structured habitats as universal prey refuges. Gulf of Mexico Graduate Student Symposium, Ocean Springs, MS. April 9-11, 2010.
- Martin, C.W., M.M. Valentine, and J.F. Valentine. Impacts of Invasive Nile Tilapia (*Oreochromis niloticus*) on Estuarine Food Webs. Northern Gulf Institute Annual Conference, Mobile, AL. May 20-21, 2009. **3<sup>rd</sup> Place Poster Contest** and Gulf of Mexico Graduate Student Symposium, Dauphin Island, AL. April 3-5, 2009. **3<sup>rd</sup> Place Oral Presentation, Voted "People's Choice" Best Presentation.**
- Martin, C.W., M.M. Valentine, and J.F. Valentine. Impacts of Invasive Nile Tilapia (*Oreochromis niloticus*) on Estuarine Food Webs. Benthic Ecology Meeting, Corpus Christi, TX. March 4-7, 2009, and Benthic Ecology Meeting, Wilmington, NC. March 10-13, 2010.

- Martin, C.W., J.F. Valentine, K. Blankenhorn, and S.A. Sklenar. 2008. The invasion of Eurasian milfoil in Mobile Bay: does a reduction in disturbance frequency facilitate invasion success? Benthic Ecology Meeting, Providence, RI. April 9-12, 2008.
- Martin, C.W. and J.F. Valentine. 2007. Impacts of invasive Eurasian milfoil on fish communities in the Mobile-Tensaw Delta. Invited Seminar, Gadsden State Community College, April 5, 2007; Benthic Ecology Meeting; Atlanta, GA. March 25-29, 2007.

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### *RELEVANT PROFESSIONAL EXPERIENCE*

- Associate Editor, Aquatic Invasions (2015-Present) and Bioinvasions Records (2015-Present)
- Manuscripts reviewer for: Marine Ecology Progress Series (7), PLoS ONE (5), Aquatic Invasions (2), ICES Journal of Marine Science (1), Environmental Biology of Fishes (6), Hydrobiologia (5), Estuaries and Coasts (2), Journal of Fish Biology (1), Marine Biology (1), Aquatic Biology (1), Aquatic Ecology (1), Bioinvasions Records (3), Southeastern Naturalist (1), Ecosystems (1), American Fisheries Society book chapter (1), Reviews in Fisheries and Fish Biology (1), Journal of Current Zoology (2), Journal of Ecosystem and Ecography (3), Gulf of Mexico Science (1), African Journal of Environmental Science and Technology (1), Knowledge and Management of Aquatic Ecosystems (2), Florida Scientist (1), Acta Ethologica (1), Sustainability (1), Sea Grant (1)
- Co-organizer, Ecology/Environment Ecoforum, Louisiana State University (2013)
- Organizer, Coastal Ecology Meetings (weekly Monday morning seminars), Department of Oceanography and Coastal Sciences, Louisiana State University (2012-2016)
- Co-organizer, Chair of Scientific Program Committee for Benthic Ecology Meeting, Mobile, AL (2011)
- Judge for student presentations, Benthic Ecology Meeting (2011, 2012, 2013) and ASLO Meeting (2013)
- Session Chair, Benthic Ecology Meeting (2011, 2012, 2013, 2014)
- Editorial Board Member Journal of Ecosystem and Ecography (2010-Present)
- Professional Memberships: Ecological Society of America, American Society of Limnology and Oceanography, American Fisheries Society, Coastal and Estuarine Research Federation, Gulf Estuarine Research Society, Alabama Fisheries Association
- Research/Teaching Assistant at Dauphin Island Sea Lab (2006-2010)
- AAUS Scientific Diver (over 100 logged dives)
- Fundraising Committee Chair, Gulf Coast Graduate Student Symposium Sea Lab (2006)
- Vice President (2005-2006) and Public Relations Officer (2004-2005); Marine Science Graduate Student Organization, Dauphin Island Sea Lab

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### *AWARDS AND HONORS*

- 2009 3<sup>rd</sup> Place Poster Presentation. Northern Gulf Institute Annual Conference
- 2009 Voted "People's Choice" Best Oral Presentation. Gulf of Mexico Graduate Student Symposium
- 2009 3<sup>rd</sup> Place Oral Presentation, Gulf of Mexico Graduate Student Symposium
- 2008 Northern Gulf Institute Graduate Fellowship (Stipend)
- 2007, 2008 1<sup>st</sup> Place, FloraBama Mullet Toss
- 2006 Alabama Legacy Graduate Scholarship, \$2000
- 2004, 2005 Dauphin Island Sea Lab Fellowship (Stipend plus tuition waiver)
- 2004 Merck-AAAS Research Fellowship, May - July 2004
- 2000 Salutatorian, Glencoe High School



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*PROFESSIONAL REFERENCES***John F. Valentine, Ph.D.** (relationship: PhD advisor)

Executive Director and Senior Marine Scientist; Dauphin Island Sea Lab  
Department of Marine Sciences; University of South Alabama  
Phone: (251) 861-2141 ext 2261  
Email: jvalentine@disl.org

**Kenneth L. Heck, Ph.D.** (relationship: PhD committee member)

Chair of Undergraduate Programs and Senior Marine Scientist; Dauphin Island Sea Lab  
Department of Marine Sciences; University of South Alabama  
Phone: (251) 861-2141 ext 2284  
Email: kheck@disl.org

**F. Joel Fodrie, Ph.D.** (relationship: collaborator)

Assistant Professor, Institute of Marine Sciences & Department of Marine Sciences,  
University of North Carolina at Chapel Hill  
Phone: (252) 726-6841 ext 149  
Email: jfodrie@unc.edu

**R. Eugene Turner, Ph.D.** (relationship: postdoctoral advisor)

LSU Distinguished Research Master and Shell Endowed Chair in Oceanography/Wetlands Studies  
Department of Oceanography and Coastal Sciences, Louisiana State University  
Phone: (225) 578-6454  
Email: eturne@lsu.edu

**Karen Aguirre, Ph.D.** (relationship: teaching supervisor)

Chair and Associate Professor of Biology, Coastal Carolina University  
Phone: (843) 349-4159  
Email: kmaguirr@coastal.edu