

September 9, 2008

**JAMES W. FOURQUREAN**  
**CURRICULUM VITA**

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**Education**

Ph.D. 1992. University of Virginia, Department of Environmental Sciences.  
M.S. 1987. University of Virginia, Department of Environmental Sciences.  
B.A. 1983. University of Virginia, Departments of Biology and Environmental Sciences.

**Positions held**

2006- Professor  
2002-2006 Chair, Department of Biological Sciences, Florida International University  
2001-2002 Visiting Professor, Institut Mediterrani d'Estudis Avançats, CSIC-Universitat des Illes Balears, Esporles, Mallorca, Spain  
1998-2006 Associate Professor  
1993-1998 Assistant Professor, Department of Biological Sciences and Southeast Environmental Research Center, Florida International University  
1992 Postdoctoral research associate, San Francisco State University. J.T. Hollibaugh, advisor.  
1983-1992 Graduate research assistant, University of Virginia. J.C. Zieman, advisor.  
1983-1987 Research biologist, National Audubon Society.

**Teaching Experience**

At FIU: Undergraduate courses: Ecology, Ecology Lab, Freshwater Ecology.  
Graduate Courses: Advanced Ecology - Communities and Ecosystems, Ecology of Marine Vascular Plants, Techniques in Seagrass Ecology, Techniques in Scientific Diving, Introduction to Biological Research, Workshop in Plant Nutrient Analysis, Readings in Marine Ecosystem Ecology, Marine Botany.

At SFSU: Graduate courses: Advances in Biogeochemistry

Other formal teaching: 2003 - Tropical Marine Ecosystems graduate course through the Organization for Tropical Studies, Bocas del Toro, Panama. 2004, 2005 and 2007 - Marine Protected Areas in Central America and the Caribbean and Tropical Marine Botany, Puerto Morelos, Mexico. 2005 - Seagrass biology and ecology, Flatts, Bermuda.

**Research Interests**

Biogeochemistry of the coastal ocean  
Community ecology  
Nutrient cycling in the marine environment  
Primary productivity of aquatic systems  
Seagrass physiological ecology

**Awards and Honors**

- 2008 Florida International University Award for Excellence in Faculty Scholarship  
2007 Florida International University Foundation Excellence in Research Award  
1999 Florida International University Award for Extraordinary Performance in Attracting Contract and Grant Resources  
1998 Florida International University Award for Extraordinary Performance in Attracting Contract and Grant Resources

**Publications (peer reviewed journals)**

58. **Fourqurean, J.W.**, C.M. Duarte, M.D. Kershaw and S.T. Threlkeld. 2008. *Estuaries and Coasts* as an outlet for research in coastal ecosystems: a bibliometric study. *Estuaries and Coasts*. 31(3):469-476. DOI 10.1007/s12237-008-9046-7
57. Herbert, D.A. and **J.W. Fourqurean**. 2008. Ecosystem structure and function still altered two decades after short-term fertilization of a seagrass meadow. *Ecosystems*. 11: 688–700. DOI: 10.1007/s10021-008-9151-2
56. Ruiz-Halpern, S., S.A. Macko and **J.W. Fourqurean**. 2008. The effects of manipulation of sedimentary iron and organic matter on sediment biogeochemistry and seagrasses in a subtropical carbonate environment. *Biogeochemistry* 87:113-126. DOI:10.1007/s10533-007-9162-7
55. **Fourqurean, J.W.**, N. Marbà, C.M. Duarte, E. Diaz-Almela, E. and S. Ruiz-Halpern, 2007. Spatial and temporal variation in the elemental and stable isotopic content of the seagrasses *Posidonia oceanica* and *Cymodocea nodosa* from the Illes Balears, Spain. *Marine Biology* 151:219-232. DOI:10.1007/s00227-006-0473-3
54. Heithaus, M.R., A. Frid, A.J. Wirsing, L.M. Dill, **J.W. Fourqurean**, D. Burkholder, J. Thomson and L. Bejder. 2007. State-dependent risk-taking by green sea turtles mediates top-down effects of tiger shark intimidation in a marine ecosystem. *Journal of Animal Ecology* 76(5):837-844. doi:10.1111/j.1365-2656.2007.01260.x
53. Collado-Vides, L., V.G. Caccia, J.N. Boyer and **J.W. Fourqurean**. 2007. Distribution and trends in macroalgal components of tropical seagrass communities in relation to water quality. *Estuarine Coastal and Shelf Science* 73:680-694.
52. Murdoch, T.J.T. , A.F. Glasspool, M. Outerbridge, J. Ward, S. Manuel, J. Gray, A. Nash, K. A. Coates, J. Pitt, **J.W. Fourqurean**, P.A. Barnes, M. Vierros., K. Holzer, and S.R. Smith. 2007. Large-scale decline of offshore seagrass meadows in Bermuda . *Marine Ecology Progress Series* 339:123-130.
51. Peterson, B.J., C.M. Chester, F.J. Jochem and **J.W. Fourqurean**. 2006. Potential role of the sponge community in controlling phytoplankton blooms in Florida Bay. *Marine Ecology Progress Series* 328:93-103.
50. Orth, R.J., T.J.B. Carruthers, W.C. Dennison, C.M. Duarte, **J.W. Fourqurean**, K.L. Heck, Jr., R. Hughes, G. Kendrick, W.J. Kenworthy, S. Olyarnik, F.T. Short, M. Waycott and S.L. Williams. 2006. A global crisis for seagrass ecosystems. *BioScience* 56(12):987-996.
49. Armitage, A.R and **J.W. Fourqurean**. 2006. The short-term influence of herbivory near patch reefs varies between seagrass species. *Journal of Experimental Marine Biology and Ecology* 339:65-74; doi:10.1016/j.jembe.2006.07.013.
48. Johnson, M.W., K.L. Heck, Jr., **J.W. Fourqurean**. 2006. Nutrient content of seagrasses and epiphytes in the northern Gulf of Mexico: evidence of phosphorus and nitrogen limitation. *Aquatic Botany* 85(2):103-111.
47. Price, R.M., P.K. Swart and **J.W. Fourqurean**. 2006. Coastal groundwater discharge – an additional source of phosphorus for the oligotrophic wetlands of the Everglades. *Hydrobiologia* 569:23-36.

46. Gil, M., A.R. Armitage, and **J.W. Fourqurean**. 2006. Nutrients increase epifaunal abundance and shift species composition in a subtropical seagrass bed. *Hydrobiologia* 569:437-447.
45. Armitage, A.R., T.A. Frankovich and **J.W. Fourqurean**. 2006. Variable responses within epiphytic and benthic microalgal communities to nutrient enrichment. *Hydrobiologia* 569:423-435.
44. Carruthers, T.J.B., P.A.G. Barnes, G.E. Jacome and **J.W. Fourqurean**. 2005. Lagoon scale processes in a coastally influenced Caribbean system: implications for the seagrass *Thalassia testudinum*. *Caribbean Journal of Science* 41(3):441-455.
43. **Fourqurean, J.W.** S.P. Escorcia, W.T. Anderson and J.C. Zieman. 2005. Spatial and seasonal variability in elemental content,  $\delta^{13}\text{C}$  and  $\delta^{15}\text{N}$  of *Thalassia testudinum* from south Florida. *Estuaries* 28(3):447-461.
42. Armitage, A.R., Frankovich, T.A., Heck, K.L. Jr., **Fourqurean, J.W.** 2005. Complexity in the response of benthic primary producers within a seagrass community to nutrient enrichment. *Estuaries* 28(3):422-434.
41. Romero, L.M., T.J. Smith, III., and **J.W. Fourqurean**. 2005. Changes in mass and nutrient content of wood during decomposition in a South Florida mangrove forest. *Journal of Ecology* 93(3):618-631.
40. Collado-Vides, L., L.M. Rutten and **J.W. Fourqurean**. 2005. Spatiotemporal variation of the abundance of calcareous green macroalgae in the Florida Keys: A study of synchrony within a macroalgal functional-form group. *Journal of Phycology* 41(4):742-752.
39. Borum, J., O. Pedersen, T. M. Greve, T. A. Frankovich, J. C. Zieman, **J. W. Fourqurean** and C. J. Madden. 2005. The potential role of plant oxygen and sulphide dynamics in die-off events of the tropical seagrass, *Thalassia testudinum*. *Journal of Ecology* 93(1):148-158.
38. **Fourqurean, J. W.** and L. M. Rutten. 2004. The impact of Hurricane Georges on soft-bottom, backreef communities: site- and species-specific effects in south Florida seagrass beds. *Bulletin of Marine Science* 75(2):239-257.
37. Ferdie, M. and **J.W. Fourqurean**. 2004. Responses of seagrass communities to fertilization along a gradient of relative availability of nitrogen and phosphorus in a carbonate environment. *Limnology and Oceanography* 49(6):2082-2094.
36. Zieman, J.C., **J.W. Fourqurean** and T.A. Frankovich. 2004. Reply to B.E. Lapointe and P.J. Barile (2004). Comment on J.C. Zieman, J.W. Fourqurean and T.A. Frankovich, 1999. Seagrass die-off in Florida Bay: Long-term trends in abundance and growth of turtlegrass, *Thalassia testudinum*. *Estuaries* 27(1):165-172.
35. **Fourqurean, J.W.** and J.E. Schrlau. 2003. Changes in nutrient content and stable isotope ratios of C and N during decomposition of seagrasses and mangrove leaves along a nutrient availability gradient in Florida Bay. *Chemistry and Ecology* 19(5):373-390.
34. **Fourqurean, J.W.**, N. Marbà and C.M. Duarte. 2003. Elucidating seagrass population dynamics: theory, constraints and practice. *Limnology and Oceanography* 48(5):2070-2074.
33. **Fourqurean, J.W.**, J.N. Boyer, M.J. Durako, L.N. Hefty, and B.J. Peterson. 2003. Forecasting the response of seagrass distribution to changing water quality: statistical models from monitoring data. *Ecological Applications* 13(2): 474-489.
32. Anderson, W.T. and **J.W. Fourqurean**. 2003. Intra- and interannual variability in seagrass carbon and nitrogen stable isotopes from south Florida, a preliminary study. *Organic Geochemistry* 34(2):185-194.
31. Peterson, B.J., C. D. Rose, L.M. Rutten and **J.W. Fourqurean**. 2002. Disturbance and recovery following catastrophic grazing: studies of a successional chronosequence in a seagrass bed. *Oikos* 97:361-370.
30. **Fourqurean, J. W.** and J. C. Zieman. 2002. Nutrient content of the seagrass *Thalassia testudinum* reveals regional patterns of relative availability of nitrogen and phosphorus in the Florida Keys USA. *Biogeochemistry*. 61:229-245.

29. **Fourqurean, J.W.** and Y. Cai. 2001. Arsenic and phosphorus in seagrass leaves from the Gulf of Mexico. *Aquatic Botany* 71:247-258.
28. Peterson, B.J. and **J.W. Fourqurean**. 2001. Large-scale patterns in seagrass (*Thalassia testudinum*) demographics in south Florida. *Limnology and Oceanography*. 46(5):1077-1090
27. Chambers, R.M., **J. W. Fourqurean**, S.A. Macko and R. Hoppenot. 2001. Biogeochemical effects of iron availability on primary producers in a shallow marine carbonate environment. *Limnology and Oceanography*. 46(6):1278-1286.
26. **Fourqurean, J.W.**, A. Willsie, C.D. Rose and L.M. Rutten. 2001. Spatial and temporal pattern in seagrass community composition and productivity in south Florida. *Marine Biology* 138:341-354.
25. Davis, B.C. and **J.W. Fourqurean**. 2001. Competition between the tropical alga, *Halimeda incrassata*, and the seagrass, *Thalassia testudinum*. *Aquatic Botany* 71(3):217-232.
24. Cai, Y., M. Georgiadis and **J.W. Fourqurean**. 2000. Determination of arsenic in seagrass using inductively coupled plasma mass spectrometry. *Spectrochimica Acta, Part B: Atomic Spectroscopy*. 55:1411-1422
23. Nuttle, W.K., **J.W. Fourqurean**, B.J. Cosby, J.C. Zieman, and M.B. Robblee. 2000. Influence of net freshwater supply on salinity in Florida Bay. *Water Resources Research* 36(7):1805-1822.
22. **Fourqurean, J.W.** and M. B. Robblee. 1999. Florida Bay: a history of recent ecological changes. *Estuaries* 22(2B):345-357.
21. Corbett, D. R., J. Chanton, W. Burnett, K. Dillon, C. Rutkowski and **J.W. Fourqurean**. 1999. Patterns of groundwater discharge into Florida Bay. *Limnology and Oceanography* 44(4):1045-1055.
20. Rose, C.D., W.C. Sharp, W.J. Kenworthy, J.H. Hunt, W.G. Lyons, E.J. Prager, J.F. Valentine, M.O. Hall, P. Whitfield, and **J.W. Fourqurean**. 1999. Sea urchin overgrazing of a large seagrass bed in outer Florida Bay. *Marine Ecology Progress Series* 190:211-222.
19. Zieman, J.C., **J.W. Fourqurean** and T.A. Frankovich. 1999. Seagrass dieoff in Florida Bay: long term trends in abundance and productivity of turtlegrass, *Thalassia testudinum*. *Estuaries* 22(2B):460-470.
18. Boyer, J.N., **J.W. Fourqurean** and R.D. Jones. 1999. Temporal trends in water chemistry of Florida Bay (1989-1997). *Estuaries* 22(2B):417-430
17. Hall, M.O., M.D. Durako, **J.W. Fourqurean** and J.C. Zieman. 1999. Decadal scale changes in seagrass distribution and abundance in Florida Bay. *Estuaries* 22(2B):445-459.
16. Frankovich, T.A. and **J.W. Fourqurean**. 1997. Seagrass epiphyte loads along a nutrient availability gradient, Florida Bay, FL, USA. *Marine Ecology - Progress Series* 159:37-50.
15. **Fourqurean, J.W.**, T.O. Moore, B. Fry, and J.T. Hollibaugh. 1997. Spatial and temporal variation in C:N:P ratios,  $\delta^{15}\text{N}$ , and  $\delta^{13}\text{C}$  of eelgrass (*Zostera marina* L.) as indicators of ecosystem processes, Tomales Bay, CA, USA. *Marine Ecology - Progress Series* 157:147-157.
14. Boyer, J.N., **J.W. Fourqurean**, and R.D. Jones. 1997. Spatial trends in water chemistry of Florida Bay and Whitewater Bay: Zones of similar influence. *Estuaries* 20(4):743-758.
13. **Fourqurean, J.W.**, K.L. Webb, J.T. Hollibaugh and S.V. Smith. 1997. Contributions of the plankton community to ecosystem respiration, Tomales Bay, California. *Estuarine, Coastal and Shelf Science*. 44:493-505.
12. Chambers, R.M., **J.W. Fourqurean**, J.T. Hollibaugh and S.M. Vink. 1995. Importance of terrestrially-derived, particulate phosphorus to P dynamics in a west coast estuary. *Estuaries*. 18(3):518-526.
11. **Fourqurean, J.W.**, G.V.N. Powell, W.J. Kenworthy and J.C. Zieman. 1995. The effects of long-term manipulation of nutrient supply on competition between the seagrasses *Thalassia testudinum* and *Halodule wrightii* in Florida Bay. *Oikos* 72:349-358.
10. Zieman, J.C., R. Davis, **J.W. Fourqurean** and M.B. Robblee. 1994. The role of climate in the Florida Bay seagrass dieoff. *Bulletin of Marine Science* 54(3):1088.

9. **Fourqurean, J.W.**, R.D. Jones and J.C. Zieman. 1993. Processes influencing water column nutrient characteristics and phosphorus limitation of phytoplankton biomass in Florida Bay, FL, USA: Inferences from spatial distributions. *Estuarine, Coastal and Shelf Science*. 36:295-314.
8. **Fourqurean, J.W.**, J.C. Zieman and G.V.N. Powell. 1992. Relationships between porewater nutrients and seagrasses in a subtropical carbonate environment. *Marine Biology* 114:57-65.
7. **Fourqurean, J.W.**, J.C. Zieman and G.V.N. Powell. 1992. Phosphorus limitation of primary production in Florida Bay: evidence from the C:N:P ratios of the dominant seagrass *Thalassia testudinum*. *Limnology and Oceanography* 37(1):162-171
6. Chambers, R.M. and **J.W. Fourqurean**. 1991. Alternative criteria for assessing nutrient limitation of a wetland macrophyte (*Peltandra virginica* (L.) Kunth). *Aquatic Botany* 40:305-320.
5. **Fourqurean, J.W.** and J.C. Zieman. 1991. Photosynthesis, respiration and the whole plant carbon budget of the seagrass *Thalassia testudinum*. *Marine Ecology - Progress Series* 69(1-2):161-170.
4. Powell, G.V.N., **J.W. Fourqurean**, W.J. Kenworthy and J.C. Zieman. 1991. Bird colonies cause seagrass enrichment in a subtropical estuary: observational and experimental evidence. *Estuarine, Coastal and Shelf Science* 32(6):567-579.
3. Robblee, M.B., T.R. Barber, P.R. Carlson, M.J. Durako, **J.W. Fourqurean**, L.K. Muehlstein, D. Porter, L.A. Yarbro, R.T. Zieman and J.C. Zieman. 1991. Mass mortality of the tropical seagrass *Thalassia testudinum* in Florida Bay (USA). *Marine Ecology - Progress Series* 71:297-299.
2. Powell, G.V.N., W.J. Kenworthy and **J.W. Fourqurean**. 1989. Experimental evidence for nutrient limitation of seagrass growth in a tropical estuary with restricted circulation. *Bulletin of Marine Science* 44(1):324-340.
1. Zieman, J.C., **J.W. Fourqurean** and R.L. Iverson. 1989. Distribution, abundance and productivity of seagrasses and macroalgae in Florida Bay. *Bulletin of Marine Science* 44(1):292-311.

#### Book Chapters:

3. Duarte, C.M., **J.W. Fourqurean**, D. Krause-Jensen and B. Olesen. 2005. Dynamics of seagrass stability and change. Pp. 271-294 In Larkum, A.W.D., Orth, R.J., and C.M. Duarte. *Seagrasses: Biology, ecology and conservation*. Springer
2. **Fourqurean, J.W.** and L.M. Rutten. 2003. Competing goals of spatial and temporal resolution: monitoring seagrass communities on a regional scale. Pp 257-288 in: Busch, D. E. and J.C. Trexler, eds. *Monitoring ecosystems: interdisciplinary approaches for evaluating ecoregional initiatives*. Island Press, Washington, D. C. 447 pp.
1. **Fourqurean, J.W.**, M.D. Durako, M.O. Hall and L.N. Hefty. 2002. Seagrass distribution in south Florida: a multi-agency coordinated monitoring program. Pp 497-522 in: Porter, J.W. and K.G. Porter, eds. *The Everglades, Florida Bay, and the coral reefs of the Florida Keys*. CRC Press LLC, Boca Raton. 1000pp.

#### Manuscripts submitted:

- Frankovich, T.A., A.R. Armitage, A.H. Wachnicka, E.E. Gaiser and **J.W. Fourqurean**. In review. P enrichment of seagrass meadows causes changes in epiphyte community structure at Division level and within diatom communities. *Journal of Phycology*
- Waycott, M., C.M. Duarte, T.J.B. Carruthers, R.J. Orth, W.C. Dennison, S. Olyarnik, A. Calladine, **J.W. Fourqurean**, K.L. Heck, Jr., A.R. Hughes, G. Kendrick, W.J. Kenworthy, F.T. Short and S.L. Williams. In review. Accelerating global declines of seagrass meadows. *PNAS*.

- Baggett, L.P., K.L. Heck, Jr., T.A. Frankovich, A.R. Armitage and **J.W. Fourqurean**. In Review. Nutrient enrichment, grazer identity and their effects on epiphytic algal assemblages: field experiments in sub-tropical turtlegrass (*Thalassia testudinum*) meadows. Marine Ecology - Progress Series
- Armitage, A.R. and **J.W. Fourqurean**. In review. Nutrient addition changes food web structure in a coastal marine ecosystem. *Oikos*.
- Madden, C.J., D.T. Rudnick, A.A. McDonald, K.M. Cunniff, **J.W. Fourqurean**. In review. Development of ecological indicators for assessing seagrass status and trends in Florida Bay. *Ecological Indicators*
- Herbert, D.A. and **J.W. Fourqurean**. In review. Phosphorus availability and salinity control productivity and demography of the seagrass *Thalassia testudinum* in Florida Bay. *Estuaries and Coasts*.

### Publications (other):

- Kershaw, M., **J. Fourqurean** and C.M. Duarte. 2007. Bibliometric data show *Estuaries and Coasts* is a great venue for publishing your research. *Estuarine Research Federation Newsletter* 33(1):6-7.
- Fourqurean, J. W.** 2002. Seagrass ecology (Marten A. Hemminga and Carlos M. Duarte). *Limnology and Oceanography* 47(2):611. [Book Review]
- Durako, M.J., **J.W. Fourqurean** and 9 others. 1994. Seagrass die-off in Florida Bay. In: Douglas, J. (ed.) *Proceedings of the Gulf of Mexico Symposium*. U.S.E.P.A., Tarpon Springs, FL. pp. 14-15.
- Fourqurean, J.W.** 1992. The roles of resource availability and competition in structuring seagrass communities of Florida Bay. Ph.D. Dissertation, Department of Environmental Sciences, University of Virginia. 280 pp.
- Fourqurean, J.W.** and J.C. Zieman. 1991. Photosynthesis, respiration and whole plant carbon budgets of *Thalassia testudinum*, *Halodule wrightii* and *Syringodium filiforme*. pp 59-70 in Kenworthy, W.J. and D.E. Haunert (eds.) *The light requirements of seagrasses: proceedings of a workshop to examine the capability of water quality criteria, standards and monitoring programs to protect seagrasses*. NOAA Technical Memorandum NMFS-SEFC-287.
- Continental Shelf Associates. 1991. A comparison of marine productivity among outer continental shelf planning areas. Supplement - An evaluation of benthic habitat primary productivity. Final Report, U.S. Department of the Interior, Minerals Management Service OCS Study MMM 91-0001, Contract #14-35-0001-30487, Herndon, VA. 244 pp + appendix.
- Fourqurean, J.W.** 1987. Photosynthetic response to temperature and salinity variation in three subtropical seagrasses. MS Thesis, Department of Environmental Sciences, University of Virginia. 80 pp.
- Zieman, J.C. and **J.W. Fourqurean**. 1985. The distribution and abundance of benthic vegetation in Florida Bay, Florida. Final report, USNPS South Florida Research Center, Everglades National Park. Contract CX5280-2-2204.

### Participation in Invited Workshops (Last 5 years)

- 2007 Global Marine Species Assessment: Temperate seagrasses workshop. IUCN Redlist, World Conservation Union. Santa Barbara, CA Oct 25
- 2007 LTER Science Council Net Primary Production Workshop, Portland, OR, May 17-19.
- 2005-2007 Global seagrass trajectories. NSF's National Center for Ecological Analysis and Synthesis, Santa Barbara, CA.
- 2005 COREO Congress of Regional Ecological Observatories national meeting, Kellogg Biological Station
- 2004 National congress of regional NEON planning groups, Bonneville Hot Springs, WA, Oct 18-20.
- 2004 Feasibility meeting for Integrated Seagrass Studies, sponsored by Bermuda Department of Conservation Services, Flatts, Bermuda August 16-19.

- 2004 Organizational Meeting, Neotropical National Ecological Observatory Network. Miami, FL April 9-10.
- 2003 European-American workshop on Long Term Environmental Research, Sponsored by NSF and the EU, Motz, France, July 1-5.
- 2002 National Estuarine Eutrophication Assessment workshop. Sponsored by NOAA, Patuxent Wildlife Research Center, MD, Sept 6-7.
- 2002 Nutrient pollution in coastal waters - national research priorities. Sponsored by NOAA, Woods Hole, MA, May 30

#### Invited Oral Presentations (Last 5 years)

- 2007 Armitage, A.R., T.A. Frankovich, and J.W. Fourqurean. Long-term shifts in seagrass community structure follow experimental nutrient enrichment in Florida Bay. *Biennial Estuarine Research Federation meeting, Providence, RI Nov 4-8.*
- 2007 Evidence for regional increases in nutrient availability causing decadal-scale change in seagrass beds in the Florida Keys. USGS-USF Marine Sciences seminar series, Mar 30.
- 2007 Seagrasses: flowering plants in the sea that are sentinels of environmental change. Keynote address at the Fairchild Tropical Botanic Garden Annual Members' Meeting, Mar 10.
- 2005 Fourqurean, J.W. and S.P. Escorcia. Long-term patterns of eutrophication in south Florida seagrass beds: water quality, species composition, and chemical proxies. Biennial Estuarine Research Federation meeting, Norfolk, VA Oct 15-20.
- 2005 Carruthers, T.J., W.C.; Dennison, P. A. Barnes, J.W. Fourqurean and B.I. van Tussenbroek, B. I. Nutrient interactions of *Thalassia testudinum* in high and low rainfall Caribbean systems. Biennial Estuarine Research Federation meeting, Norfolk, VA Oct 15-20.
- 2005 Invited seminar, Chesapeake Biological Laboratory, University of Maryland, Solomons Island, MD February 14.
- 2004 The future of seagrass: modeling water quality impacts on seagrass. US Coral Reef Task Force Meeting, December 1-4.
- 2004 Status and trends of seagrasses in south Florida. Florida Keys National Marine Sanctuary Connectivity Conference, Key West, FL Aug 19-21.
- 2004 Departmental seminar, Department of Fisheries and Aquatic Sciences, University of Florida, Gainesville. July 29.
- 2002 Long-term marine monitoring programs: an example from subtropical south Florida, USA. Keynote address at the annual Meeting of IMAR-Instituto do Mar. Cascais, Portugal. November 28-29.
- 2002 Fourqurean, J.W., L.M. Rutten, M.J. Durako, J.C. Zieman and T.A. Frankovich. Assessing changes in seagrass ecosystems on a regional scale: the relative merits of fixed stations and systematic random sampling. International Seagrass Biology Workshop 5, Ensenada, Mexico. October 7-11.
- 2002 Long-term ecological research in the coastal Everglades. Department of Ecology, Faculty of Biology, University of Barcelona. July 1.
- 2002 Inferring ecosystem function from spatial and temporal patterns in elemental and isotopic composition of benthic plants. Instituto Mediterraneo de Estudios Avanzados, University of the Balearic Islands, Mallorca, Spain March 14
- 2002 Inferring ecosystem function from spatial and temporal patterns in elemental and isotopic composition of benthic plants. Department of Ecology, Faculty of Biology, University of Barcelona. March 11
- 2001 Seagrass monitoring in the Florida Keys National Marine Sanctuary. Given at the symposium "The Florida Keys National Marine Sanctuary: an ecosystem report card", NOAA Headquarters, Silver Spring, MD December 6.

- 2001 Seagrass monitoring: competing goals of temporal and spatial resolution. Estuarine Research Federation 16<sup>th</sup> Biennial International Conference, St. Petersburg, FL November 4-8.

#### Contributed Presentations (Last 5 years)

- 2007 Armitage, A.R. and **J.W. Fourqurean**. 2007. Trophic implications of nutrient enrichment in seagrass beds. Ecological Society of America annual meeting, San Jose, Ca Aug 5-10
- 2007 Frankovich T.A., A.R. Armitage, J.W. Fourqurean, A. Wachnicka and E.E. Gaiser. P enrichment of seagrass meadows causes changes in epiphyte community structure at different taxonomic levels. Biennial Estuarine Research Federation meeting, Providence, RI Nov 4-8.
- 2007 Herbert, D.A and J.W. Fourqurean. 2007. Long-term effects of short-term and long-term nutrient loading in an oligotrophic seagrass ecosystem. Biennial Estuarine Research Federation meeting, Providence, RI Nov 4-8.
- 2007 Dennison, W.C., T.J.B. Carruthers, C.M. Duarte, **J.W. Fourqurean**, K.L. Heck, Jr., R. Hughes, G. Kendrick, W.J. Kenworthy, S. Olyarnik, R.J. Orth, F.T. Short, M. Waycott, and S.L. Williams Global trajectories of seagrasses: A quantitative assessment. Biennial Estuarine Research Federation meeting, Providence, RI Nov 4-8.
- 2007 Carruthers, T.J.B., S.L. Williams, M. Waycott, W.C. Dennison, C.M. Duarte, **J.W. Fourqurean**, K.L. Heck, A.R. Hughes, G.A. Kendrick, W.J. Kenworthy, S. Olyarnik, R.J. Orth and F.T. Short. Could climate change and eutrophication promote *Ruppia* as the seagrass of the future? Biennial Estuarine Research Federation meeting, Providence, RI Nov 4-8.
- 2007 Collado-Vides, L. and **J.W. Fourqurean**. *Halimeda* dynamics relative to availability in the Florida Keys National Marine Sanctuary. Biennial Estuarine Research Federation meeting, Providence, RI Nov 4-8.
- 2007 Manuel, S.A., K.A. Coates, **J.W. Fourqurean**, W.J. Kenworthy, M.W. Hammond, and M.L. Shailer. Seagrass habitat monitoring and management in Bermuda. Biennial Estuarine Research Federation meeting, Providence, RI Nov 4-8.
- 2007 Coates, K.A., S. Manuel, **J.W. Fourqurean**, W.J. Kenworthy, and T.J.T. Murdoch. Conservation and management of seagrass habitat in Bermuda. 33<sup>rd</sup> Scientific Conference of the Association of Marine Laboratories of the Caribbean, St. Thomas, USVI, June 4-8.
- 2007 Manuel, S., K.A. Coates, **J.W. Fourqurean**, W.J. Kenworthy, M.P. Hammond, M.L. Shailer, T.J. Murdoch. Mapping and monitoring seagrass habitat in Bermuda, year 1: species diversity and distribution. 33<sup>rd</sup> Scientific Conference of the Association of Marine Laboratories of the Caribbean, St. Thomas, USVI, June 4-8.
- 2006 Armitage, A.R., M. Gil, and **J.W. Fourqurean**. Trophic implications of nutrient enrichment in seagrass beds: epiphytic grazer densities increase and benthic consumer diets shift. Western Society of Naturalists 87th Annual Meeting November
- 2005 Frankovich, T.A., E.E. Gaiser, A.R. Armitage, and **J.W. Fourqurean**. Effects of nitrogen and phosphorus fertilization on epiphytic diatom communities. Biennial Estuarine Research Federation meeting, Norfolk, VA Oct 15-20.
- 2005 Armitage, A.R. and **J.W. Fourqurean**. Short-term herbivore impacts and long-term implications of nutrient enrichment on seagrass species distribution. Biennial Estuarine Research Federation meeting, Norfolk, VA Oct 15-20.
- 2005 Fourqurean, J.W., C.M. Duarte, N. Marbà and S. Ruiz. Survey of elemental content and stable isotopes in *Posidonia oceanica* and *Cymodocea nodosa* from the Balearic Islands, Spain. ASLO International Meeting, Santiago de Compostela, Spain Jun 19-24.
- 2005 Armitage, A.R. and **J.W. Fourqurean**. 2005. Acute influence of herbivory on seagrass distribution and the long-term implications of nutrient enrichment. 34th Annual Benthic Ecology Meeting. Williamsburg, VA. April 6-12

- 2005 T.J.T. Murdoch, A.F. Glasspool, M. Outerbridge, S. Manuel, J. Ward, J. Gray, A. Nash, K. A. Coates, J. Pitt, **J.W. Fourqurean**, P.A. Barnes, S.R. Smith and M. Vierros. Sustained, catastrophic mortality in the offshore seagrass meadows of Bermuda. 34th Annual Benthic Ecology Meeting. Williamsburg, VA. April 6-12.
- 2005 Armitage, A.R., T.A. Frankovich, K.L. Heck, Jr, and **J.W. Fourqurean**. Experimental long-term nutrient enrichment causes complex changes in seagrass and epiphyte community structure in Florida Bay. Florida Coastal Everglades LTER All Scientists Meeting. Miami, FL. March
- 2004 Collado-Vides, L., L.M. Rutten and J.W. Fourqurean. Variación espaciotemporal de la abundancia de las algas calcáreas verdes en los cayos de la Florida: un estudio de sincronía dentro de un grupo funcional macroalgal. First national meeting of the Mexican LTER network. Oaxaca, Mexico. 22 October.
- 2004 Carruthers, T., P. Barnes, G. Jacome, and J. Fourqurean. Implications of inputs and habitat types to *Thalassia* meadow processes. International Seagrass Biology Workshop 6, Townsville, Australia. 24-27 Sept.
- 2004 Armitage, A.R., T.A. Frankovich, J.W. Fourqurean and K.L. Heck, Jr. Community response to N and P enrichment along a gradient of nutrient limitation in Florida Bay seagrass beds. Ecological Society of America annual meeting, Portland, OR 1-6 August.
- 2003 Zieman, J.C., J.W. Fourqurean and T.A. Frankovich. Recent and historical changes in seagrass beds in southern Florida. 17<sup>th</sup> Biennial Meeting of the Estuarine Research Federation. Seattle, WA 14-18 September.
- 2003 Carruthers, T.J., P. Barnes and J.W. Fourqurean. Linking rainfall, watershed sources and seagrass nutrients in a high rainfall tropical coastal system. 17<sup>th</sup> Biennial Meeting of the Estuarine Research Federation. Seattle, WA 14-18 September.
- 2003 Frankovich, T.A., A. Armitage and J.W. Fourqurean. Nitrogen versus phosphorus limitation of benthic primary production in Florida Bay. LTER All Scientists' Meeting, sponsored by the National Science Foundation, Seattle, WA 18-21 September.
- 2003 Fourqurean, J.W., L.M. Rutten, S.P. Escorcia, M.J. Durako and J.C. Zieman. Seagrass monitoring in the Florida Keys National Marine Sanctuary: seasonal pattern and long-term trends at permanent monitoring sites. Joint Conference on the Science and Restoration of the Greater Everglades and Florida Bay Ecosystems. Palm Harbor, FL 13-18 April.
- 2003 Pedersen, O., J. Borum, T.M. Greve, J.C. Zieman, T.A. Frankovich and J.W. Fourqurean. Meristem anoxia and sulfide intrusion: a mechanism for *Thalassia testudinum* short shoot mortality in Florida Bay. Joint Conference on the Science and Restoration of the Greater Everglades and Florida Bay Ecosystems. Palm Harbor, FL 13-18 April.
- 2003 Frankovich, T. A., A. Willman, J.W. Fourqurean and K.L. Heck. Nitrogen versus phosphorus limitation of benthic primary production and the role of epiphyte grazers in Florida Bay. Joint Conference on the Science and Restoration of the Greater Everglades and Florida Bay Ecosystems. Palm Harbor, FL 13-18 April.
- 2003 Fourqurean, J. W., J.N. Boyer, B.J. Peterson, M.J. Durako and L.N. Hefty. The response of seagrass distribution to changing water quality: predictive models from monitoring data. Joint Conference on the Science and Restoration of the Greater Everglades and Florida Bay Ecosystems. Palm Harbor, FL 13-18 April.
- 2003 Cosby, B.J., J.W. Fourqurean and W.K. Nuttle. Spatial and temporal patterns of salinity simulated by the FATHOM model compared to observed salinity data for the period 1993 to 1999. Joint Conference on the Science and Restoration of the Greater Everglades and Florida Bay Ecosystems. Palm Harbor, FL 13-18 April.
- 2003 Evans, S., W. Anderson, J.W. Fourqurean, R. Jaffe, E. Gaiser, L. Collins and S. Escorcia. Carbon and nitrogen stable isotope composition of sedimentary organic matter from Florida Bay: evidence of historic seagrass distribution and paleoproductivity. Joint Conference on the Science and Restoration of the Greater Everglades and Florida Bay Ecosystems. Palm Harbor, FL 13-18 April.

- 2002 Evans, S.L., Anderson, W.T., Fourqurean, J. W., Jaffe, R., Gaiser, E.E. Collins, L.S., and Holmes, C.W., 2002, Carbon and Nitrogen Stable Isotope Composition of OM From Florida Bay, the Initial Results of a Paleoenvironmental Seagrass Reconstruction. AGU Fall Meet., San Francisco, December.
- 2002 Frankovich, T.A., J.C. Zieman, B.J. Peterson and J.W. Fourqurean. Nutrients, gastropod grazers, and seagrass leaf turnover rate as controls of epiphyte loading on *Thalassia testudinum*. International Seagrass Biology Workshop 5, Ensenada, Mexico. October 7-11.
- 2001 Fourqurean, J.W. and W.T. Anderson. Interannual variability in seagrass carbon and nitrogen stable isotopes from the Florida Keys National Marine Sanctuary, a preliminary study. American Geophysical Union Fall Meeting, San Francisco, December.
- 2001 Zieman, J.C., J.W. Fourqurean, T.A. Frankovich, A. Schwarzschild and E. Bricker. Seagrass dieoff in Florida Bay 1989-2001. Estuarine Research Federation 16<sup>th</sup> Biennial International Conference, St. Petersburg, FL November 4-8.
- 2001 Peterson, B.J. and J.W. Fourqurean. Can sponges control phytoplankton blooms in Florida Bay? Estuarine Research Federation 16<sup>th</sup> Biennial International Conference, St. Petersburg, FL November 4-8.
- 2001 Anderson, W.T. and J.W. Fourqurean. Spatial and temporal patterns of  $\delta^{13}\text{C}$  and  $\delta^{15}\text{N}$  from seagrass in south Florida. 2001 Goldschmidt Conference, Hot Springs, VA May 20-24.
- 2001 Fourqurean, J.W., J.N. Boyer, B.J. Peterson, M.J. Durako and L.N. Hefty. The statistical relationship between benthic habitats and water quality in Florida Bay. 2001 Florida Bay Science Conference, Key Largo, FL April 23-26.
- 2001 Chambers, R, M, and J. W. Fourqurean. Biogeochemical effects of iron availability on primary producers in a shallow marine carbonate environment. 2001 Florida Bay Science Conference, Key Largo, FL April 23-26.
- 2001 Zieman, J.C., J.W. Fourqurean and T.A. Frankovich. Seagrass dieoff in Florida Bay 1989-2001: decadal trends in abundance and growth of *Thalassia testudinum*. 2001 Florida Bay Science Conference, Key Largo, FL April 23-26.
- 2001 Pedersen, O., J. Borum, T. Greve, J. Zieman, T. Frankovich and J. Fourqurean. Seagrass dieoff in Florida Bay: meristem anoxia, a mechanism for the initiation of primary seagrass dieoff. 2001 Florida Bay Science Conference, Key Largo, FL April 23-26.
- 2001 Peterson, B.J. and J.W. Fourqurean. The potential for filter feeding sponges to control phytoplankton blooms in Florida Bay. 2001 Florida Bay Science Conference, Key Largo, FL April 23-26.
- 2001 Pedersen, O., J. Borum, T. Greve, J. Zieman, T. Frankovich and J. Fourqurean. Does meristematic anoxia cause episodic mass mortality among seagrasses? 7<sup>th</sup> Conference of the International Society for Plant Anaerobiosis, Nijmegen, June
- 2001 Fourqurean, J.W., M.J. Durako, J.C. Zieman, A. Willsie, L.M. Rutten, C.D. Rose and D. Byron. Spatial and temporal pattern in seagrass community composition and productivity in south Florida. Benthic Ecology meeting, Durham, N.H. March 16-19.
- 2001 Peterson, B.J. and J.W. Fourqurean. Can sponges control phytoplankton blooms in Florida Bay? 30<sup>th</sup> Annual Benthic Ecology meeting, Durham, N.H. March 16-19.

#### **Presentations by My Students at Scientific Meetings (Last 5 years)**

- 2005 Dewsbury, B.M. and **J.W. Fourqurean**. Artificial structures as fish habitats in an oligotrophic estuary. Biennial Estuarine Research Federation meeting, Norfolk, VA Oct 15-20.
- 2005 Ruiz, S., **J.W. Fourqurean**, D. Childers, and R.M. Chambers. Effects of iron and organic matter addition on sediment biogeochemistry and seagrass growth in a subtropical carbonate environment. Biennial Estuarine Research Federation meeting, Norfolk, VA Oct 15-20.
- 2003 Ferdie, M. and J.W. Fourqurean. Differential responses of benthic primary producers to nitrogen and phosphorus enrichment in a carbonate seagrass system. 17<sup>th</sup> Biennial Meeting of the Estuarine Research Federation. Seattle, WA 14-18 September.

- 2003 Byron, D.A. and J.W. Fourqurean. Determining physiological status of a subtropical seagrass, *Thalassia testudinum*, using Pulse Amplitude Modulated (PAM) fluorometry. 17<sup>th</sup> Biennial Meeting of the Estuarine Research Federation. Seattle, WA 14-18 September.
- 2003 Cunniff, K.M. and J.W. Fourqurean. Factors affecting the reproductive ecology of *Thalassia testudinum* in the Florida Keys National Marine Sanctuary (FKNMS). 17<sup>th</sup> Biennial Meeting of the Estuarine Research Federation. Seattle, WA 14-18 September.
- 2003 Rutten, L.M., J.W. Fourqurean and T. Philippi. Assessment of nearshore benthic communities of the Florida Keys. 17<sup>th</sup> Biennial Meeting of the Estuarine Research Federation. Seattle, WA 14-18 September.
- 2003 Cloutier, J., J.W. Fourqurean, J. Schrlau, R. Jaffé and N. Maie. Changes in nutrient content, C and N stable isotope ratios, and molecular composition during decomposition of seagrasses and mangrove leaves in Florida Bay. LTER All Scientists' Meeting, sponsored by the National Science Foundation, Seattle, WA 18-21 September.
- 2003 Byron, D.A. and J.W. Fourqurean. Determining physiological status of a subtropical seagrass, *Thalassia testudinum*, using Pulse Amplitude Modulated (PAM) fluorometry. LTER All Scientists' Meeting, sponsored by the National Science Foundation, Seattle, WA 18-21 September.
- 2003 Evans, S.L., W. Anderson, L. Collins, E. Gaiser and J.W. Fourqurean. Stable isotope composition of sedimentary organic matter from Florida Bay: Historic seagrass distribution and paleoproductivity. LTER All Scientists' Meeting, sponsored by the National Science Foundation, Seattle, WA 18-21 September.
- 2003 Ferdie, M. and J.W. Fourqurean. Responses of benthic primary production to nutrient enrichment in the upper Florida Keys. Joint Conference on the Science and Restoration of the Greater Everglades and Florida Bay Ecosystems. Palm Harbor, FL 13-18 April.
- 2003 Rutten, L.M., J.W. Fourqurean and T. Philippi. An assessment of nearshore benthic communities of the Florida Keys. Joint Conference on the Science and Restoration of the Greater Everglades and Florida Bay Ecosystems. Palm Harbor, FL 13-18 April.
- 2002 Ferdie, M. and J.W. Fourqurean. Nutrient limitation of benthic marine primary production in the upper Florida Keys: Preliminary results of an *in-situ* nutrient enrichment experiment. Ecological Society of America Annual meeting, Tuscon, AZ August 4-9.
- 2002 Ferdie, M. and J.W. Fourqurean. Nutrient limitation of benthic macrophytes in the upper Florida Keys: an *in situ* nutrient enrichment experiment. Department of Ecology, Faculty of Biology, University of Barcelona. July 1.
- 2002 Rutten, L.M. J.W. Fourqurean and T. Philippi. An assessment of nearshore benthic communities of the upper Florida Keys. . Department of Ecology, Faculty of Biology, University of Barcelona. July 1.
- 2001 Rutten, L.M. J.W. Fourqurean. Monitoring of back-reef seagrass communities in the Florida Keys National Marine Sanctuary. Presented at "Backreef Habitat: Ecological Analysis and Characterization Workshop" Caribbean Marine Research Center, Lee Stocking Island, Bahamas, December 10-14.
- 2001 Rutten, L.M. J.W. Fourqurean and T. Philippi. An assessment of nearshore benthic communities of the upper Florida Keys. Estuarine Research Federation 16<sup>th</sup> Biennial International Conference, St. Petersburg, FL November 4-8.
- 2001 Ferdie, M. And J.W. Fourqurean. Nutrient limitation of benthic macrophytes in the upper Florida Keys: an *in situ* nutrient enrichment experiment. Estuarine Research Federation 16<sup>th</sup> Biennial International Conference, St. Petersburg, FL November 4-8.
- 2001 Rutten, L.M., J.W. Fourqurean, S. Miller and D.L. Childers. An assessment of nearshore benthic communities of the upper Florida Keys. 30<sup>th</sup> Annual Benthic Ecology meeting, Durham, N.H. March 16-19.

**Grants and Funding**

Over \$14M in extramural grants since 1992 (as PI unless otherwise noted), including:

- Florida Sea Grant. "Projected Reorganization of Seagrass Communities in Response to Altered Freshwater Flow in Florida Bay," \$96,255. 02/01/08 -01/31/10. (With Darrell Herbert, PI)
- National Park Service. Design and implementation of monitoring of seagrass restoration projects in Biscayne National Park. \$30,497. Dec 2006 - Dec 2007.
- National Park Service. "Impacts of increased freshwater flow & nutrient input on benthic community structure & trophic interactions" \$319,000, August 2007-October 2009.
- Government of Bermuda. "Guidance in Developing a Monitoring Program for Bermuda's Seagrass Resources" \$12,060, 02-May-2007 - Dec 31, 2007.
- Stanford Foundation, Inc. "Impacts of global change on the Antigua and Barbuda coastal and marine ecosystem and development of a management plan" \$1.4M, Nov 2006- Oct 2012 (PI on a \$1.4M subcontract of a \$60M overall project).
- National Science Foundation - Biological Oceanography: "Influence of predation risk on foraging behavior of sea turtles and dugongs" \$336,000, September 2005 - August 2008 (with Mike Heithaus, PI)
- National Park Service. "Submerged aquatic vegetation and physiochemical monitoring of the Florida Bay mangrove zone" \$248,000, Nov 2005 - Oct 2009.
- National Science Foundation - Geology and Paleontology: "The seagrass history of Florida Bay reconstructed from integrating micropaleontological and geochemical proxies" \$130,000, Sept 2002 - August 2003 (With L. Collins, PI, and two other coPIs).
- Environmental Protection Agency. "Seagrass monitoring in the Florida Keys National Marine Sanctuary" \$2.6M, Oct 1994 - Sept 2008.
- National Park Service. "N vs P limitation of seagrass communities of Florida Bay" \$225,000, April 2002 - March 2005.
- National Park Service. "Hydrologic mass balance of Florida Bay: continued development of FATHOM" \$175,000, April 2002-March 2003.
- National Oceanographic and Atmospheric Administration. "Seagrass monitoring in the Florida Keys National Marine Sanctuary," \$850,000, Sept 2001-Aug 2007.
- National Science Foundation. "Florida coastal Everglades Long Term Environmental Research Supplement," \$55,000, March 2001 -Feb 2002 (With D. L. Childers, PI, and 4 other coPIs).
- National Science Foundation. "Florida coastal Everglades Long Term Environmental Research - COERCE LTER," \$4,200,000, May 2000 - May 2007. (With D. L. Childers, PI, and 4 other coPIs).
- Florida Sea Grant. "The role of filter feeding sponges in controlling phytoplankton blooms in Florida Bay and the concomitant effect on the health of seagrasses," \$113,594. January 2000 - December 2001.
- National Oceanographic and Atmospheric Administration. Monitoring in the Carysfort and Western Sambos ecological reserves of the Florida Keys National Marine Sanctuary," \$20,000. October 2000 - September 2001.
- US Army Corps of Engineers. "An assessment of nearshore benthic communities of the Florida Keys," \$130,215. Oct 2000 - Sept 2001.
- National Park Service. "Developing ecologically meaningful performance measures for the USACOE Restudy," \$22,000. Oct 1999 - Jul 2000
- Florida Fish and Wildlife Conservation Commission. "Evaluation of ecological performance measures for Florida Bay. \$23,500. Aug 1999 - Jul 2000
- South Florida Water Management District. "Salinity performance measures for Florida Bay," \$15,400. Oct 1999 - Sep 2000
- National Park Service. "Sea turtle monitoring in Dry Tortugas National Park" \$14,511. Jun 1998- Nov 1998
- United States Geological Survey, Biological Resources Division. "Isotope analysis in Florida Bay and adjacent waters" \$60,000. Oct 1998-Dec 1999.

- National Oceanographic and Atmospheric Administration. "Seagrass monitoring in the Florida Keys National Marine Sanctuary special use zones. \$20,277, Sept 1997-Aug 1998.
- National Park Service. "Continued development of FATHOM: a mass-balance model for the simulation of salinity and circulation in Florida Bay" \$200,309, Aug 1997-Jul 1999.
- National Park Service. "Relationship of sedimentary sulfur, iron and phosphorus cycling to water quality in Florida Bay: how seagrass dieoffs contribute to algal blooms," \$76,871, 5/97-4/99. (With R.M. Chambers, PI)
- Environmental Protection Agency. Multiscale assessment of the population status of *Thalassia testudinum*: a new approach to ecosystem management. \$870,000, 10/1/96-9/30/99. (With M.D. Durako, PI, and 4 other co-PI's).
- United States Geological Survey, Biological Resources Division. Proposal for a dedicated issue of the journal *Estuaries* for long-term studies of Florida Bay. \$21,500, December 1996.
- National Biological Survey. \$31,802. "Recovery of mangrove forests following Hurricane Andrew." July 1996 - June 1997.
- Florida Institute of Oceanography. Shiptime award for teaching and research. \$10,000, Feb. 1996
- National Biological Survey. "Studies of wood decomposition and nutrient dynamics in southwest Florida mangrove forests." \$55,994, Jan 1996 - Dec 1996.
- National Biological Survey. "Hurricane Andrew technical services." \$5,000, Sept 1995-Dec 1995.
- National Science Foundation, Academic Research Infrastructure Program. "Acquisition of an advanced isotope ratio mass spectrometer for ecosystems studies at Florida International University." \$201,960, January 1996. ( with B. Fry, PI, and 4 other Co-PI's).
- National Biological Survey. "Florida Bay seagrass technical services." \$5,000, Sept 1995 - Mar 1996.
- National Marine Fisheries Service. "Analysis of seagrass monitoring data from Biscayne Bay, Florida." \$12,000, Sept 1994 - Apr 1995.
- Everglades National Park. "Development of a hydrological mass balance model of Florida Bay, Everglades National Park." \$41,468. Sept 1994 - Aug 1995. (with J.C. Zieman, M.B. Robblee, and B.J. Cosby).
- Florida Department of Environmental Protection. "Southwest Florida Shelf Water Quality Monitoring." C-5272. \$57,500/yr, May 1994 - Oct 1996. (with R.D. Jones).
- National Science Foundation. "Acquisition of an autoanalyzer." BIR-9317198. \$40,000, Mar. 1994, (with J.T. Hollibaugh, R.M. Chambers).
- Florida Sea Grant. "Photographic mapping of seagrasses in Florida Bay." \$20,161, Aug. 1993 - July 1994.
- South Florida Water Management District. "Monitoring water quality in South Biscayne Bay." C-4226. \$103,000/yr, Sept. 1993 - Aug. 1994. (with R.D. Jones).
- National Park Service. "Effects of Hurricane Andrew on water quality and biogeochemistry in the near-shore marine and estuarine areas of Everglades National Park." \$240,000, Oct. 1993 - Sept. 1995. (with R.D. Jones)
- Environmental Protection Agency. Coastal Submerged Aquatic Vegetation Initiative. CR 820443-01-0. \$142,900/yr, Oct. 1992 - Sept. 1994. (with J.C. Zieman and 4 other Co-PI's).
- NOAA National Undersea Research Program. "The use of seagrasses to determine the sources of natural and anomalous nutrient inputs to the Florida Keys National Marine Sanctuary." \$20,000/yr, Jan. 1992 - Dec. 1995. (with J.C. Zieman and S.A. Macko).

### **Other Professional Activities**

Reviewer of manuscripts for Limnology and Oceanography; Estuarine, Coastal and Shelf Science; Bulletin of Marine Science; Estuaries and Coasts; Marine Ecology - Progress Series; Ecological Applications; Water Resources Bulletin; Journal of Experimental Marine Biology and Ecology; Archiv für Hydrobiologie; Coral Reefs; Marine Pollution Bulletin; Ecology; Aquatic Botany; Environmental Science and Technology.

Editorships: guest editor for a dedicated issue of the journal *Estuaries* on the long-term dynamics of Florida Bay, Volume 22, Number 2B, June 1999.

Reviewer of proposals for National Science Foundation, National Oceanographic and Atmospheric Administration, National Undersea Research Program, Connecticut Department of Environmental Protection, U.S. Environmental Protection Agency.

Membership on advisory boards

Member-at-large, Estuarine Research Federation Governing Board, 2003-2005  
NOAA's Florida Bay Technical Advisory Group, 1993-  
FIU Scientific Diving Control Board, 1994-, Chair, 1996-  
FIU's representative on the advisory board of Florida Institute of Oceanography, 1998-  
FIU's campus coordinator for Florida Sea Grant, 1998-

**Student and Post-docs**

Current graduate students (program): Justin Campbell (Ph.D.), Zayda Halun (Ph.D.), Amanda Bourque (Ph.D.) Travis Thyberg (M.S.), Rebecca Bernard (M.S.), Elizabeth Lacey (Ph.D.)

Former graduate students (degree received): Craig Rose (Ph.D.), Braxton Davis (M.S.), Maureen Walter (M.S.), Patricia Mumford (M.S.), Luz Romero (M.S.), Meredith Ferdie (M.S.), Leanne Rutten (M.S.), Kevin Cunniff (M.S.), Virginia Cornett (M.S.), Dorothy Byron (M.S.), Sergio Ruiz-Halpern (M.S.), Bryan Dewsbury (M.S.)

Current post-docs: Darrell Herbert, Thomas Frankovich

Former post-docs (current position): Allan Willsie (Biologist, Parks Canada), Bradley J. Peterson (Assistant Prof, Stony Brook), Anna R. Armitage (Assistant Prof, Texas A&M Galveston), Ligia Collado-Vides (Instructor, FIU Biology)