

**ASWANI K. VOLETY**  
*Curriculum vitae*

**Professor of Marine and Environmental Science**

Florida Gulf Coast University  
Department of Marine and Ecological Sciences  
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**CITIZENSHIP:** United States of America

**EDUCATION**

- Graduate Certificate.** 2009. Harvard Institute for Higher Education. Management Development Program. Graduate School of Education, Harvard University, Massachusetts.
- Ph.D.** 1995 Marine Science. School of Marine Science, College of William & Mary, Virginia
- M.S.** 1988 Zoology with Specialization in Marine Biology. Andhra University, Visakhapatnam, India
- B.S.** 1985 Zoology, Andhra University, Visakhapatnam, India.

**PROFESSIONAL EXPERIENCE**

- August 2007 – Present, *Professor and Chair*, Department of Marine and Ecological Sciences, August 2007 – Present, *Professor and Chair*, Department of Marine and Ecological Sciences.
- August 2005 – Present, *Chair*, Department of Marine and Ecological Sciences, College of Arts and Sciences.
- August 2004 – 2005, *Chair*, Division of Ecological and Social Sciences, College of Arts and Sciences.
- August 2003 – 2005, *Program Leader, Marine Science*, Division of Ecological Studies, College of Arts and Sciences.
- June 2003, *Visiting Researcher*, IFREMER, *Institut français de recherche pour l'exploitation de la mer*, Brest, France.

August 2002 - 2007, *Associate Professor of Marine Science*, Division of Ecological Studies, and Department of Marine and Ecological Sciences, College of Arts and Sciences.

August 1999-August 2002, *Assistant Professor of Marine Science*, Division of Ecological Studies.

**National Academy Of Sciences / National Research Council (1997-1999)**

March 1997-August 1999, *National Research Council Associate*, National Health and Environmental Effects Research Laboratory, Gulf Ecology Division, US Environmental Protection Agency, Gulf Breeze, Florida 32561.  
Developed sensitive biomarkers for pollution stress in marine bivalves.

**College of William and Mary, Virginia Institute of Marine Science (1990-1997)**

May 1995-March 1997, *Post-Doctoral Research Associate*, Division of Environmental Science, Virginia Institute of Marine Science, Gloucester Point, Virginia 23062.  
Co-Principal Investigator on 2 research grants. Conducted research on host-parasite interactions and the role of environmental factors on these interactions.

August 1990-1995, *Research Assistant*, Division of Environmental Science, Virginia Institute of Marine Science, Gloucester Point, Virginia.

August-December 1992, *Teaching assistant*, Department of Biology, The College of William & Mary, Virginia. Taught a course in Introductory Zoology.

**National Institute of Oceanography (1988-1989)**

May 1988-Dec 1989, *Research Fellow*, Division of Biological Oceanography, National Institute of Oceanography, Visakhapatnam, India.

**AWARDS, FELLOWSHIPS & HONORS:**

**Coastal America Partnership Award. Lead Principal Investigator. 2006**

**Florida Gulf Coast University Senior Faculty Scholarship Excellence Award. 2006.**

**Invited visiting researcher, IFREMER, Brest, France. 2003.**

**“Students’ Choice Award” nomination. 2001-2002.**

**National Academy of Science / National Research Council Associateship. 1997.**

Scientific Advisor: Dr. William Fisher, US EPA, Gulf Breeze, FL.

**Post-Doctoral Fellowship.** Virginia Institute of Marine Science, 1995. Advisor: Dr. Fu-Lin. Chu.

**Best Student Poster Presentation Award.** Aquaculture / National Shellfisheries Association Conference, February 1-4, 1995, San Diego, California. Biochemical characterization of the oyster parasite *Perkinsus marinus*: Lipid and fatty acid composition.

August 1990-1995, **Research Assistantship**, Division of Environmental Science, Virginia Institute of Marine Science, Gloucester Point, Virginia 23062.

May 1988-Dec 1989, **Research Fellowship**, Department of Ocean Development, tenable in Division of Biological Oceanography, National Institute of Oceanography, Visakhapatnam, India.

M.S. Graduated with a **First Class Distinction** (highest grade), Andhra University, India.

B. S. Graduated with a **First Class Distinction** (highest grade), Andhra University, India.

## RESEARCH AND SCHOLARLY ACTIVITIES

### Peer Reviewed Publications (\* denotes student author)

**Volety, A. K.**, M. Savarese, G. Tolley, P. Sime, P. Goodman, and P. Doering. **2009.** Eastern oysters (*Crassostrea virginica*) as an indicator for restoration of Everglades Ecosystems. Ecological Indicators. 9: S120-S136. DOI:10.1016/j.ecolind.2008.06.005

**Volety, A. K. 2008.** Effects of salinity, heavy metals and pesticides on health and physiology of oysters in the Caloosahatchee Estuary. Ecotoxicology. 17: 579-590. DOI 10.1007/s10646-008-0242-9.

Panko, C.\*, V. Encomio, J. Barreto, and A. K. Volety. **2008.** *In vitro* and *in vivo* evaluation of quinine as a potential anti-protozoal for the eastern oyster parasite *Perkinsus marinus*. Journal of Shellfish Research. 27: 789-793.

Barnes, T. K., **A. K. Volety.**, K. Chartier, F. J. Mazzotti, and L. Pearlstine. **2007.** A habitat suitability index model for the eastern oyster (*Crassostrea virginica*), a tool for restoration of the Caloosahatchee Estuary, Florida. Journal of Shellfish Research. 26: 949-959.

Tolley, G., **A. K. Volety**, M. Savarese, L. D. Walls, C. Linardich, and E. M. Everham. **2007.** Impacts of salinity and freshwater inflow on oyster-reef communities in SW Florida. Aquatic Living Resources. 19: 371-387.

- Barnes, T., F. Mazzotti, L. Pearlstine, and **A. K. Volety**. 2006. Habitat evaluation in coastal southwestern Florida: a policy decision model for the blue crab, *Callinectes sapidus*. Florida Scientist. 69: 140-151.
- Tolley, S. G., J. T. Winstead, L. Haynes, **A. K. Volety**. 2006. Influence of salinity on the prevalence of the parasite *Loxothylacus panopaei* in the xanthid *Panopeus obesus* in southwest Florida. Diseases of Aquatic Organisms. 70: 243-250.
- Tolley, S. G., and **A. K. Volety**. 2005. The role of oysters in habitat use of oyster reefs by resident fishes and decapod crustaceans. Journal of Shellfish Research. 24: 1007-1012.
- Tolley, S. G., **A. K. Volety**, and M. Savarese. 2005. Influence of salinity on the habitat use of oyster reefs in three Southwest Florida estuaries. Journal of Shellfish Research. 24: 127-138
- Wilson, C., L. Scotto, J. Scarpa, **A. Volety**, S. Laramore, and D. Haunert. 2005. Influence of watershed management on estuarine water quality and characterization of oyster reproduction, and oyster health status in the St. Lucie estuary. Journal of Shellfish Research. 24: 157-165.
- J. T. Winstead, **A. K. Volety**., and S. G. Tolley. 2004. Parasitic and Symbiont Fauna in Oysters (*Crassostrea virginica*) Collected from the Caloosahatchee River and Estuary, Florida. Journal of Shellfish Research. 23: 831-840.
- Xue, Q-G., K. L. Schey, **A. K. Volety**, F-L. E. Chu, and J. F. La Peyre. 2004. Purification and characterization of lysozyme from plasms of the eastern oyster (*Crassostrea virginica*). Comparative Biochemistry and Physiology Part B: Biochemistry and Molecular Biology. 139: 11-25.
- Shields, J.D., C. Scanlon, and **A. Volety**. 2003. Aspects of the pathophysiology of blue crabs, *Callinectes sapidus*, infected with the parasitic dinoflagellate *Hematodinium perezii*. Bull. Mar. Sci. 72 (2): 519-535.
- W. S. Fisher, L. M. Oliver, J. T. Winstead, and **A. K. Volety**. 2003. Stimulation of defense factors for oysters deployed to contaminated sites in Pensacola Bay, Florida. Aquatic Toxicology. 64: 375-391.
- Oliver, L. M., W. S. Fisher, **A. K. Volety** and Z. Malaeb. 2003. Relationships between oyster (*Crassostrea virginica*) defense measurements and tissue contaminant concentration. Aquatic Toxicology. 64: 363-373.
- La Peyre, M. K., A. D. Nickens, **A. K. Volety**, S. G. Tolley, and J. F. La Peyre. 2003. Environmental significance of freshets in reducing *Perkinsus marinus* infections in eastern oysters (*Crassostrea virginica*): potential management implications. Marine

Ecology Progress Series. 248: 165-176.

Chu, F. L. E., **A. K. Volety**, R. C. Hale, G. Constantin, and Y. Huang. **2002**. Hemocyte activities and disease expression in oysters (*Crassostrea virginica*) exposed to polyaromatic hydrocarbon-contaminated sediments. *Marine Environmental Research*. 53: 17-35.

**Volety, A. K.**, S. A. McCarthy, B. D. Tall, S. K. Curtis, W. S. Fisher and F. J. Genthner. **2001**. Responses of oyster (*Crassostrea virginica*) hemocytes to nonpathogenic and clinical isolates of *Vibrio parahaemolyticus*. *Aquatic Microbial Ecology*. 25: 11-20

**Volety, A. K.**, and W. S. Fisher. **2000**. *In vitro* killing of *Perkinsus marinus* by hemocytes of oysters *Crassostrea virginica*. *Journal of Shellfish Research*. 19: 827-834.

**Volety, A. K.**, F. O. Perkins, R. Mann, and P. Hershberg. **2000**. Progression of diseases caused by the oyster parasites, *Perkinsus marinus* and *Haplosporidium nelsoni*, in *Crassostrea virginica* on constructed intertidal reefs. *Journal of Shellfish Research*. 19: 341-347.

Chu, F.-L. E. P. Soudant, **A. K. Volety**, Y. Huang. **2000**. Uptake and interconversion of fluorescent lipid analogs in the protozoan parasite, *Perkinsus marinus*, of the oyster, *Crassostrea virginica*. *Experimental Parasitology*. 95: 240-251.

**Volety, A. K.**, L. M. Oliver, F. Genthner, and W. S. Fisher. **1999**. A rapid tetrazolium dye reduction assay to assess bactericidal activity of oyster, *Crassostrea virginica* hemocytes against *Vibrio parahaemolyticus*. *Aquaculture*. 172(1-2): 205-222.

F. J. Genthner, **A. K. Volety**, L. M. Oliver, and W. S. Fisher. **1999**. Factors influencing killing of *Vibrio parahaemolyticus*, *V. vulnificus* and *Listeria monocytogenes* by hemocytes of eastern oyster, *Crassostrea virginica*. *Applied and Environmental Microbiology*. 65(7): 3015-3020.

**Volety, A. K.** and F. L. E. Chu. **1997**. Acid phosphatase activity in *Perkinsus marinus*, the protistan parasite of the American oyster, *Crassostrea virginica*. *Journal of Parasitology*. 83(6): 1093-1098.

Chu, F. L. E., and **A. K. Volety**. **1997**. Disease processes of the parasite, *Perkinsus marinus* in eastern oyster *Crassostrea virginica*: minimum dose for infection initiation, and interaction of temperature, salinity and infective cell dose. *Diseases of Aquatic Organisms*. 28(1):61-68.

Chu, F. L. E., **A. K. Volety**, and Constantin, G. **1996**. A comparison of *Crassostrea gigas* and *Crassostrea virginica*: Effects of temperature and salinity on susceptibility to the protozoan parasite, *Perkinsus marinus*. *Journal of Shellfish Research*. 15: 375-380.

**Volety, A. K.**, and F. L. E. Chu. **1995**. Suppression of chemiluminescence of eastern oyster

(*Crassostrea virginica*) hemocytes by the protozoan parasite *Perkinsus marinus*.  
Developmental and Comparative Immunology. 19:135-142.

Tirard, C.T., R. M. Grossfeld, **A. K. Volety**, and F. L. E. Chu. **1995**. Heat shock proteins of the oyster parasite *Perkinsus marinus*. Diseases of Aquatic Organisms. 22:147-151.

**Volety, A. K.**, and F. L. E. Chu. **1994**. Comparison of infectivity and pathogenicity of meront (trophozoite) and prezoosporangiae stages of the oyster pathogen *Perkinsus marinus* in eastern oysters, *Crassostrea virginica* (Gmelin, 1791). Journal of Shellfish Research. 13: 521-527.

Sarma, V.V., and **Aswani Kumar. V.**, **1991**. Subsurface chlorophyll maxima in the north-western Bay of Bengal. Journal of Plankton Research. 13:339-352.

Encomio, V. G., **G. Boyle\***, and **A. K. Volety**, Biological effects of suspended sediments on shellfish in the Charlotte Harbor Watershed – implications for water releases and dredging activities. (*In review*, Journal of Shellfish Research).

### **Technical Publications and Reports**

**Volety, AK, Savarese, M, Hoyer, B\*\*, and Loh, AN.** 2009. Landscape pattern: present and past distribution of oysters in South Florida Coastal Complex (Whitewater Bay / Oyster Bay / Shark to Robert's Rivers). South Florida Water Management District, Technical Report. 105 p. + 46 figs.

**Volety, A. K.**, S. L. Wohlpart, M. Savarese, and A. N. Loh. **2008**. Characterization of Community Assemblages in Oyster-Reef Habitats of the Estero Estuary Through the Late Holocene: Monitoring the Ecological Impact of Watershed Management and Sea-level Rise. Final Report submitted to SW Florida Regional Planning Council. 86 pages.

**Savarese, M and Volety, AK.** 2008. Oyster reef health in Pumpkin and Fakahatchee Estuaries: baseline monitoring for Ten Thousand Islands Restoration. South Florida Water Management District, Technical Report. 58 p.

**Volety, A. K.** **2007**. Caloosahatchee estuary oyster monitoring and research. Final Report, Submitted to the South Florida Water Management District. Contract # CP040626. 28 pages.

**Volety, A. K.**, and V. Encomio. **2006**. Biological effects of suspended sediments on shellfish in the Charlotte Harbor watershed – implications for water releases and dredging activities. Final Report submitted to the Charlotte Harbor National Estuarine Program / Southwest Florida Regional Planning Council. 47 pages.

- Mazzotti, F. J., Pearlstine, L. G., Barnes, T., **Volety, A.**, Irvin, D., and A. M. Weinstein. **2005**. Stressor response models for the eastern oyster, *Crassostrea virginica*. JEM Technical Report 2005-01. Final report to the South Florida Water Management District and U. S. Geological Survey. University of Florida, Fort Lauderdale Research and Education Center, Fort Lauderdale, Florida, 14 pages.
- Mazzotti, F. J., Pearlstine, L. G., Barnes, T., **Volety, A.**, Chartier, K., and A. M. Weinstein. **2005**. Stressor response models for the blue crab, *Callinectes sapidus*. JEM Technical Report 2005-02. Final report to the South Florida Water Management District and U. S. Geological Survey. University of Florida, Fort Lauderdale Research and Education Center, Fort Lauderdale, Florida, 12 pages.
- Volety, A. K.**, and S. G. Tolley. **2005**. Analyses of the effects of freshwater inflow alteration on oysters (*Crassostrea virginica*) in Lower Alafia River. Final Report submitted To Southwest Florida Water Management District 2379 Broad St., Brooksville, FL 34604. 31 pages.
- Volety, A. K.**, and S. G. Tolley. **2005**. Life History and ecological aspects of the American (Eastern) Oyster, *Crassostrea virginica*. Progress report submitted to the Southwest Florida Water Management District. 2379 Broad St., Brooksville, FL 34604. 49 pages.
- Volety, A. K.**, and S. G. Tolley. **2005**. Analyses of the effects of freshwater inflow alteration on oysters (*Crassostrea virginica*) in the Tampa Bypass Canal/McKay Bay estuarine system. Final Report submitted To Southwest Florida Water Management District 2379 Broad St., Brooksville, FL 34604. 14 pages.
- Savarese, M. and **Volety, A.K.** **2004**. Southern Golden Gate Estates restoration monitoring plan: oyster reefs. Appendix of the Southern Golden Gate Estates Project Implementation Report. 8 p.
- Volety, A.** and Savarese, M. **2004**. GIS oyster reef mapping in the Caloosahatchee River and Estero Bay. South Florida Water Management District, Technical Report.
- Savarese, M., Dellapenna, T., and **Volety, A.** **2004**. Preliminary study of the sedimentary surface and subsurface of Naples Bay and the Ten Thousand Islands using acoustic geophysical techniques. South Florida Water Management District, Technical Report. 45 p. + 26 figs.
- Savarese, M., **A. K. Volety**, and S. G. Tolley. **2004**. Oyster health and habitat quality in Fakahatchee estuary: establishing a baseline performance for ten thousand island estuarine restoration. Final Report Submitted to the South Florida Water Management District, Big Cypress Basin. 42 pp.

**Volety, A. K., G. Romeis, and B. Boler (2003).** Effects of heavy metals and pesticides on health and physiology of oysters in the Caloosahatchee Estuary: implications for management of water quality and restoration of oyster reefs. Final Report submitted to the Charlotte Harbor National Estuary Program, Florida. 61 pp.

Savarese, M., **A. K. Volety**, and S. G. Tolley. **2003.** Influence of watershed alteration on oyster health and oyster-reef habitat: management implications for the Faka-Union and Estero Bays. Final Report (Award # C-13252) submitted to the South Florida Water Management District, 86 pp.

Tolley, S. G., **A. K. Volety**, and M. Savarese. **2003.** Shellfish responses and adaptive resource management in southwest Florida: oysters as sentinels of ecosystem health. World Aquaculture Magazine. 34: 64-66.

**Volety, A. K., S. G. Tolley, and J. T. Winstead. 2003.** Investigations into effects of seasonal and water quality parameters on oysters (*Crassostrea virginica*) and associated fish populations in the Caloosahatchee Estuary. Interpretive Report (Award #C12412-A1) submitted to the South Florida Water management District, 111 pp.

**Volety, A. K., and S. G. Tolley. 2001.** Investigations into effects of seasonal and water quality parameters on oysters (*Crassostrea virginica*) and associated fish populations: implications of altered freshwater inflow in the Caloosahatchee Estuary. Final Report for CES/FAU Project June 23, 2000 to March 15, 2001. Submitted to Florida Atlantic University and the Florida Center for Environmental Studies, 45 pp.

**Volety, A. K., and M. Savarese. 2001.** Oysters as indicators of ecosystem health: determining the impacts of watershed alterations and implications for restoration. Final Report submitted to National Fish and Wildlife Foundation, South Florida Water Management District (Big Cypress Basin), and Florida Gulf Coast University Foundation, 104 pp.

## **Presentations & Published Abstracts**

### **Invited Presentations: \* denotes student author**

**Volety, A. K.,** Lesli Haynes, Lacey Smith, **Brooke Denkert\***, Peter Doering, Patricia Sime, Patricia Goodman. Seasonal dynamics of *Perkinsus marinus* disease, reproduction and recruitment of oyster, *Crassostrea virginica*, in SW Florida estuaries. National Shellfisheries Association, Savannah, GA. March 22-26<sup>th</sup>, 2009.

**Volety, A. K.** Effects of salinity, heavy metals and pesticides on health and physiology of oysters in the Caloosahatchee Estuary, Florida. 29th Annual Meeting of the Society of Environmental Toxicology and Chemistry (SETAC 2008), Tampa Convention Center, Tampa, Florida (USA), 16-20 Nov 2008.

**Volety, A. K.,** M. Savarese, S. G. Tolley, L. Haynes, A. Booth, W. Arnold., P. Doering, P. Sime, and P. Goodman. Eastern Oysters (*Crassostrea virginica*) as an Indicator for Restoration of Everglades Ecosystems. Greater Everglades Ecosystem Restoration 2008 Conference. July 28 – August 1, 2008.

- Volety, A. K.**, P. Doering, P. Sime, P. Goodman. Role of shellfish in setting water quality targets in SW Florida estuaries. Charlotte Harbor Watershed Summit. March 2008. Punta Gorda, FL.
- Dykes, E\*., A. K. Volety**, J. Winstead. Effects of heavy metals and pesticides on health and physiology of oysters in Hendry Creek, Estero Bay, FL: implications for management of water quality. Charlotte Harbor Watershed Summit. March 2008. Punta Gorda, FL.
- Volety, A. K.**, T. Barnes, K. Chartier, L. Pearlstine, and F. Mazzotti. The use of stressor response models in management decisions: oyster habitat suitability index model as a tool for the restoration of the Caloosahatchee estuary. Mark A. Benedict Symposium on Science, Conservation, and Restoration of SW Florida Ecosystems. Dec 6, 2007.
- Volety, A. K.** T. Barnes, K. Chartier, L. Pearlstine, and F. Mazzotti. The use of stressor response models in management decisions: oyster habitat suitability index model as a tool for the restoration of the Caloosahatchee estuary. Mark A. Benedict Symposium on Science, Conservation, and Restoration of SW Florida Ecosystems. Dec 6, 2007.
- Volety, A. K., C. Panko\***, V. Encomio, J. Barreto. *In vitro* and *in vivo* evaluation of quinine as a potential anti-protozoal for the eastern oyster parasite *Perkinsus marinus*. Workshop for the Analysis of the Impact of *Perkinsosis* to the European Shellfish Industry. September 12-14, 2007. Vigo, Spain.
- Volety, A. K.**, S. G. Tolley, M. Savarese, **R. Wasno\***, and T. Barnes. Role of bivalves in estuarine management: a case study from southwest Florida. 9<sup>th</sup> International Congress on Medical and Applied Malacology, Qingdao, China. October 17-20, 2006.
- Volety, A. K.** Using shellfish responses in adaptive resource management in SW Florida estuaries. Presentation to the Rotary Club, Cape Coral, FL (August 23, 2006).
- Volety, A. K.**, and V. Encomio. Biological effects of suspended sediment on shellfish in the Charlotte Harbor Watershed. Technical Advisory Committee meeting, Charlotte Harbor National Estuary Program. April 12, 2006. Fort Myers, Florida.
- Volety, A. K.** Using shellfish responses in adaptive resource management of SW Florida estuaries. Scientists Association of Southwest Florida. March 17<sup>th</sup>, 2006. Edison College, Fort Myers, FL.
- Tolley, S.G., A. K. Volety, M. Savarese, **C. Linardich\***, E. E. Everham. Multivariate analysis of spatial variability of oyster-reef communities: the influence of salinity. National Shellfisheries Association Conference, March 22-25, 2006. Monterey, CA.
- Volety, A. K.** 2005. Hogs on the half shell: ecological role of oysters in estuaries. Estero Island Historical Society. November 14, 2005. Fort Myers Beach, FL.
- Volety, A. K.**, T. Barnes, L. Pearlstine, and F. Mazzotti. Habitat suitability index model for the American oyster, *Crassostrea virginica*: implications for restoration and enhancement of oysters in SW Florida estuaries. 8<sup>th</sup> International Conference on Shellfish Restoration. Oct 2-5, 2005. Brest, France.
- Volety, A. K.**, S. G. Tolley, M. Savarese, **E. Rasnake\***, L. Haynes, J. T. Winstead, T. Barnes, P. H. Doering, and R. Wasno Seasonal and anthropogenic influences on the ecological and physiological responses of oysters: the role of adaptive resource management in SW Florida estuaries. World Aquaculture Conference, May 9-13, 2005, Bali, Indonesia.
- M. Savarese, **A. K. Volety**, S. G. Tolley. Design of estuarine restoration projects using aspects of oyster physiology and ecology. 8<sup>th</sup> International Conference on Shellfish Restoration. Oct 2-5, 2005. Brest, France.

- Tolley, S.G., **A.K. Volety**, **L. Walls\***, **C. Linardich\***, and M. Savarese. Multivariate approach to understanding spatial variability of oyster-reef communities. 8<sup>th</sup> International Conference on Shellfish Restoration. Oct 2-5, 2005. Brest, France.
- Volety, A. K.** 2005. Role of oysters in setting water quality targets in southwest Florida estuaries. Decision Makers Forum. April 1, 2005. Florida Gulf Coast University, Fort Myers, FL.
- Savarese, M., Demers, N., Everham, E. M., **Volety, A.**, and Kakareka, J. 2004. Scientific Process: an interdisciplinary core natural science course as a mechanism for faculty collaboration. Geological Society of America Abstracts with Programs 36(5):444. Presented at the Geological Society of America, 2004 Denver Annual Meeting, Denver, Colorado, Nov 7 – 10, 2004.
- Savarese, M., **Volety, A. K.**, and Tolley, S. G. 2004. Aspects of oyster ecology and their utility in the design of estuarine restoration projects in the Greater Everglades: example from Southern Golden Gate Estates. 1<sup>st</sup> National Conference on Ecosystem Restoration Abstracts with Programs, p. 373.
- Volety, A. K.**, Tolley, S. G., Savarese, M., **Rasnake, E\***, Haynes, L., Winstead, J. T., Barnes, T., and Doering, P. H. 2004. The role of oysters, oyster reef-associated organisms, and adaptive resource management in setting water quality targets in the Caloosahatchee estuary, Florida. 1<sup>st</sup> National Conference on Ecosystem Restoration Abstracts with Programs, p. 453.
- Savarese, M., **Volety, A. K.**, and Tolley, S. G. 2004. Use of oyster reef communities in the design and monitoring of Everglades restoration projects. 70<sup>th</sup> Annual Meeting of the American Malacological Society, Program and Abstracts, p 77. *Invited symposium.*
- Volety, A. K.** Water Quality Considerations for Sustaining and Enhancing Oyster Reefs in the Caloosahatchee Estuary: An Adaptive Resource Management Approach. Charlotte Harbor National Estuary Program Water Quality Targets workshop. Fort Myers, Florida, July 2004.
- Volety, A. K.** and S. G. Tolley. Approaches and metrics for the evaluation of oyster-reef restoration efforts in Southwest Florida. Workshop to Examine and Evaluate Oyster Restoration Metrics for Assessing Ecological Function, Sustainability and Success, New Hampshire to Louisiana. Myrtle Beach, South Carolina, May 2004.
- Volety, A. K.**, S. G. Tolley, M. Savarese, and J. T. Winstead. Role of anthropogenic and environmental variability on the physiological and ecological responses of oysters in southwest Florida estuaries. Aquaculture 2004. Honolulu, HI, March 2004.
- S. Gregory Tolley\*, **Aswani K. Volety**, and Mike Savarese. Managing oyster reefs for ecological function: factors influencing habitat quality for reef-resident communities. Aquaculture 2004. Honolulu, HI, March 2004.
- Michael Savarese\*, S. Gregory Tolley, and **Aswani K. Volety**. Using oyster reef communities in the design of estuarine restoration projects in south Florida. Aquaculture 2004. Honolulu, HI, March 2004.
- Volety, A. K.** 2004. Effects of heavy metals and pesticides on the health and physiology of oysters in the Caloosahatchee Estuary. Charlotte Harbor National Estuary Program, Technical Advisory Committee Meeting, Fort Myers, FL. Jan 14, 2004.
- Volety, A. K.**, **S. G. Tolley** and **M. Savarese**. 2003. Oyster responses as proxies in setting target water quality conditions for restoration of Southwest Florida estuaries. Estuarine Research Federation 17<sup>th</sup> Biennial International Conference, Seattle, Washington.
- Tolley S. G.**, **A. K. Volety**, **M. Savarese** and J. T. Winstead. 2003. The influence of salinity on the habitat value of oyster reefs in three southwest Florida estuaries. Estuarine Research Federation 17<sup>th</sup> Biennial International

Conference, Seattle, Washington.

**Savarese, M., A. K. Volety and S. G. Tolley.** 2003. Late Holocene history of oyster-reef development in Southwest Florida: implications for management and future coastal environmental change. Estuarine Research Federation 17<sup>th</sup> Biennial International Conference, Seattle, Washington.

**Volety, A. K.** Biomarkers and bioindicators: using responses of shellfish and adaptive management strategies in improving ecosystem health. *International Conference on Disease Management for Sustainable Fisheries, Kerala, India.* August 25-28, 2003.

**Volety, A. K.** Potential application of bactericidal assay to MOREST program to assess immune competence of shellfish. IFREMER, Brest, France. June 11, 2003.

**Volety, A. K., S. G. Tolley and J. T. Winstead.** Establishing minimum flows and levels of freshwater in the Caloosahatchee River, Florida, using responses of oysters. *National Shellfisheries Association, 95<sup>th</sup> Annual Meeting,* New Orleans, Louisiana. April 2003.

Savarese, M., **Volety, A.,** & Tolley, G. 2003. Oyster physiology and ecological distribution as an indication of environmental health and as a performance measure of restoration effectiveness of Southwest Florida's estuaries. Joint Conference on the Science and Restoration of the Greater Everglades and Florida Bay Ecosystem, Palm Harbor, Florida. Program and Abstracts, April 13-18, 2003. p. 464-466. *Invited plenary symposium.*

**Volety, A. K.,** S. Gregory Tolley, and J. T. Winstead. 2002. Effects of freshwater releases and season on oysters (*Crassostrea virginica*) in Caloosahatchee estuary, Florida. 94<sup>th</sup> National Shellfisheries Association Annual Conference, Mystic, CT. April 2002.

Tolley, S. G., **A. K. Volety,** \*E. C. Lindland, and J. T. Winstead. 2002. Use of habitat by reef-resident fishes and decapod crustaceans in the Caloosahatchee Estuary, Florida. 94<sup>th</sup> National Shellfisheries Association Annual Conference, Mystic, CT. April 2002.

Winstead, J. T., **A. K. Volety,** and S. G. Tolley. 2002. Parasitic and symbiotic fauna inhabiting oysters (*Crassostrea virginica*) sampled from the Caloosahatchee River estuary, Florida. 94<sup>th</sup> National Shellfisheries Association Annual Conference, Mystic, CT. April 2002.

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oysters (*Crassostrea virginica*) to the pathogen, *Perkinsus marinus*. Annual Meeting of National Shellfisheries Association Conference, April 24-28, 1994, Charleston, South Carolina.

**Volety, A. K.**, and Chu, F. L. E. Inhibition/suppression of superoxide ion production in the hemocytes of *Crassostrea virginica*, by the protistan parasite *Perkinsus marinus*. Sixth International Colloquium on Pathology in Marine Aquaculture. April 28 - 30, 1995, Montpellier, France. 1994.

**Volety, A. K.**, and Chu, F. L. E. Infectivity and pathogenicity of two life stages, meront and prezoosporangia of *Perkinsus marinus* in Eastern oysters, *Crassostrea virginica*. Annual Meeting of National Shellfisheries Association Conference, May 31-June 3, 1993, Portland, Oregon.

Chu, F. L. E., Burreson, C. S., **Volety, A. K.**, and Constantin, G. *Perkinsus marinus* susceptibility in Eastern (*Crassostrea virginica*) and Pacific (*Crassostrea gigas*) oysters: Temperature and salinity effects. Annual Meeting of National Shellfisheries Association Conference, May 31-June 3, 1993, Portland, Oregon.

Chu, F. L. E., **Volety, A. K.**, and Hale, R. C. In vitro effect of toxicants derived from polluted sediments on activities of hemocytes from the oyster, *Crassostrea virginica*. 1992 World Congress on Cell and Tissue Culture, June 20-25, 1995, Washington, D. C.

## GRANTS AND CONTRACTS

Ten Thousand Islands oyster monitoring. **PI: A. Volety**. \$17,500. November 2009 – March 2010. South Florida Water Management District.

Development of a Strategic Plan for Florida Gulf Coast University's Vester Marine and Environmental Sciences Research Field Station. **PI: A. Volety**. \$24,070. September 15, 2009 – August 31, 2010. National Science Foundation.

NOAA Center for Sponsored Coastal Ocean Research, Coastal Ocean Program. \$65,108 (of \$1.47M collaborative effort). Marine and estuarine goal setting for South Florida (MARES). Co-PI: **M Savarese, A. Volety**. Jun 2009 – May 2011.

Ten Thousand Islands oyster reconnaissance and salinity study. **PI: A. Volety**. \$49,500. February – September 2009. South Florida Water Management District.

Relationship between freshwater inflows and oyster spat recruitment in Estero Bay Tributaries. **PI: A. Volety**. \$45,000. March –September 2009. South Florida Water Management District.

Environmental education and outreach in Estero Bay. **PI: A. Volety**. \$175,000. April 1, 2009 – March 31, 2010. West Coast Inland Navigation District.

Investigations into the effects of water quality (salinity and food) on two shellfish species: oysters (*Crassostrea virginica*) and green mussels (*Perna viridis*). **PI: A. Volety**. \$30,000. Dec 1, 2008 – Sep 30, 2009. South Florida Water Management District.

Restoration of oyster reefs in Estero Bay. **PI: A. Volety**. \$34,600. April 1, 2008 – Sep 30,

2008. South Florida Water Management District.

Enhancement of Public Health Preparedness for Dealing with Bioterrorism: New Biocides and Decontaminating Agents for Biodefense. PI: J. Baretto; **Co-PI: A. Volety** (Other co-PIs: Thomas Beatty, Diane Bondehagen, David Brown, Sulekha Coticone, Terry Dubetz, Michael Parsons). \$366,625. May 19, 2008 – May 18, 2010. University of South Florida.

Lee County Commercial Fishermen's Council. **PI: A. Volety**. \$25,000. Jan 15, 2008 – Dec 15, 2008. Lee County.

Marine Environmental Education and Outreach in SW Florida. **PI: A. Volety**. \$100,000. Jan 15, 2008 – Dec 31, 2008. West Coast Inland Navigation District.

Historical distribution of reef building organisms and their control on coastal geomorphology in the Everglades PI: **A. Volety**, Co-PIs: M. Savarese, A. N. Loh. \$50,000. August 1, 2007 – September 30, 2007. South Florida Water Management District.

Oyster monitoring network in the Caloosahatchee Estuary. PI: **A. Volety**, Co-PIs: G. Tolley, A. N. Loh. \$686,085. June 2007 – June 2010. South Florida Water Management District.

Caloosahatchee Estuary oyster monitoring and research. PI: **A. Volety**. \$50,000. March 12, 2007 – May 31, 2007. South Florida Water Management District.

Ecology of the Florida Keys and Florida Bay. PI: A. Volety, Co-PI: M. Parsons. \$5000. Florida Institute of Oceanography. Nov 2007.

Interactions between Native (*Crassostrea virginica*) and non-native (*Crassostrea ariakensis*) oysters in Chesapeake Bay: potential for spread and ecological impacts and lessons learned. \$988. Florida Sea Grant, University of Florida, Gainesville, Florida. Elise B. Newell Seminar Grant. Nov 2006. (Dr. Mark Luckenbach, Virginia Institute of Marine Science, Virginia.). PI: **A. Volety**.

Molecular Approaches to Early Detection and Detoxification of Red Tides. \$243,750. **Co-PI: A. Volety**. July 1, 2006 – July 1 2009. U. S. Environmental Protection Agency.

Landscape Pattern: Present and Past Distribution of Oysters in South Florida Coastal Complex (Whitewater Bay/Oyster Bay/Shark to Robert's Rivers). PI: **Volety, A.**, Co-PI: M. Savarese, A. N. Loh, and V. Encomio. \$349, 996. April 11, 2006 – April 10, 2009. South Florida Water Management District.

Restoration of oyster reefs in Charlotte Harbor / Caloosahatchee River. PI: **Volety, A.** \$20,000. April 10 – August 23<sup>rd</sup>, 2006. South Florida Water Management District.

Restoration of oyster reefs in Estero Bay. PI: **Volety, A.** \$20,000. April 10 – August 26,

2006. South Florida Water Management District.

Adaptive management and community involvement in restoring oyster reefs in SW Florida. **Volety, A.** \$35,000. Aug 1, 2005 – July 12, 2006. Fish America Foundation / National Oceanic Atmospheric Administration.

Oyster reef restoration in Naples Bay. PI: Savarese, M. and **Volety, A.** \$50,000. June 16, 2005 – May 31, 2007. Naples Bay Initiative of the South Florida Water Management District.

Bivalve molluscs as potential vectors for transport and ecological impacts of Harmful Algal Blooms. \$964. Florida Sea Grant, University of Florida, Gainesville, Florida. Elise B. Newell Seminar Grant. April 2006. (Funds to bring Dr. Sandra Shumway, University of Connecticut for a seminar at FGCU). PI: **A. Volety.**

Substrate and subsurface mapping of Naples Bay using geophysical technologies. PI: M. Savarese, Co-PIs: M., Dellapenna, T., and **Volety, A.** \$50,000. South Florida Water Management District. Feb 2, 2005 – Oct 31, 2005.

Oyster reef health in Pumpkin and Fakahatchee estuaries: baseline monitoring for Ten Thousand Islands restoration. PI: Savarese, M., Co-PIs: **Volety, A.**, and Lee, G.-H. \$182,858. July 1, 2005 – June 30, 2007. Big Cypress Basin of the South Florida Water Management District.

Restoration of shellfish and fish habitat in the Caloosahatchee and Estero Bays. \$30,000. February 2005 – January 2006. South Florida Water Management District. PI: **A. K. Volety.**

Effects of seasonal and spatial variation in salinity on oysters (*Crassostrea virginica*) and associated fish populations: in Estero Bay. \$125,944. Jan 1, 2005 – Dec 31, 2006. South Florida Water Management District. PI: **A. K. Volety**, Co-PI: S. G. Tolley.

The study of Coastal Watersheds in Southwest Florida. \$1,192,900. July 1, 2005 – Dec 31, 2007. Congressional Grant FY 2004. Environmental Protection Agency, PI: S.G. Tolley; Co-PIs **A.K. Volety**, M. Savarese & A.N. Loh.

Research programs at FGCU related to the study of coastal watersheds in SW Florida. \$1,341,200. April 2004-Dec 31, 2005. Environmental Protection Agency. PI: S.G. Tolley, Co-PIs: **A. K. Volety**, M. Savarese, A. N. Loh, and G-H. Lee.

Ecology and Natural History of the Florida Keys and Florida Bay: A Collaborative Undergraduate Research and Education Expedition. A proposal to use the Florida Keys Marine Laboratory. **Volety, A.**, Savarese, M., and Tolley, G. Florida Institute of Oceanography. October 2004. \$3800.

Analyses of the effects of freshwater inflow alteration on oysters (*Crassostrea virginica*) in the Alafia River and Tampa Bypass Canal/McKay Bay estuarine systems. \$21,038.36. July 15, 2004 – December 31, 2004. Southwest Florida Water Management District. PI: **A. K. Volety**, Co-PIs: S. G. Tolley, E. Estevez (Mote Marine Laboratory).

Oyster reef and bay bottom mapping: a preliminary test of new geophysical techniques. \$9,995. May 5, 2004 – Sep 30, 2004. South Florida Water Management District. PI: M. Savarese, Co-PI: **A. K. Volety**.

Application of flow cytometric techniques in bivalve immunology and disease studies to evaluate environmental and anthropogenic stress: an overview. \$1383. Florida Sea Grant, University of Florida, Gainesville, Florida. Elise B. Newell Seminar Grant. March 2004. (Funds to bring Dr. Philippe Soudant, University of Brest for a seminar at FGCU). **PI: A. Volety**.

Caloosahatchee Estuary Oyster monitoring. January 1, 2004 – September 30, 2006. \$175,000. South Florida Water Management District. PI: **A. K. Volety**.

Restoration of shellfish and fish habitat in the Caloosahatchee River – Charlotte Harbor watershed. \$35,000. October 1, 2003 – September 30, 2004. South Florida Water Management District. PI: **A. K. Volety**, Co-PIs: S. G. Tolley, M. Savarese.

Restoration of shellfish and fish habitat in Estero Bay State Aquatic Buffer Preserve. \$20,000. October 1, 2003 – September 30, 2004. South Florida Water Management District. PI: **A. K. Volety**, Co-PIs: S. G. Tolley, M. Savarese.

Characterization of community assemblages in oyster-reef habitats of the Estero estuary: monitoring the ecological impact of watershed management. November 1, 2003 – October 31, 2004. \$53,343. Charlotte Harbor National Estuary Program. PI: **A. K. Volety**; Co-PI's: S. G. Tolley, M. Savarese, and A. N. Loh.

Effect of freshwater inflow on the oysters and oyster reef communities in the Caloosahatchee River. October 1 – September 30, 2004. \$72,000. Mote Marine Laboratory / South Florida Water Management District. PI: **A. K. Volety**, Co-PIs: S. G. Tolley, and M. Savarese.

Community-based restoration of oyster reefs in Southwest Florida / Western Everglades watersheds, \$50,000. October 1, 2003 – May 1, 2005. National Oceanic Atmospheric Administration. PI: **A. K. Volety**. Co-PI's: S. G. Tolley, and M. Savarese.

Internship support – GIS technical assistance, \$6750. October 28, 2003 – May 30, 2004. South Florida Water Management District. PI: **A. K. Volety**.

Florida Institute of Oceanography, St. Petersburg, Florida, \$6,600 Shiptime. Shiptime support for Florida Gulf Coast University's Marine Science curriculum. PIs: S. G. Tolley, **A. K. Volety** and A. N. Loh. April 2004.

Florida Institute of Oceanography, St. Petersburg, Florida, \$2,800. Ecology of the Florida Keys and Florida Bay: A collaborative undergraduate research and education expedition. PIs: **A. K. Volety**, S. G. Tolley and M. Savarese. October 2003.

Community-based restoration of oyster reefs in Charlotte Harbor - Western Everglades watershed: collaboration of secondary and post-secondary education. \$44,176. (April 26, 2003 - April 26, 2004). National Fish and Wildlife Foundation. PI: **A. K. Volety**, Co-PIs: S. G. Tolley, M. Savarese, N. Wilkinson, B. Murphy, R. Wasno.

Mapping of oyster reefs and reef-restoration in Charlotte Harbor. \$45,000. (April 1, 2003 - March 31, 2004). South Florida Water Management District. PI: **A. K. Volety**, Co-PIs: S. G. Tolley and M. Savarese.

Biological effects of suspended sediments on shellfish in the Charlotte Harbor watershed: implications for water releases and dredging activities. \$25,018. (March 1, 2003 - September 30, 2004). Charlotte Harbor National Estuary Program. PI: **A. K. Volety**; Co-PI's: S. G. Tolley, M. Savarese, and G. Romeis.

Oyster health and habitat quality in Fakahatchee Estuary: establishing a baseline performance for Ten Thousand Island estuarine restoration. \$25,000. (March 1, 2003 - February 29, 2004). South Florida Water Management District, Big Cypress Basin. PIs: M. Savarese, **A. K. Volety**, and S.G. Tolley.

Ship time support for Florida Gulf Coast University's marine science curriculum. \$8,800 (ship time). Florida Institute of Oceanography, St. Petersburg, FL. (April 2003). PI: S. G. Tolley, Co-PIs: **A. K. Volety** and M. Savarese.

Effect of river flow on the Benthic biota in the Caloosahatchee River. \$92,275. (October 1, 2002 - September 30, 2003). South Florida Water management District / Mote Marine Laboratory. PI: **A. K. Volety**, Co-PIs: S. G. Tolley, and M. Savarese.

Natural History of the Florida Keys and Florida Bay: a collaborative undergraduate research and educational experience. \$2,500 (laboratory and ship time). Florida Institute of Oceanography, St. Petersburg, FL. PI: M. Savarese, Co-PIs: **A. K. Volety** and S. G. Tolley. 2002.

Ship time support for Florida Gulf Coast University's marine science curriculum. \$8,000 (ship time). Florida Institute of Oceanography, St. Petersburg, FL. (April 2002). PI: S. G. Tolley, Co-PIs: **A. K. Volety** and M. Savarese.

Community-Based Restoration of Oyster Reefs and Enhancement of Essential Fish Habitat in Charlotte Harbor Watershed. Charlotte Harbor National Estuary Program. \$19,736. (March 1, 2002 - September 30, 2003). PI: A. K. Voley, Co-PIs: S. G. Tolley, M. Savarese, S. Thurston, N. Wilkinson (Florida Gulf Coast University), B. Murphy (Lee County School District), and R. Wasno (Florida Sea Grant Extension Program).

Relationship between PCB accumulation and reproductive success in sexually mature and immature oysters (*Crassostrea virginica*) exposed via a contaminated algal diet. \$850. Florida Sea Grant, University of Florida, Gainesville, Florida. Elise B. Newell Seminar Grant. March 2002. Seminar title: (Dr. Dr. Fu-Lin E. Chu, Virginia Institute of Marine Science, Virginia.). PI: A. Voley.

Effects of River flow on Caloosahatchee Biota. South Florida Water Management District / Mote Marine Laboratory, \$31,000. (October 1, 2001 – September 30, 2002). PIs: A. K. Voley, S. G. Tolley, and M. Savarese.

Influence of watershed alteration on oyster health and oyster reef habitat: management implications for the Faka-Union and Estero Bays. \$49,725. (February 2002 – January 2003). PIs: M. Savarese, A. K. Voley, and S. G. Tolley.

Investigations into the effects of season and water quality on oysters (*Crassostrea virginica*) and associated fish assemblages: implications of altered freshwater inflow into the Caloosahatchee Estuary. South Florida Water Management District, \$91,423. (April 1, 2001 - June 30, 2002). PIs: A. K. Voley and S.G. Tolley.

Effects of heavy metals and pesticides on health and physiology of oysters in Caloosahatchee Estuary: implications for management of water quality and restoration of oyster reefs. Charlotte Harbor National Estuary Program. \$19, 824. (PI: A. K. Voley; Co-PIs: Bruce Boler, Catherine Hopkins, Karen Shudes (Florida Department of Environmental Protection), and David Ceilley (Sanibel Captiva Conservation Foundation) (July 2001 - September, 2002).

Oysters as indicators of ecosystem health: determining the impacts of watershed alteration and implications for restoration. National Fish and Wildlife Foundation, South Florida Water Management District, Florida Gulf Coast University (FGCU) Foundation, and FGCU, \$115,600. (July 1, 2000 - June 30, 2001). Principal Investigator (PI): A. K. Voley, Co-PI: M. Savarese.

Oysters as indicators of ecosystem health: determining the impacts of watershed alteration and implications for restoration. Faculty Development and Grants Program, FGCU, \$5,000. (July 1, 2000 - June 30, 2001). Principal Investigator (PI): A. K. Voley, Co-PI: M. Savarese.

Investigations into the effects of season and water quality on oysters (*Crassostrea virginica*)

and associated fish assemblages: implications of altered freshwater inflow into the Caloosahatchee Estuary. South Florida Water Management District, \$90,000. (July 31, 2000 - June 30, 2001). Co-PI: A. K. Voley and S.G. Tolley.

Florida Sea Grant, University of Florida, Gainesville, Florida. \$989. Elise B. Newell Seminar Grant. April 2000. Seminar title: Appraisal of prospective bivalve immunomarkers for estuarine management. (Dr. William S. Fisher, US EPA, Gulf Breeze, Florida.)

Florida Sea Grant, University of Florida, Gainesville, Florida. \$968. Elise B. Newell Seminar Grant. February 2001. Seminar title: DNA damage and embryo effects in grass shrimp as indicators of genotoxicants in estuarine ecosystems (Dr. Richard F. Lee, Skidaway Institute of Oceanography, Georgia.)

Effects of heavy metals and organic pollutants on the immunological and biochemical responses in the eastern oyster, *Crassostrea virginica*: optimization and standardization of biomarkers. Environmental Protection Agency, \$129,000 (Year 1:\$42,000, Year 2: \$43,000, Year 3: \$44,000) (Principal Investigator, March 15, 1997- March 14, 2000). Principal Investigator: A. K. Voley.

Acid phosphatase(s): A virulence factor of the protozoan parasite, *Perkinsus marinus* against, oysters' defense? Oyster Disease Research Program, NOAA. \$76,836. (January 1, 1997 - December 31, 1997). PI: F.L. E. Chu; Co-PI: A. K. Voley.

Uptake of PCB and transport within adult oysters and to embryo and larvae: Potential for reproductive and developmental impairments. Environmental Protection Agency. \$247,122. (January 1, 1997 - December 31, 1999). PI: F. L. E. Chu; Co-PIs: A. K. Voley, R.C. Hale.

Mortality and physiopathology studies of blue crabs infected with the parasitic dinoflagellate *Hematodinium perezii*. Saltonstall-Kennedy Program, NOAA. \$117,868 (July 1, 1997 - December 31, 1998). PI: J. Shields; Co-PI: A. K. Voley

Virginia Institute of Marine Science GSA Mini-grant research award (1994). Title: Lipid and fatty acid requirements of the oyster parasite, *Perkinsus marinus* during development. PI: A. K. Voley

Virginia Institute of Marine Science Minor Research Grant (1993). Title: Dose related response of *Perkinsus marinus* in American oyster, *Crassostrea virginica*. PI: A. K. Voley

Virginia Institute of Marine Science GSA Mini-grant research award (1992). Title: Characterization of acid phosphatase activity in trophozoites and prezoosporangia stages of *Perkinsus marinus*, a protozoan parasite of the eastern oyster, *Crassostrea virginica*. PI: A. K. Voley.

## **TEACHING EXPERIENCE:**

**Average student teaching evaluation: 4.6 / 5.0.**

Master's Thesis; Marine Ecology (undergraduate); Marine Ecology (graduate); Internship in Interdisciplinary Natural Sciences; Senior Project Research in Interdisciplinary Natural Sciences; Senior Project Presentation in Interdisciplinary Natural Sciences; Marine Systems; Scientific Writing; Shellfish Immunology; Senior Project Research in Environmental Studies; Senior Project Presentation in Environmental Studies; Environmental Practicum; Internship in Environmental Studies; Shellfish Ecology; Ecotoxicology; Environmental Toxicology; Scientific Process; Analytical Biochemistry.

## **MENTORSHIP / ACADEMIC ADVISING**

### ***Graduate Students: (Major Advisor)***

Holly Abeels, M. S. Environmental Science, FGCU (2009)

Stephen Cullipher, M. S. Environmental Science, FGCU (2010) (Co-Chair)

Andrew Griffith, M. S. Environmental Science, FGCU (anticipated graduation 2010)

Robert Wasno, M. S. Environmental Science, FGCU (anticipated graduation 2010)

Erin Dykes, M. S. Environmental Science, FGCU (anticipated graduation 2010)

Christina Panko, M. S. Environmental Science, FGCU (2006)

### ***Graduate Students (Committee member)***

Ian Dow, M. S. Marine Science, University of South Florida (2008)

Julie Van Horn, M. S. Environmental Science, FGCU (2007)

Bethany Bachelor, M. S. Environmental Science, FGCU

Laura Walls, M. S. Environmental Science, FGCU (2006)

Sasha Linsin, M. S. Environmental Science, FGCU (2007)

### ***Post-Doctoral Advisor for :***

Dr. Vincent Encomio

### ***Host and mentor:***

Madeleine Goncalves, Visiting Scientist, Brest, France

### ***Undergraduate Senior Research Projects and Presentations***

2010. Arianne Paul, B. A. Marine Science, FGCU. Effect of salinity changes on the osmolality of green mussels, *Perna viridis*.

2009. Bonnie Getter, B. A. Environmental Studies, FGCU. Effect of salinity and desiccation on the survival, growth and physiological response of green mussels, *Perna viridis*.

2008. Heather Benton, B. A. Marine Science, FGCU. Growth and survival of clams *Mercenaria mercenaria* and oysters *Crassostrea virginica*, in an intertidal lagoon in Naples Bay, FL.
2005. William Blum, B. A. Environmental Studies, FGCU. Seasonal and spatial variation of condition index and spat recruitment of oysters in the Caloosahatchee estuary.
2005. Stephanie Martin, B. A. Environmental Studies, FGCU. Effect of various sediment sizes and duration exposure on the responses of the freshwater clam, *Rangia cuneata*.
2005. Jessica Alexander, B. A. Biology, FGCU. Effect of the anti-malarial drugs, Quinine and curcumin on the viability / metabolic activity of the protozoan parasite, *Perkinsus marinus*.
2005. Matthew Logan, B. A. Environmental Studies, FGCU. Effect of beach re-nourishment on sea turtle nesting and hatching success.
2005. Laura R. Markley, B. A. Biology, FGCU. The effect of copper exposure on hemocyte number and intensity of *Perkinsus marinus* infections in *Crassostrea virginica*
- 2004: Jessica Neal, B. A. Environmental Studies, FGCU. Seasonal variation of glycogen levels in oysters from the Caloosahatchee River, Florida.
- 2004: Jennifer McManus, B. A. Biology, FGCU. Effect of copper on the *in vitro* and *in vivo* responses of oysters.
2004. Alicia Kruse, B. A. Environmental Studies, FGCU. Uptake kinetics and effect of antimalarial drug, quinine on the oyster pathogen, *Perkinsus marinus*.
- 2002: Matthew Hooper, B. A. Environmental Studies, FGCU. Effect of salinity on survival and growth of juvenile oysters, *Crassostrea virginica*.
- 2002: James A. Stantiford, B. A. Environmental Studies, FGCU. Watershed alteration effects on glycogen levels in oysters.
- 2002: Erin Rasnake, B. A. Environmental Studies, FGCU. Acute effects of a model heavy metal, copper, used in agricultural fields on oysters, *Crassostrea virginica*.
- 2002: Rashel Grindberg, B. A. Biology, FGCU. Chronic effects of endosulfan on growth, survival and energy reserves in bivalves.
- 2002: Erik Hansen, B. A. Environmental Studies, FGCU. Effect of over seeding and

fertilization of rye grass during winter on native grass: changing cultural practices on the golf course to protect the environment.

- 2001: Gayle Boyle, B. A. Environmental Studies, FGCU. Chronic effects of a model heavy metal, copper, used in agricultural fields on growth and survival of oysters, *Crassostrea virginica*
- 2001: Prachi Ashar, B. A. Biology, FGCU. (co-mentor with Dr. Jose Barreto). Synthesis and evaluation of toxicity of bio-diesel on *Daphnia magna*.
- 2000: Jason Barowski, B. A. Biology, FGCU. Detection and culture of *Enterococcus* sp. From pore waters of Santa Rosa Sound, Florida.
- 2000: J. T. Lison, B. A. Biology, FGCU. Effect of acute salinity changes on uptake and killing of *Virbrio parahaemolyticus* by oysters.
- 2000: Craig Thompson, B. A. Environmental Studies, FGCU. Investigations of *Perkinsus marinus* prevalence, health and distribution of oyster reefs in Estero Bay, Florida.

*National Science Foundation funded undergraduate summer internship* (with Dr. Fu-Lin Chu, VIMS, The College of William and Mary, Virginia.)

- 1996: Christine Forsythe, Coastal Carolina University, Conway, South Carolina. Characterization and optimization of extracellular acid phosphatase activity of the protozoan parasite, *Perkinsus marinus*.
- 1995: Sandra Merrill, Reed College, Portland, Oregon. Role of lipids in the oyster protozoan parasite, *Perkinsus marinus* (Dermo): A preliminary investigation of lipid metabolism.
- 1994: Richard Amar, College of William and Mary, Williamsburg, Virginia. Effect of sodium stibogluconate, an antiprotozoal drug, on the viability of the oyster parasite *Perkinsus marinus*.
- 1993: Arnita Ford, Jackson State University, Mississippi. Comparison of chemiluminescent response of *Perkinsus marinus* exposed and unexposed eastern oysters (*Crassostrea virginica*).
- 1992: Mentored Governor's High School student during the summer of 1992.

**Internship Advisor / Opportunity: (Partial list)**

- Aurélie Perrin, ENSAT, Toulouse, France
- Marine Fondacci, ENSAT, Toulouse, France

- Aurélie Glachant, ENSAT, Toulouse, France
- Audrey Valls, ENSAT, Toulouse, France
- Vicki Ohm – Marine Science
- Sarah Ernst – Marine Science
- Stephanie Goodwin – Environmental Studies
- Arianne Paul – Environmental Studies
- Sarah Larson – Marine Science
- Erin McGuire – Marine Science
- Andrew Currin – Marine Science
- Bonnie Getter – Environmental Studies
- Keith Michael – Marine Science
- Liza Rollins – Marine Science
- Amanda Torres – Marine Science
- Rachel Sommers, B. A. Marine Science, FGCU.
- Heather Benton, B. A. Marine Science, FGCU
- Rheanon Ketover, B. A. Marine Science, FGCU.
- Sarah Ernest, B. A. Marine Science, FGCU.
- Travis Knight, B. A. Marine Science, FGCU.
- Travis Brindise, B. A. Marine Science, FGCU.
- Stephanie Goodwin, B. A. Marine Science, FGCU
- Erin Maguire, B. A. Marine Science, FGCU.
- Brooke Denkert, B. A. Environmental Studies, FGCU.
- Troy McPherson, B. A. Marine Science, FGCU.
- Melissa McConnell, B. A. Biology, FGCU.
- Rachel Minor, B. A. Marine Science, FGCU.
- Noel Wingers, B. A. Marine Science, FGCU.
- Paul Smith, B. A. Marine Science, FGCU.
- Anthony Myers, B. A. Marine Science, FGCU.
- Lindsey Garvin, B. A. Marine Science, FGCU.
- Miranda Westphal, B. A. Marine Science, FGCU.
- Christian Ercolani, B. A. Marine Science, FGCU.
- Jason Hahner, B. A. Marine Science, FGCU.
- Raymond Leary, B. A. Marine Science, FGCU
- Anthony Myers, B. A. Marine Science, FGCU.
- Stephanie Martin, B. A. Environmental Studies, FGCU.
- Andrew Erickson, B. A. Environmental Studies, FGCU.
- Tim Schwan, B. A. Environmental Studies, FGCU
- Alicia Kruse, B.A. Environmental Studies, FGCU.
- Abby Walthier, B. A. Marine Science, FGCU
- Jerry Berry, B. A. Biology, FGCU.
- Amanda Bridges, B.A. Marine Science, FGCU.
- William Blum, B. A. Biology, FGCU.

- Christi Linardich, B.A. Marine Science, FGCU.
- Kevin Kaufman, M.S. Environmental Science, FGCU.
- Laura Markley, B. A. Marine Science, FGCU.
- Jessica Neal, B. A. Environmental Studies, FGCU.
- Todd Bost, B. A. Marine Science, FGCU.
- Benjamin Jacobs, B. A. Environmental Studies, FGCU.
- Cecile Perret, ENSAT, Toulouse, France.
- Cyrille Doumenq, ENSAT, Toulouse, France.
- Megan Dunphy-Daly, B. S. Biology, Oberlain College, OH.
- Cecile Jauzein, ENSAT, Toulouse, France.
- Cedric Loret, ENSAT, Toulouse, France.
- Julie Farineau, B. A. Environmental Studies, FGCU.
- Angelina Ruttan, B. A. Environmental Studies, FGCU.
- Lacey Smith, B. A. Marine Science, FGCU.
- Nicholas Smith, B. A. Environmental Studies, FGCU.
- Micheal Chichester, B, A, Earth System Science, FGCU.
- James A. Stantiford, B. A. Environmental Studies, FGCU.
- Matthew Hooper, B. A. Environmental Studies, FGCU.
- Sherith Bankston, B. A. Environmental Studies, FGCU.
- Erin Rasnake, B. A. Environmental Studies, FGCU.
- Rashel Grindberg, B. A. Biology, FGCU.
- Emily Lindland, B. A. Earth System Science, FGCU.
- Holly Peters, B. A. Environmental Studies, FGCU.
- Gayle Boyle, B. A. Environmental Studies, FGCU.
- Matthew Benolkin, B. A. Environmental Studies, FGCU.
- Craig Thompson, B. A. Environmental Studies, FGCU.
- Sara Hammermeister, B. A. Environmental Studies, FGCU.

### **Membership in professional societies**

- \* National Shellfisheries Association (1992-Present)
- \* Society of Invertebrate Pathology (1992-1996)
- \* Society of Environmental Toxicology and Chemistry (1996-1999)

### **PROFESSIONAL & PEER-REVIEW ACTIVITIES**

#### **National Review Panels:**

- \* *U. S. Environmental Protection Agency / National Oceanic Atmospheric Administration*

\* *U. S. Department of Agriculture, Aquaculture Programs*

**Journal referee:**

- \* *Journal of Experimental Biology*
- \* *Journal of Experimental Marine Biology and Ecology*
- \* *Journal of Eukaryotic Microbiology*
- \* *Applied and Environmental Microbiology*
- \* *Aquaculture*
- \* *Journal of Shellfish Research*
- \* *Journal of Invertebrate Pathology*
- \* *The Quarterly Review of Biology*
- \* *Environmental Toxicology and Chemistry*
- \* *Comparative Biochemistry and Physiology*
- \* *Marine Environmental Research*
- \* *Estuaries (Now Estuaries and Coasts)*
- \* *Environmental Management*
- \* *Florida Scientist*

**Proposal Referee:**

*National Science Foundation*  
*National Oceanic Atmospheric Administration*  
*Maryland Sea Grant*  
*Maine / New Hampshire Sea Grant*  
*Connecticut Sea Grant*  
*Rhode Island Sea Grant*  
*North Carolina Sea Grant*  
*Virginia Sea Grant*  
*South Carolina Sea Grant*

**Book Reviews:**

- 2001.** *Great Waters: An Atlantic Passage* by Deborah Cramer (W. W. Norton and Company). For **Choice** magazine.
- 2002.** *The Whales' Journey* by Stephen Martin, Allen & Unwin Pty., Limited (Australia). For **Choice** magazine.
- 2003.** *Molecular and Cell Biology of Marine Mammals*, ed. Carl J. Pfeiffer. Krieger Publishers. For **Choice** magazine.
- 2004.** *Sperm Whales: social evolution in the ocean* by Hal Whitehead. The University of Chicago Press. For **Choice** magazine.
- 2004.** *Heal the ocean, solutions for saving our seas* by Rod Fugita (New Society Publishers). For **Choice** magazine.
- 2005.** *The Norwegian Sea Ecosystem* by Hein Rune Skjoldal (Ed). Tapir Academic Press. For **Choice** magazine.
- 2006.** *Marine conservation biology: the science of maintaining the sea's biodiversity*, ed. by Elliott A. Norse and Larry B. Crowder. Island Press, 2005. For **Choice** magazine.
- 2007.** *"Otters – Ecology, Behavior and Conservation"* by Hans Kruuk. Oxford Publishers, For **Choice** Magazine.
- 2008.** *Oceans past: management insights from the history of marine animal populations*, ed. by David J. Starkey, Poul Holm, and Michaela Barnard. Earthscan Publications Ltd, 2008. 223p bibl index ISBN 9781844075270. For **Choice** Magazine.
- 2008.** *A photographic guide to seashore life in the North Atlantic: Canada to Cape Cod*. J. Duane. Princeton, 2008. 224p index afp ISBN 9780691133195. For **Choice** Magazine.
- 2009.** *Watersheds, bays, and bounded seas: the science and management of semi-enclosed marine systems*, ed. by Edward J. Urban et al. Island Press, 2009. 269p bibl index afp (SCOPE, 70) ISBN 9781597265027. For **Choice** Magazine.

**Conference Organization:**

**International Advisory Committee Member – 3<sup>rd</sup> International Oyster Symposium, Nov 2-4, Taipei, Taiwan.**

**Co-Organizer and Chair of the Scientific Committee. 8<sup>th</sup> International Conference on Shellfish Restoration, Oct 2-5<sup>th</sup>, 2005. Brest, France.**

**Conference sessions:**

**Chair, Marine Molluscs and Global Change, Physiomar 08, Brest, France, September 1-4, 2008.**

**Chair**, Invertebrate Aquaculture session, Aqua 2006 conference (World Aquaculture 2006 Conference), Florence, Italy, May 9-13, 2006.

**Co-Chair**, Molluscs and other invertebrates Session, Aqua 2006 conference (World Aquaculture 2006 Conference), Florence, Italy, May 9-13, 2006.

**Co-Chair**, Shellfish Restoration Session. 98<sup>th</sup> Conference of the National Shellfisheries Association, April 2006, Monterey, CA.

**Chair**, Physiology, Ecology and Diseases of Shellfish. World Aquaculture, Bali, Indonesia. May 2005.

**Chair**, Shellfish-Ecosystem Linkages. 7<sup>th</sup> International Conference on Shellfish Restoration. Charleston, SC. November 17-20, 2004.

**Co-Chair**, Bivalve Habitat Suitability and Role of Bivalves in Ecosystems. National Shellfisheries Association Annual Conference, Mystic, CT. April 2002.

**Co-Chair**, Oyster Reefs and Restoration. National Shellfisheries Association Annual Conference, Mystic, CT. April 2002.

**Co-Chair**, Bivalves and Environmental Management. Aquaculture 2001, Orlando, FL. January 2001.

**Co-Chair**, Environmental and Anthropogenic Influences on Shellfish. National Shellfisheries Association Annual Conference, Seattle, WA. March 2000.

**Co-chair**, "Shellfish-microbe interactions: ecological and human health perspectives". session, National Shellfisheries Association Annual Meeting, Halifax, Canada, April 18-22, 1999.

**Co-chair**, "Toxic effects and Shellfish" session, National Shellfisheries Association Annual Meeting, Fort Walton, Florida, April 20-24, 1997.

**Panels and committees:**

**Advisory Board, Florida Institute of Oceanography, University of South Florida, FL.**

**Member, Steering Committee, World Oyster Society.**

**Delegate, Florida – U. K. Global Climate Change Forum, July 12-19, London, U. K.**

**Panel Member (twice) – Ecology and Oceanography of Harmful Algal Blooms (ECOHAB) program (by EPA / NOAA / NSF).**

**Panel Member - United States Department of Agriculture – Aquaculture Division (SBIR).**

Institutional Host (for FGCU) – Florida Coastal Ocean Observing System Consortium.

Chair, Comprehensive Everglades Restoration Plan, Restoration Coordination and Verification, Northern Estuaries Subteam and Northern Estuaries Integrated Assessment Team Oyster module (2004 – Present)

Caloosahatchee Estuary Conceptual Model Workshop, South Florida Water Management District, Invited scientist, Fort Myers, FL. January and July 2000.

Member-at-large. National Shellfisheries Association (2000-2003).

Judge for student presentations in Annual National Shellfisheries Conference (1997 - Present)

Co-chair, Endowment/Student Awards Committee, National Shellfisheries Association (1998-Present)

**UNIVERSITY SERVICE:  
Florida Gulf Coast University**

University Service:

*College-wide*

- \* Member, Environmental Sustainability Committee (2009 - ).
- \* Chair, Whitaker Eminent Scholar Search Committee (2008, 2009).
- \* Deans' Representative – CAS Space Committee (2007 – Present).
- \* Co-Chair, AB7 Planning Committee (2007- 2010)
- \* Member, Search Committee (School of Engineering) Environmental Engineering Program Director and Environmental Engineering faculty positions (2006-2007).
- \* Member, search Committee, (College of Health Professions, CHP) Assistant Director of Nursing position (2006-2007).
- \* Member, Search Committee (School of Engineering), Civil Engineering and Environmental Engineering positions (2005-2006)
- \* Member, Search Committee (CHP), Nurse anesthesia position (2005-2006)
- \* Member, Search Committee (CHP), Nursing and Graduate coordinator in Nursing positions (2005-2006)
- \* Member, Search Committee (CAS), Environmental Communication position (2005-2006)
- \* Member, CAS Graduate Curriculum Committee (2002 – 2004)
- \* Member, CAS Faculty Governance Team (2003)
- \* Member, Search Committee, Biotechnology Program Director, College of Arts and Sciences (2002-2003).
- \* Member, Task Force for teaching evaluations (1999-2000)

- \* Search Committee, Physics Faculty Position, College of Arts and Sciences (2000)
- \* Search Committee, 3 English Writing Instructors Positions, College of Arts and Sciences (2000)
- \* Search Committee, Biology / Biotechnology Faculty position, College of Arts and Sciences (2000-2001)
- \* Member, College of Arts and Sciences, Undergraduate Curriculum Committee (2000-2001)
- \* Reviewer, Ampersand (2000).
- \* Member, CAS Website Revision Taskforce (2000)

#### *University-wide*

- \* Member, Environmental Sustainability Committee
- \* Member, Institutional Animal Care and Use Committee (IACUC; 2006-present)
- \* Chair, IACUC (2005 – 2006)
- \* Member, Department Chairs / Assistant Associate Dean's Task Force (2005 – Present)
- \* Member, SACS Re-affirmation of accreditation Steering Committee (2003-2006)
- \* Chair, SACS Re-affirmation of accreditation, Library and Technology Team (2003 – 2006)
- \* Chair, Graduate Affairs Team, Curriculum Team (2002-2004)
- \* Chair, Grants and Research Committee (2001 – 2004)
- \* Member, Senate Leadership Team (2001-2003)
- \* Member, Institutional Animal Care and Use Committee (2001 - Present)
- \* Member, Technology Committee (1999-2002)
- \* Member, Book Store Committee (1999-2002)
- \* Member, Grants and Research Committee (2000-2001)
- \* Member, University Graduate Curriculum Committee (2000 – 2002)
- \* Member, Senate Leadership Team (2001-2002)
- \* Member, University Admissions Appeals Committee (2001-2002)

#### *Other*

- \* Member, CAS Grade Appeals Committee
- \* Student Recruitment Team (Eagle Expo 1999-present)

#### **Community Service**

- \* Guest speaker, Webelo Scout group (Nov 14, 2006) Cape Coral, FL.
- \* Advisor, Environmental Science topics for science fair projects, Imaginarium.
- \* Southwest Florida Watershed Council member.
- \* Judge, Florida State Science and Engineering Fair, Fort Myers, FL, April 2001.
- \* Volunteer, Calusa Nature Center and Planetarium, Inc.
- \* Judge, Collier Regional Science Fair, January 2000.
- \* Guest Speaker (Naples 4H Youth Group)

#### **Virginia Institute of Marine Science, The College of William and Mary**

- \* Member, VIMS Awards Committee 1993-1994.

## **CRUISE EXPERIENCE:**

- 2001: R/V *Bellows*, Chief Scientist, Teaching Cruise-Marine Systems (OCE 1001C): Physical and biological characterization of continental shelf off southwest Florida.
- 2000: R/V *Suncoaster*, Chief Scientist, Teaching Cruise-Marine Systems (OCE 1001C): Onshore-offshore trends in biological and physical oceanographic properties, Pine island Sound, Florida.
- 1988-1989: R/V *Gaveshani*, Scientific Staff. Investigation of pollution in the seas around India, Bay of Bengal, India.

## **Interviews**

Daily Press, Fort Myers, FL.  
Naples Daily News, Naples, FL  
ABC-7 TV  
NBC-2 TV  
Island Press – Sand Paper

## **Professional Development**

Attended Coastal and Estuarine Risk Assessment Forum. The College of William and Mary, Williamsburg, Virginia. July 20-21, 2000.

Attended Camps Leadership for Sustainable Innovation conference. Leesburg, Virginia. June 23-28, 2002.

## **COMMUNITY SERVICE:**

Volunteer, Calusa Nature Center and Planetarium, Inc. Fort Myers, FL.

## **Science Fairs**

Judge, Florida, State Science Fair, January 2001.  
Collier Regional Science Fair (Judge), Naples, FL, 2000.

## **PROFESSIONAL DEVELOPMENT AND LEADERSHIP TRAINING**

Harvard Institute of Higher Education's Management Development Program. 2009.

The American Conference of Academic Deans and The Phi Beta Kapa Society. Third Biennial Conference. Promoting The Liberal Sciences: Science As Liberal Education. October 25-27, 2007, Washington, D. C.

Florida Gulf Coast University Leadership Academy, March 2006, Fort Myers, FL

Chairing the Academic Department. American Council on Education, Feb 15-18, 2006. San Diego, CA.

Institute for Academic Leadership, Oct 10-13, 2004. Howey-in-the-Hills, FL.

Institute on Campus Leadership for Sustainable Innovation, Association of American Colleges and Universities, 2002. Maryland.