

**Aswani K. Volety**  
*Curriculum vitae*

**Associate Professor of Marine Science**  
**Chair, Department of Marine and Ecological Sciences**

Florida Gulf Coast University  
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**EDUCATION**

- 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 2005 – Present, *Chair*, Department of Marine and Ecological Sciences, College of Arts and Science, Florida Gulf Coast University, Fort Myers, Florida 33965.

August 2004 – 2005, *Chair*, Division of Ecological and Social Sciences, College of Arts and Science, Florida Gulf Coast University, Fort Myers, Florida 33965.

August 2002 - Present, *Associate Professor of Marine Science*, Division of Ecological Studies, College of Arts and Sciences, Florida Gulf Coast University, Fort Myers, Florida 33965.

August 1999-August 2002, *Assistant Professor of Marine Science*, Division of Ecological Studies, College of Arts and Sciences, Florida Gulf Coast University, Fort Myers, Florida 33965.

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.

May 1995-March 1997, *Post-Doctoral Research Associate*, Division of Environmental Science, Virginia Institute of Marine Science, Gloucester Point, Virginia 23062.

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.

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

### **Scholarly Activity**

### **Selected Publications**

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. Haurert. 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

#### **Selected Presentations:**

- Volety, A. K.**, T. Barnes, L. Pearlstine, and F. Mazzoti. 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.

- 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.
- 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.**, 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.
- 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.
- 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. 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. September 15-19, 2003.
- Joseph Kakareka, Michael Fauerbach, Terry Dubetz, Jose Barreto, and **Aswani Volety**. 2003. Using Technology to Enhance Student Learning in Undergraduate Science, *AAC&U Technology, Learning, & Intellectual Development, Association of American Colleges & Universities*, Cambridge, MA, October 30-November 1, 2003.
- 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.*
- Volety, A. K.**, S. G. Tolley and J. T. Winstead. Utilizing shellfish responses in science-based adaptive resource management in improving ecosystem health in the

Caloosahatchee Estuary, Florida. *International Workshop On Restoration of Benthic Invertebrate Populations: Genetics, Diseases and Ecology*. Coquimbo, Chile. November 2002.

**Volety, A. K.**, S. G. Tolley, and J. T. Winstead. Investigations of parasitic and symbiotic fauna in oysters (*Crassostrea virginica*) and mud crabs (*Panopeus spp.*) from the Caloosahatchee estuary, southwest Florida, USA. 4<sup>th</sup> International Conference on Molluscan Shellfish Safety, Santiago deCompostela, Spain. June 4-8<sup>th</sup>, 2002.

**Volety, A. K.** Susceptibility of cultured *Perkinsus marinus* and *vibrio parahaemolyticus* cells to hemocytes of Eastern oyster, *Crassostrea virginica*. Aquaculture 2001, Orlando, FL. January 2001.

**Volety, A. K.**, M. Savarese, S. G. Tolley. Disease status and physiological responses of oysters as indicators of watershed alteration effects in southwest Florida estuaries. Aquaculture 2001, Orlando, FL. January 2001.

**Volety, A. K.**, F. L. E. Chu, and L. Cruz-Rodriguez. Partial purification and characterization of lysozyme-like proteins from the plasma of the eastern oyster, *Crassostrea virginica*. Aquaculture 2001, Orlando, FL. January 2001.

### **Selected Grants and Contracts**

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.

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.

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.

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, 2006. 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).

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

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.

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.

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 2003 - February 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.
- 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. Volety, 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. Volety, 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, \$181,423. (July 31, 2000 - June 30, 2002). PIs: A. K. Volety 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. Volety; Co-PIs: Bruce Boler, Catherine Hopkins, Karen Shudes

(Florida Department of Environmental Protection), and David Ceilley (Sanibel Captiva Conservation Foundation) (July 2001 - September, 2002).

**Professional Service:**

Chair, Oyster sub-team of Northern Estuaries Module for the Comprehensive Everglades Restoration Plan. 2004-Present.

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.

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.

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)

Member, review panel for Ecology and Oceanography of Harmful Algal Blooms program (EPA / NOAA), USDA – Aquaculture Division.

Proposal Reviewer for the *National Science Foundation, Maryland Sea Grant, Maine / New Hampshire Sea Grant, Connecticut Sea Grant, Rhode Island Sea Grant, South Carolina Sea Grant, State of Louisiana, Board of Regents, and Maine Agricultural and Forest Experimental Station*

Manuscript Reviewer for *Journal of Experimental Biology, 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, Environmental Management*

**University Service:**

- \* Chair, Institutional Animal Care and Use Committee (2005 – Present)
- \* Member, Department Chairs / Assistant Associate Dean’s Task Force (2005 – Present)

- \* 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)
- \* Chair, SACS Re-affirmation of accreditation, Library and Technology Team (2003 – Present)
- \* 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)

### **Community Service**

- \* 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.