# Shirley M. Baker, PhD

Associate Professor

University of Florida
School of Forest Resources and Conservation
Fisheries and Aquatic Sciences
7922 NW 71st St, Gainesville, FL 32653

352-273-3627
sbaker25@ufl.edu

**EDUCATION:**

| | | |
|---|---|---|
| 1994 | **PhD** | **Marine Science**, The College of William and Mary, Virginia Institute of Marine Science |
| 1988 | **MS** | **Marine Biology**, University of Oregon, Oregon Institute of Marine Biology |
| 1986 | **BS** | **Biology**, Seattle Pacific University |

**PROFESSIONAL POSITIONS:**

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| 2008-present | **Associate Professor**, University of Florida (UF), School of Forest Resources and Conservation (SFRC) |
| 1999-2008 | **Assistant Professor**, UF Department of Fisheries and Aquatic Sciences (FAS) |
| 1996-1999 | **Postdoctoral Associate**, Department of Ecology and Evolution, State University of New York at Stony Brook |
| 1993-1996 | **Visiting Assistant Professor**, Department of Biology, Macalester College |

**AWARDS:**

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| 2017-2018 | **Undergraduate Faculty Advisor/Mentor of the Year**, University of Florida |
| 2017-2018 | **Advising Mentor of the Year Award**, UF College of Agricultural and Life Sciences |
| 2016 | **Cross-Campus Faculty Entrepreneur of the Year**, UF Center for Entrepreneurship and Innovation, Warrington College of Business |
| 2016 | **2015 Award for Supervising the Outstanding Fisheries and Aquatic Sciences Thesis**, UF SFRC Fisheries and Aquatic Sciences |

2014 **Outstanding Faculty Award**, FAS Students United in the Research of Fisheries

2011 **Outstanding Faculty Award**, FAS Students United in the Research of Fisheries

2002 **The Sir Charles Maurice Yonge Award,** Malacological Society of London

2002 **Davis Productivity Award**, **Certificate of Commendation,** State of Florida

**CURRENT SERVICE:**

2019-present **Member**, Dean for Research Advisory Committee, UF Institute of Food and Agricultural Sciences (IFAS)

2019-present **Chair**, UF IFAS Faculty Assembly

2016-present **Co- Faculty Advisor**, UF Marine Biology Club

2016-present **Member**, Diversity Task Force, UF School of Forest Resources and Conservation

2013-present **Member**, Scholarship and Awards Committee, UF School of Forest Resources and Conservation

2012-present **Chair**, UF Marine Sciences Major Cross-College Committee

2012-present **Faculty Advisor**, UF CALS Interdisciplinary Studies – Marine Sciences major

2008-present **Undergraduate Coordinator**, UF SFRC Fisheries and Aquatic Sciences

2008-present **Member**, Undergraduate Programs Committee, UF School of Forest Resources and Conservation

2007-present **Member of the Board**, East Coast Shellfish Research Institute

**CURRENT COURSES:**

**FAS 4932/6154 Marine Adaptations/Aquatic Invertebrate Ecological Physiology**
This course examines and compares the physiological adaptations of marine, coastal, and estuarine invertebrates to environmental conditions. The processes examined span several levels of organization, from ecological and organismal to cellular and molecular. Examples are drawn from rocky intertidal, salt marsh, coral reef, and deep-sea habitats, among others. Undergraduate, graduate, and graduate online sections. Fall semesters, 3 credits.

**FOR 6934 Natural Resources in a Changing Climate**
This course explores conservation and management tools and their vulnerabilities to global climate change, how practitioners can implement them in new ways to maintain or increase their effectiveness, options for integrating the needs of humans and natural resources, and how governance mechanisms can be improved to support adaptation efforts. Graduate and graduate online sections. Spring semesters, 3 credits.

**Regular guest lectures:**

FAS4932/FAS5015 **Aquaculture 1**
FAS6932 **Advanced Aquaculture**
FAS 4932/6932 **Invasion Ecology of Aquatic Animals**
FAS69556/VEM5912 **Fish and Aquatic Invertebrate Histological Interpretation**
VME4013/6011/VEM5372 **Aquatic Wildlife Health Issues**

**SCHOLARSHIP OF TEACHING:**

2018 **Forum moderator**. Successful Student Field Experiences: Courses and Research – A participatory panel discussion on enhancing student field experiences … without losing your cool. IFAS Inaugural Research Forum.

2016 **Invited Panelist**, The View from Outside a B School: Experiences in Teaching and Developing Entrepreneurship Courses. The Experiential Classroom No. XVII. UF Center for Entrepreneurship & Innovation.

2016 **Nominated Presenter**, Student Engagement with VoiceThread. Spring Interface 2016: Tips, Tricks, and Timesavers. UF Office of Faculty Development and Teaching Excellence.

2013 **Co-Author**, Reusable Learning Object. Tilapia Aquaculture in Belize; Impacts of Climate Change. http://www.globaleducationlab.org/index.shtml

2012 **Co-Author**, Reusable Learning Object. Fisheries Science Careers; Working Towards Sustainable Fisheries. http://www.globaleducationlab.org/index.shtml

**PROFESSIONAL DEVELOPMENT OF TEACHING:**

2019 **Roche Teaching Scholar,** UF College of Agricultural and Life Sciences (CALS)

2014-2017 **Entrepreneurship Faculty Fellow**, UF Center for Entrepreneurship and Innovation, Warrington College of Business.

2014 **Invited Participant**, The Experiential Classroom No. XV: Becoming a Great Entrepreneurship Educator. UF Center for Entrepreneurship & Innovation.

2012-2013 **Selected Participant**, Teaching Locally, Engaging Globally: Increasing Undergraduates' Knowledge of the International Dimensions of Climate Change, Food Security, and Childhood Obesity. USDA-NIFA Higher Education Challenge Grant.

Annually **Participant**, Teaching Enhancement Symposium, UF College of Agricultural and Life Sciences

**STUDENT AND POSTDOCTORAL MENTORSHIP:**

**Postdoctoral projects directed:**

Suprenand, Paul. 2013-2015. Developing a decision-support tool for the management of clam farms on the FL Gulf Coast.

Bergquist, Derk. 2002-2004. CLAMMRS: Clam lease assessment, management, and modeling using remote sensing.

**Dissertation projects directed:**

Black, Ken. Active. Quantification of nitrogen removal by shellfish aquaculture.

Schuman, Carrie. 2018. Ecosystem service provision by the Eastern oyster, *Crassostrea virginica*, within the St. Augustine region of Florida.

**Masters projects directed:**

Simonetti, Julia. 2015. Economic analysis of a small urban aquaponics system.

Broderick, Melissa. 2012. Determination of temperature thresholds for the northern hard clam, and evaluation of backcrossed F1 hybrids (*Mercenaria mercenaria* X *Mercenaria campichensis*).

Weber, Kerry. 2008. Effect of temperature on the metabolic rate of diploid and triploid *Mercenaria mercenaria*.

Hoover, Elise. 2007. Effects of temperature, salinity, and dissolved oxygen on survival of triploid and diploid hard clams, *Mercenaria mercenaria*.

McCoy, Ayana. 2005. Examination of *Mercenaria mercenaria* as a host for *Perkinsus marinus*.

Beals, Carla. 2004. Clearance rates and particle selectivity in the hard clam, Mercenaria mercenaria, from warm water habitats.

Herb, Heather. 2001. A systematic review of the shallow-water octopuses (Cephalopoda, Octopodidae) of the Fiji Islands.

**Masters projects co-directed:**

Love, Gabrielle. Active.

Alo, Micah. 2005. Survivorship, growth, and pigmentation responses of the marine ornamental invertebrate *Tridacna maxima* to varied irradiance levels in two different culture systems.

**Non-thesis masters directed:**

Blanco, Victor Marquez. Active.

Richards, Luke. 2019. The future of Apalachicola oysters: Coastal aquaculture as a solution for restoration.

French, Lindsay. 2019. Worldwide shark attacks are related to phases of the moon.

Cremeans, Tyler. 2019. High school aquaculture curriculum.

Bogle, Stephanie. 2019. Glacial nutrients: Impacts on marine food webs.

Christman, Seth. 2017. The use of oyster aquaculture nutrient assimilation services as a best management practice in the Chesapeake Bay to meet TMDL compliance reductions.

Bigay, Theresa. 2016. *Pyrodinium bahamense* in Puerto Mosquito, Vieques, Puerto Rico: A literature review. AND Bioluminescence in a changing climate: Conservation of the dinoflagellate *Pyrodinium bahamense* in Puerto Mosquito Bay.

Horton, Jessica. 2015. *Perkinsus marinus* in the Eastern oyster, *Crassostrea virginica*, in the Delaware Bay.

DiNallo, Caitlin. 2014. The invasive Asian shore crab, *Hemigrapsis sanguinneus*, in the northeastern US.

**Other graduate mentorship:**

**Member**, 21 PhD committees
**Member**, 9 MS committees
**Member**, 11 MFAS committees
**Examiner**, 6 MS in Forest Resources and Conservation

**Other Undergraduate mentorship:**

**Mentor**, 5 interns, UF IFAS Undergraduate Summer Research Internship Program
**Faculty Sponsor,** 5 pledges, Fraternity of Alpha Zeta
**Mentor**, 2 students, UF University Minority Mentoring Program
**Advisor**, 1 student, Undergraduate Scholar's Program
**Advisor**, 2 students, CALS 4+1 Program

**RESEARCH INTERESTS:**

Invertebrates: Physiology and ecology

Marine and freshwater molluscs: functional morphology, feeding ecology, bioenergetics, invasions

Bivalve aquaculture: diversification, sustainable development, ecosystem services

**PEER-REVIEWED JOURNAL ARTICLES:**

Bai, J., **S.M. Baker**, R.M. Goodrich-Schneider, N. Montazeri and P.J. Sarnoski. 2019. Aroma profile characterization of mahi-mahi and tuna for determining spoilage using purge and trap gas chromatography-mass spectrometry. Journal of Food Science doi: 10.1111/1750-3841.14478

Martony, M., D. Pouder, R. Yanong, Y. Kiryu, J.H. Landsberg, R. Isaza, T. Waltzek, N.I. Stacy, R. Giglio, **S. Baker** and R. Francis-Floyd. 2018. Establishing a diagnostic technique for coelomocentesis in the long-spined sea urchin *Diadema antillarum*. Journal of Aquatic Animal Health 30: 325-331. DOI: 10.1002/aah.10043

Rogers, A., J.-F. Hamel, **S.M. Baker** and A. Mercier. The 2009-2016 Belize sea cucumber fishery: Resource use patterns, management strategies and socioeconomic impacts. Regional Studies in Marine Science 22: 9-20.

Dole, T., S. Koltun, **S.M. Baker**, R.M. Goodrich-Schneider, M.R. Marshall and P.J. Sarnoski. 2017. Colorimetric evaluation of mahi-mahi and tuna for biogenic amines. Journal of Food Product Technology. 26:7, 781-789, DOI: 10.1080/10498850.2017.1297879

Dole, T., S. Koltun, **S.M. Baker**, R.M. Goodrich-Schneider, M.R. Marshall and P.J. Sarnoski. 2016. The matrix effect of tuna and mahi-mahi on biogenic amine detection. Journal of Food and Health Science 2(3): 74-81.

Arnold, T.E., M. Brenner, J.H. Curtis, A. Dutton, **S.M. Baker**, J.H. Escobar and C.A. Ortega. 2014. Application of stable isotopes ($\delta^{18}O$) to determine growth patterns of the invasive gastropod *Pomacea maculata* in Florida lakes. Florida Scientist 77: 126-143.

Lopeztegui-Castillo, A., **S.M. Baker**, Y. Garcés-Rodríguez, R. Castelo-Báez, N. Castro-Graña and A. Artiles-Valor. 2014. Spatial and temporal patterns of the nonnative green mussel *Perna viridis* in Cienfuegos Bay, Cuba. Journal of Shellfish Research 33: 273-278.

McFarland, K., **S. Baker**, P. Baker, M. Rybovich and A K. Volety. 2014. Temperature, salinity, and aerial exposure tolerance of the invasive mussel, *Perna viridis*, in estuarine habitats: Implications for spread and competition with native oysters, *Crassostrea virginica*. Estuaries and Coasts **Published online:** 25 October. PDF 10 pages.

Baker, P., J.S. Fajans and **S.M. Baker**. 2012. Habitat dominance of a nonindigenous tropical bivalve, *Perna viridis* (Linnaeus, 1758), in a subtropical estuary in the Gulf of Mexico. Journal of Molluscan Studies 78: 28-33.

Riley, L.W., **S.M. Baker** and E.J. Phlips. 2010. A new device for use in crushing rigid biomass and geological materials prior to compositional analysis. Journal of Paleolimnology 44: 737-739.

Baker, P., F. Zimmanck and **S.M. Baker**. 2010. Feeding rates of an introduced freshwater gastropod *Pomacea insularum* on native nonindigenous aquatic plants in Florida. Journal of Molluscan Studies 76: 138-143.

Riley, L., **S.M. Baker** and E. Phlips. 2010. Self-adhesive wire markers for bivalve tag and recapture studies. American Malacological Bulletin 28: 183-184.

Joyner-Matos, J., J. Andrzejewski L. Briggs, **S.M. Baker**, C.A. Downs and D. Julian. 2009. Assessment of cellular and functional biomarkers in bivalves exposed to ecologically relevant abiotic stressors. Journal of Aquatic Animal Health 21: 104-116.

Phlips, E.J., **S.M. Baker**, K. Black and N. Dix. 2008. Effects of hard clam (*Mercenaria mercenaria*) high density culture on water quality in a shallow semi-restricted bay. Florida Scientist 71: 330-340.

**Baker, S.M.** and D.J. Hornbach. 2008. Zebra mussels (*Dreissena polymorpha*) attached to native mussels (Unionidae) or inanimate substrates: Comparison of physiological rates and biochemical composition. American Midland Naturalist 160: 20-28.

Steigerwalt, N.M., C.E. Cichra and **S.M. Baker**. 2008. Composition and distribution of aquatic invertebrate communities on snags in a north central Florida, USA, spring-fed stream. Florida Scientist 71: 273-286.

Baker, P., J.D. Austin, B.W. Bowen and **S.M. Baker**. 2008. Range-wide population structure and history of the northern quahog (*Merceneria merceneria*) inferred from mitochondrial DNA sequence data. ICES Journal of Marine Science 65: 155-163.

Bergquist, D.C., D. Heuberger, L.N. Sturmer and **S.M. Baker**. 2008. Continuous water quality monitoring for the hard clam industry in Florida, USA. Environmental Monitoring and Assessment 148: 409-419.

McCoy, A., **S.M. Baker** and A.C. Wright. 2007. Investigation of *Perkinsus spp.* in aquacultured hard clams (*Mercenaria mercenaria*) from the Florida Gulf Coast. Journal of Shellfish Research 26: 1029-1033.

Baker, P., J.S. Fajans, W.S. Arnold, D.A. Ingrao, D.C. Marelli and **S.M. Baker**. 2007. Range and dispersal of a tropical marine invader, the green mussel, *Perna viridis*, in subtropical waters of the southeastern United States. Journal of Shellfish Research 26: 345-355.

Brenner, M., J.M. Smoak, D.A. Leeper, M. Streubert and **S. Baker**. 2007. Radium-226 accumulation in Florida freshwater mussels. Limnology and Oceanography 52: 1614-1623.

Mitchem, E., J.S. Fajans and **S.M. Baker**. 2007. Contrasting responses of two native crustacean predators to non-indigenous prey, the green mussel, *Perna viridis*. Florida Scientist 70: 180-188.

Bergquist, D.C., J.A. Hale, P. Baker and **S.M. Baker**. 2006. Development of ecosystem indicators for the Suwannee River Estuary: Oyster reef habitat along a salinity gradient. Estuaries and Coasts 29: 353-360.

**Baker, S.M**., P.K. Baker, D. Heuberger and L.N. Sturmer. 2005. Short-term effects of rapid salinity reduction on seed clams. Journal of Shellfish Research 24: 29-34.

Barber, B.J., J.S. Fajans, **S.M. Baker** and P.K. Baker. 2005. Gametogenesis in the non-native green mussel, *Perna viridis*, and the native scorched mussel, *Brachidontes exustus*, in Tampa Bay, Florida. Journal of Shellfish Research 24: 1087-1095.

**Baker, S.M**. and D.K. Padilla. 2004. New frontiers in functional morphology of molluscs: A tribute to Drs. Vera Fretter and Ruth Turner. American Malacological Bulletin 18: 121-127.

**Baker, S.M**. and J.S. Levinton. 2003. Selective feeding by three native North American freshwater mussels implies food competition with zebra mussels. Hydrobiologia 505: 97-105.

**Baker, S.M**. and D.J. Hornbach. 2001. Seasonal metabolism and biochemical composition of two unionid mussels, *Actinonaias ligamentina* and *Amblema plicata*. Journal of Molluscan Studies 67: 407-416.

**Baker, S.M**. and D.J. Hornbach. 2000. Physiological status and biochemical composition of a natural population of unionid mussels (*Amblema plicata*) infested by zebra mussels (*Dreissena polymorpha*). American Midland Naturalist 143: 443-452.

**Baker, S.M**., J.S. Levinton and J.E. Ward. 2000. Particle transport in the zebra mussel, *Dreissena polymorpha* (Pallas). Biological Bulletin 199: 116-125.

**Baker, S.M**., J.S. Levinton, J.P. Kurdziel and S.E. Shumway. 1998. Selective feeding and biodeposition by zebra mussels and their relation to changes in phytoplankton composition and seston load. Journal of Shellfish Research 17: 1207-1213.

**Baker, S.M**. and D.J. Hornbach. 1997. Acute physiological effects of zebra mussel (*Dreissena polymorpha*) infestation on two unionid mussels, *Actinonaias ligamentina* and *Amblema plicata*. Canadian Journal of Fisheries and Aquatic Sciences 54: 512-519.

**Baker, S.M**. and R. Mann. 1994. Feeding ability during settlement and metamorphosis in the oyster *Crassostrea virginica* and the effects of hypoxia on post-settlement ingestion rates. Journal of Experimental Marine Biology and Ecology 181: 239-253

**Baker, S.M**. and R. Mann. 1994. Description of metamorphic phases in the oyster *Crassostrea virginica* and effects of hypoxia on metamorphosis. Marine Ecology Progress Series 104: 91-99.

**Baker, S.M**. and N.B. Terwilliger. 1993. Hemoglobin structure and function in the rat-tailed sea cucumber, *Paracaudina chilensis*. Biological Bulletin 185: 115-122.

**Baker, S.M**. and R. Mann. 1992. Effects of hypoxia and anoxia on larval settlement, juvenile growth, and juvenile survival of the oyster *Crassostrea virginica*. Biological Bulletin 182: 265-269.

**BOOK CHAPTERS:**

Lorenzen, K., C. Ainsworth, **S. Baker**, L. Barbieri, E. Camp, J. Dotson and S. Lester. 2017. Climate Change Impactson Florida's Fisheries and Aquaculture Sectors and Options for Mitigation. *In* Florida's Climate; Changes, Variations, & Impacts. E.P. Chassignet, J.W. Jones, V. Misra, and J. Obeysekera (eds). Florida Climate Institute, Gainesville. Pages 427-456.

Anderson, J.A., **S.M. Baker**, G.L. Graham, M.G. Haby, S.G. Hall, L. Swann, W.C. Walton and C.A. Wilson. 2013. Effects of Climate Change on Fisheries and Aquaculture in the Southeast USA. *In* Climate of the Southeast United States: Variability, Change, Impacts, and Vulnerability. K.T. Ingram, K. Dow, L. Carter, and J. Anderson (eds). Island Press, Washington DC. Pages 190-209.

Levinton, J.S., J.E. Ward, S.E. Shumwa, and **S.M. Baker**. 2001. Feeding Processes of Bivalves: Connecting the Gut to the Ecosystem. *In* Organism-Sediment Interactions. S. Woodin (ed). University of South Carolina Press, Columbia, South Carolina. Pages 385-400.

**SELECTED EXTENSION, TECHNICAL, AND POPULAR PUBLICATIONS:**

**Baker, S.** 2016. MCB4934 Case Studies in Science Literacy, 4 lectures on global climate change. https://www.youtube.com/channel/UCLkP9Yp3FZDAqQkpXLqD1lg.

**Baker, S.** 2016. Hurricane Hermine Meets Her Match in Cedar Key. *National Shellfisheries Association, Quarterly Newsletter* 2016 (3).

Yang, H., L. Sturmer and **S. Baker**. 2016. Molluscan shellfish aquaculture and production. FA191. Electronic Data Information source (EDIS), UF/IFAS Extension. Hits in 2016: 595.

**Baker, S.** 2015. Time-lapse video of clam filtration.
https://www.youtube.com/watch?v=DxEpyjWDB6I

Sturmer**,** L., **S. Baker**, K. Grogan and S. Larkin. 2015. Green clams: Estimating the value of environmental benefits (ecosystem services) generated by the hard clam aquaculture industry of Florida. Extension website.

Sturmer, L., **S. Baker**, K. Grogan and S. Larkin. 2015. Florida Clam Farm Benefits Calculator. Interactive web tool.

**Baker, S.M.** 2012. Window on Underwater World Closes. Aquatic Biosystems. Blog post. http://blogs.biomedcentral.com/ss/2012/10/19/window-on-underwater-world-closes/

Dix, N., E. Phlips, **S. Baker**, S. Badylak, L. Sturmer and K. Hulen. 2010. What do Clams Eat? Interactive website. . http://shellfish.ifas.ufl.edu/clams_eat/

Scarpa, J., **S. Baker**, L. Sturmer, S. Laramore, E. El-Wazzen, E. Hoover and K. Weber. 2009. Triploid hard clams evaluated for Florida aquaculture. *Global Aquaculture Advocate* (Global Aquaculture Alliance), March/April: 48-50.

Sturmer, L.N., J.M. Nuñez, R.L. Creswell and **S.M. Baker**. 2009. The potential of blood ark and ponderous ark aquaculture in Florida; Results of spawning, larval rearing, nursery and growout trials. Florida Sea Grant College Program, TP-169. 75 pp.

Weber, K., E. Hoover, L. Sturmer and **S. Baker**. 2009. The role of dissolved oxygen in hard clam aquaculture. FA152. Electronic Data Information source (EDIS), UF/IFAS Extension.
**Baker, S.**, E. Hoover, and L. Sturmer. 2007. The role of salinity in hard clam aquaculture. Electronic Data Information Source (EDIS), UF/IFAS Extension. FA 128. 10 pp.

Fajans, J., L. Sturmer, **S. Baker**, K. Hulen and E. Cassiano. 2007. What's in the Clam Bag? Interactive website. http://shellfish.ifas.ufl.edu/clambag/

Weber, K, L. Sturmer, E. Hoover and **S. Baker**. 2007. The role of water temperature in hard clam aquaculture. FA151. Electronic Data Information Source (EDIS), UF/IFAS Extension.

Baker, P., J.S. Fajans, **S.M. Baker** and D.C. Bergquist. 2006. Green mussels in Florida, USA: Review of trends and research. World Aquaculture, December: 43-48, 65-67.

**Baker, S.**, D. Petty, R. Francis-Floyd, R. Yanong and L. Sturmer. 2006. Introduction to infectious diseases in hard clams. Electronic Data Information Source (EDIS), UF/IFAS Extension. FA 125. 7 pp.

Baker, P.K., J.S. Fajans and **S.M. Baker**. 2004. Nonindigenous marine species in the Greater Tampa Bay ecosystem. Tampa Bay Estuary Program Technical Publication # 02-04. 123 pp.

Jacoby, C.A., L. Walters, **S.M. Baker** and K. Blyler. 2004. A primer on invasive species in coastal and marine waters. Florida Sea Grant College Program, SGEB 60. 24 pp.

**SELECTED PRESENTATIONS:**

Wahlstrom, S.J., R. Francis-Floyd, R.P.E. Yanong,Y. Kiryu, G. Beck, D.B. Pouder, **S.M. Baker** and N.I. Stacy. 2018. The Use of Cytology as an Adjunct Tool in the Health Assessment of the Long-Spined Sea Urchin, *Diadema antillarum.* 49th Annual Meeting and Conference of the International Association for Aquatic Animal Medicine, Long Beach, California. *Poster*

Schuman, C, and **S. Baker**. 2018. How Oystermen and Fishermen Use and Think About Oyster Reefs in the St. Augustine Region of Florida. National Shellfisheries Association Annual Meeting. Seattle, WA.

Baker, P. and **S. Baker**. 2017. Carbon mineralization and efflux in clam aquaculture. 109th Annual Meeting of the National Shellfisheries Association, Knoxville, Tennessee. *Poster*.

**Baker, S.** and P. Baker. 2017. Apple snails: A review and introduction to the special session. 109th Annual Meeting of the National Shellfisheries Association, Knoxville, Tennessee.

**Baker, S.**, P.M. Suprenand, M. Drexler, L.N. Sturmer and J.M. Berkson. 2017. Developing a predictive model of environmental conditions for the management of clam farms on the Florida Gulf coast. 109th Annual Meeting of the National Shellfisheries Association, Knoxville, Tennessee. *Poster*.

Francis-Floyd, R., R.P.E. Yanong, **S.M. Baker**, Y. Kiryu, T.B. Waltzek, D.B. Pouder, N. Stacy, H. Stockdale Walden, G. Delgado, W.C. Sharp, J.H. Hunt and J. Landsberg. 2017. Examination and health assessment of the long-spined sea urchin, *Diadema antillarum*: Preparing for release of cultured organisms. 30th Caribbean Veterinary Medical Conference, Kingston, Jamaica.

Schuman, C. and **S. Baker**. 2017. Influence of reef height and oyster aggregation on estimates of *Crassostrea virginica* clearance rates in the Guana Tolomato Matanzas National Estuarine Research Reserve (GTM NERR), FL. 109th Annual Meeting of the National Shellfisheries Association, Knoxville, Tennessee.

Schuman, C. and **S. Baker**. 2017. Oysters as Filter Feeders: The Role of Density and Reef Height. State of the Reserve Symposium. St. Augustine, FL. *Poster*.

Schuman, C**.** and **S. Baker** .2017. Oyster-provided Ecosystem Services in the St. Augustine Region of Florida. AWRA Florida Annual Meeting. Key West, FL.

Suprenand, P.M., **S. Baker**, M. Drexler, L.N. Sturmer and J.M. Berkson. 2017. Predicting environmental conditions to enhance the management of clam farms on Florida's Gulf Coast. Big Bend Science Symposium, Cedar Key, Florida. *Poster*.

**Baker, S.** , R. Francis-Floyd, R. Yanong, J. Landsberg, N. Stacy, D. Pouder, T. Waltzek, Y. Kiryu, J. Hunt, B. Sharp, R. Smolowitz, G. Beck, K. Leber, D. Vaughn and M. Moe. 2016. Development of a health assessment protocol for hatchery-eared long-spined sea urchins *Diadema antillarum* in Florida, USA. Aquaculture 2016, Las Vegas, Nevada.

**Baker, S.,** J. Scarpa and L. Sturmer. 2016. Preparing for climate change: Increasing hard clam production and survival in the Southeastern United States using biomarkers of thermal tolerance. North Florida Marine Science Symposium, Cedar Key, Florida. *Poster*.

**Baker, S.,** P.M. Supranand, M. Drexler, L.N. Sturmer and J.M. Berkson. 2016. Predicting environmental conditions to enhance the management of Northern quahog clam farms on Florida's Gulf of Mexico coast. Weather and Climate Decision Tools for Farmers, Ranchers and Land Managers conference, Gainesville, Florida. *Poster.*

Francis-Floyd, R., R.P.E. Yanong, **S.M. Baker**, Y. Kiryu, T.B. Waltzek, D. Pouder, N. Stacy, M. Flint, R. Smolowitz, G. Beck, G. Delgado, W.C. Sharp, J.H. Hunt and J. Landsberg. 2016. Development of diagnostic protocols for health assessment of long-spined sea urchins, *Diadema antillarum*, in Florida. 47th Annual International Association for Aquatic Animal Medicine Meeting and Conference, Virginia Beach, Virginia.

Francis-Floyd, R., R. Yanong, J. Landsberg, **S. Baker** and Y. Kiryu. 2016. Health assessment of Florida's long-spined sea urchin, *Diadema antillarum*: A keystone species on Florida's coral reefs.5th University of Florida Water Institute Symposium, Gainesville, Florida.

Opazo, L.F., M. Kowalewski, R.W. Portell, J.L. Sliko, **S. Baker**, K. W. Black and P. Marquet. 2016. Coupling energy use, body size, and diversity during the Plio-Pleistocene extinction event. Geological Society of America 2016. Denver, Colorado. *Poster.*

Schuman, C. and **S. Baker**. 2016. The secret lives of filter feeders: Estimating oyster filtration rates in the Guana Tolomato Matanzas National Estuarine Research Reserve (GTM NERR) in St. Augustine, FL. American Fisheries Society Florida Chapter Meeting, Haines City, Florida. *Poster.*

Sturmer, L.N., **S. Baker**, K. Grogan and S. Larkin. 2016. "Green" clams: Estimating the value of ecosystem services generated by the hard clam culture industry in Florida, USA. Aquaculture 2016, Las Vegas, Nevada. *Poster*.

Sturmer, L., **S. Baker,** K. Grogan and S. Larkin. 2016. "Green" clams: estimating the value of environmental benefits (ecosystem services) generated by the hard clam aquaculture industry in Florida. North Florida Marine Science Symposium, Cedar Key, Florida.

Sturmer, L.N., W. White, K. Grogan and **S. Baker**. 2016. Evaluation of biocide-free coatings in reducing biofouling on culture gear to increase hard clam production in Florida, USA. Aquaculture 2016, Las Vegas, Nevada.

**Baker, S.**, Lopeztegui Castillo, A., Artiles Valor, A., Garcés Rodriquez, Y., Castelo Báez, R. and Castro Graña, N. 2015. An international collaboration: Documenting the non-native green mussel, *Perna viridis*, in Cuba. 107th Annual Meeting of the National Shellfisheries Association, Monterey, California.

**Baker, S.**, J. Scarpa and L.N. Sturmer. 2015. Preparing for Climate Change: Increasing Hard Clam Production and Survival in the Southeastern United States Using Biomarkers of Thermal Tolerance. Florida Sea Grant Coastal Science Symposium, Gainesville, Florida.

Francis-Floyd, R., R.Yanong, J. Landsberg, **S. Baker**, Y. Kiryu, T. Waltzek, D. Pouder, M. Flint, N. Stacy, R. Smolowitz, G. Beck and W. Sharp. 2015. Development of Diagnostic Protocols for Health Assessment of Long-Spined Sea Urchins, *Diadema antillarum*, in Florida Waters. 107th Annual Meeting of the National Shellfisheries Association, Monterey, California.

Opazo, L.F., Kowalewski, M., Portell, R., Baker, S., Sliko, J. and Barber, B. 2015. Species turnover during the Plio-Pleistocene extinction event: Coupling metabolic rates and body size. Geological Society of America, Southeastern Section – 64th Annual Meeting, Chattanooga, Tennessee.

Sturmer, L.N., **S. Baker**, K. Grogan and S. Larkin. 2015. "Green" Clams: Estimating the Value of Environmental Benefits (Ecosystem Services) Generated by the Hard Clam Aquaculture Industry in Florida. Florida Sea Grant Coastal Science Symposium, Gainesville, Florida.

**Baker, S.**, J. Scarpa and L. Sturmer. 2014. Biomarkers for thermal tolerance in clams: Results of laboratory challenges. 106th Annual Meeting of the National Shellfisheries Association, Jacksonville, Florida.

Sturmer, L., J. Scarpa, W. White and **S. Baker**. 2014. Thermal selection of broodstock to improve production of *Mercenaria mercenaria* in Florida waters. 106th Annual Meeting of the National Shellfisheries Association, Jacksonville, Florida.

**GRANTS AND CONTRACTS:**

**Florida Sea Grant,** 2016-2017, **$9,836,** Assessing the contribution of Florida's hard clam aquaculture industry to nitrogen cycling in coastal estuaries, **PI**

**Florida Fish and Wildlife Conservation Commission,** 2014-2018, **$172,272,** Constructing a management strategy evaluation for data-poor stocks in the Gulf of Mexico, **Co-PI**

**Florida Aquaculture Review Council,** 2014-2015, **$103, 355,** "Green" clams: Assessing, quantifying, and promoting the value of ecosystems services provided by the hard clam aquaculture industry in Florida, Co-PI

**Florida Aquaculture Review Council,** 2014-2015, **$37,995**, Evaluating the efficacy of several net coatings in reducing biofouling on culture gear and increasing hard clam production in Florida, **Co-PI**

**Florida Fish and Wildlife Conservation Commission, Florida's Wildlife Legacy Initiative, State Wildlife Grants,** 2014-2016, **$81,523,** Development of health assessment protocols for hatchery-reared long-spined sea urchins, *Diadema antillarum,* **Co-PI**

**University of Miami, Rosenstiel Marine School of Atmospheric Science, Cooperative Institute for Marine and Atmospheric Studies, US Department of Commerce,** 2013-2015, **$70,000,** Developing a decision-support tool for the management of clam farms on the Florida Gulf Coast, **PI**

**NOAA Sea Grant Aquaculture Research Program 2010,** 2010-2014, **$343,633,** Preparing for climate change: Increasing hard clam production and survival in the Southeastern United States using biomarkers of Thermal Tolerance, **PI**

**US Department of Agriculture NIFA "Aquaculture FL, CA, TX" Special Research Grants Program,** 2010-2013, Enhancing Florida hard clam production through broodstock development, improved harvest practices, and species diversification, **Co-PI**

**US Department of Agriculture NIFA "Aquaculture FL, CA, TX" Special Research Grants Program**, 2009-2012, Evaluation of thermally selected multi-parental crosses with *Mercenaria mercenaria* and *M. campechiensis* clam hybrids to improve hard clam crop production in Florida, **Co-PI**

**Florida Sea Grant,** 2009-2010, **$4,736,** Carbon fixation by hard clam aquaculture in Florida, **Co-PI**

**US Department of Agriculture CSREES "Aquaculture FL, CA, TX" Special Research Grants Program,** 2008-2011, **$412,992,** Assessment of F1 hybrids back crossed with *Mercenaria mercenaria* to improve crop production during cummer months and ensure sustainability of the hard clam aquacultureiIndustry in Florida, **Co-PI**

**US Department of Agriculture CSREES "Aquaculture FL, CA, TX" Special Research Grants Program,** 2006-2009, **$277,266,** Ensuring sustainability of the hard clam aquaculture industry in Florida through evaluation of stock hybridization and stocking densities, and initial assessment of soil characteristics, **Co-PI**

**Florida Sea Grant,** 2006-2008, **$48,223,** Enhancing production of cultured hard clams in Florida by triploidy, **Co-PI**

**Florida Department of Environmental Protection,** 2006-2007, **$35,189,** Impacts on aquatic freshwater plants in Florida by non-native Channeled Apple Snails, *Pomacea insularum,* **PI**

**Florida Fish and Wildlife Conservation Commission,** 2006-2007, **$15,000,** Impacts on aquatic freshwater plants in Florida by non-native Channeled Apple Snails, *Pomacea insularum,* **PI**

**Florida Department of Environmental Protection,** 2005-2006, **$70,562,** Impacts on aquatic freshwater plants in Florida by non-native Channeled Apple Snails, *Pomacea canaliculata,* **PI**

**Florida Sea Grant,** 2004-2007, **$143,097,** Enhancing stress resistance of cultured hard clams in Florida by triploidy, **PI**

**U S Department of Agriculture**-**Agriculture Research Service,** 2004-2006, **$59,000,** Improving stress resistance of cultured hard clams: Triploid production, **Co-PI**

**Florida Sea Grant,** 2003, **$5,000,** Toxic sulfide concentrations in the sediments and water column of the Suwannee River Estuary and its influence on hard clam survival, **Co-PI**

**Suwannee River Water Management District,** 2002-2003, **$29,936,** Oyster reef assessment in the Suwannee River Estuary, **Co-PI**

**U S Environmental Protection Agency,** 2001-2004, **$447,602,** Biopollution by the green mussel, *Perna viridis*, in the Southeastern United States, **PI**

**National Science Foundation,** 2001-2002, **$5,950,** World Congress of Malacology symposium: New frontiers in functional morphology of molluscs, **PI**

**American Malacological Society,** 2001-2002, **$4,260,** World Congress of Malacology symposium: New frontiers in functional morphology of molluscs, **PI**

**Tampa Bay Estuary Program,** 2001-2002, **$14,722,** Nonindigenous marine species in the Greater Tampa Bay Ecosystem. Literature review and field survey of Tampa Bay for nonindigenous marine estuarine species, **Co-PI**

**Florida Sea Grant,** 2001-2002, **$2,600,** Marine bioinvasion fact sheets for Florida, **Co-PI**

**U S Department of Agriculture-Initiative for Future Agriculture and Food Systems,** 2000-2005, **$863,524,** CLAMMRS: Clam Lease Assessment, Management, and Modeling using Remote Sensing, **PI**

**U S Department of Agriculture,** 2000-2005, **$435,000,** Eutrophication and the productivity of clams and oysters, **Co-PI**

**Florida Sea Grant,** 2000-2001, **$3,515,** Short-term effects of rapid salinity declines on newly planted seed clams (*Mercenaria mercenaria*) during La Nina conditions in Florida, **PI**

**MEMBERSHIPS**

American Association for the Advancement of Science

Florida Aquaculture Association

Fraternity of Alpha Zeta

National Aquaculture Association

National Shellfisheries Association