GULF SHELLFISH INSTITUTE
Research for Sustainable Aquaculture & Healthy Ecosystems

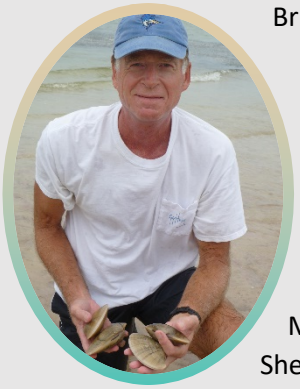
The Science and Application of Clam Restoration in Florida: Identify Research Needs to Quantify Ecological Services and Maximize benefits

Speakers' Biographies

William S. Arnold, Ph.D.

Bill was born and raised in Cocoa, Florida, with a front seat to the development of the U.S. space program. Following receipt of a Bachelor of Science degree from the University of Florida (1978) and an M.Sc. from the University of Georgia (1983), he studied midwater zooplankton at Harbor Branch Oceanographic Institution (1983-1985). Bill moved to St. Petersburg in 1985, where he founded and led the Molluscan Fisheries research program at the Florida FWCC Fish and Wildlife Research Institute from 1985 until 2009 while obtaining his Ph.D. at the University of South Florida College of Marine Science (1996). During that time, he focused considerable research effort on the distribution, ecology, and restoration of hard clams throughout Florida with an emphasis on the Indian River Lagoon. Studies on the genetics, ecology and larval dynamics of *Mercenaria mercenaria*, *M. campechiensis*, and their naturally occurring hybrids revealed complex interactions influenced by both natural and anthropogenic factors. That work contributes substantially to our understanding of the history, environmental influences, and potential for 'restoration' of clam populations both in the IRL and throughout Florida. Bill used that fundamental scientific information, in close cooperation with industry representatives from both the wild and aquaculture industries, to quantify the relative efficacy of various population enhancement strategies. Those outcomes, considered within the context of hard clam life history, revealed the need to set clear and attainable goals before initiating any hard clam restoration program. Bill then competed his career in fisheries science and management as the Caribbean Branch Chief for NOAA's Southeast Regional Office. He is now in private business, developing aquatic sensors with an emphasis on zooplankton enumeration and classification. But he still loves those clams and is honored to contribute in any way to furthering our understanding and management of these ecologically and economically important organisms.

Bruce J. Barber, Ph.D.



Bruce is the former Executive Director of the Gulf Shellfish Institute (GSI), a non-profit corporation whose mission is to increase shellfish production throughout the Gulf Region for both economic and environmental benefit through industry-driven, applied research. He has a B.S. degree in Biological Sciences from the Ohio State University and a Ph.D. in Marine Science from the University of South Florida. Prior to joining GSI, he served on the faculties of Eckerd College; the University of Maine, where he was the Director of Aquaculture Research; the College of William and Mary (Virginia Institute of Marine Science); and Rutgers University (Haskin Shellfish Research Laboratory). His research has focused on the reproductive physiology and pathology of commercially important marine bivalves (clams, oysters, scallops and mussels). He also taught numerous courses on aquaculture and marine invertebrate biology and advised undergraduate and graduate students. Bruce has published over 50 peer-reviewed articles and book chapters. He has served on the Boards of the Maine Aquaculture Innovation Center and the Northeast Regional Aquaculture Center (USDA); on review panels for the NOAA Sea Grant Program; and participated in the U.S.-Japan Natural Resources Panel on Aquaculture.

Bruce and his wife, Susan, reside in Palmetto, Florida.

Ashley R. Smyth, Ph.D.

Ashley is an Assistant Professor in the Soil and Water Sciences Department at UF/IFAS's Tropical Research and Education Center in Homestead, Florida. Ashley's research focuses on how anthropogenic activities impact nutrient cycling in coastal and aquatic ecosystems. Her research centers around where the land meets the water and how activates on land connect to ecosystems in shallow nearshore waters. She has worked extensively on quantifying the nitrogen removal benefits of oyster reef restoration and shellfish aquaculture. Ashley has a B.A. in Environmental Studies and a Ph.D. in Marine Science from The University of North Carolina at Chapel Hill. Before joining the UF faculty in 2017, Ashley was a David H. Smith Conservation Research Postdoctoral Fellow at the Virginia Institute of Marine Science and postdoctoral researcher at the University of Kansas. Ashley led some of the first measurements of denitrification in oyster reefs and has published 13 peer-reviewed articles on nitrogen dynamics in oyster reefs, oyster aquaculture and clam aquaculture sites. She has collaborated on projects related to the ecosystem services of shellfish in Virginia, North Carolina, Georgia, and Florida.

Since moving to South Florida, Ashley has found an appreciation for Cubaton music, mangos, and mamey.

Patrick Baker, Ph.D.

Patrick Baker is an invertebrate zoologist. He studied in the Pacific Northwest and Virginia, and got a Ph.D. in Marine Science from the Virginia Institute of Marine Science (College of William and Mary) in 1993. He has been at the University of Florida since 1999, where he has studied green mussels, commercial clams, oyster reefs, and offshore sand communities, among others. Bivalve mollusks are his most frequent model taxa. He also teaches invertebrate zoology at the undergraduate and graduate level at the University of Florida and, in alternate summers, at the University of Oregon.

Bradley J. Peterson, Ph.D.

Brad is an Associate Professor of Marine Science at the School of Marine and Atmospheric Sciences (SoMAS) at Stony Brook University. He has a B.S. degree in Marine Biology from the Florida Institute of Technology, an M.S. degree in Zoology from the University of Rhode Island and a Ph.D from the Dauphin Island Sea Lab/University of South Alabama. He and his research lab focus much of their attention on the impacts of climate change, seascape fragmentation, ecosystem manipulation and restoration ecology.

Prior to joining the faculty of SoMAS, he served on the faculty of Southampton College, as a research scientist at the Southeast Environmental Research Center at Florida International University and oversaw the Florida Keys National Marine Sanctuary Seagrass Status and Trends Monitoring Program.

Brad has published over 60 peer-reviewed articles. He has served as one of the founding principle investigators in the largest and most successful bay scallop restoration project in the U.S. and for the Shinnecock Bay Restoration Project which is the largest marine ecosystem manipulation project in NY.

Matt Parker, Ph.D.

Matt is the Aquaculture Business Specialist with University of Maryland Extension. He received his B.S. (Fisheries Science) from North Carolina State University in 1997, with a Master of Aquaculture (2001) and MBA (2002) from Auburn University. He completed his Ph.D in Environmental Science from the University of Maryland focusing on the effects of debt financing on Maryland Oyster Aquaculture Farm Profitability. Prior to joining University of Maryland Extension in 2011, Matt was an Aquaculture Business Specialist with the North Carolina Dept. of Agriculture and Consumer Services from 2003-2010. Matt has spent his career educating aquaculture producers about the need for proper business planning and assisting them in writing business plans and finding financing. He was recruited to provide aquaculture business planning instruction for the Myanmar Fisheries Federation as part of the USAID Farmer 2 Farmer program during the summers of 2014 and 2015.

Matt is currently the President of the US Aquaculture Society.