Meet the Deep Sea Expedition Team Aboard NOAA Ship *Bell M. Shimada*

Chris Caldow, Expedition Lead

Chris has been with NOAA since 2000 when he became a Knauss Marine Policy Fellow with the National Centers for Coastal Ocean Science's (NCCOS) Biogeography Branch at NOAA Headquarters, a unit specializing in mapping the distributions of marine plants and animals to aid decision makers faced with spatially explicit management decisions. In 2005, Chris led the Branch's efforts to produce a report, "A biogeographic assessment of the Channel Islands National Marine Sanctuary and surrounding areas: a review of boundary expansion alternatives for NOAA's National Marine Sanctuary Program." Chris subsequently became Chief of the Biogeography Branch, where he remained until coming west in July 2014 and taking on the role of Research Coordinator at Channel Islands National Marine Sanctuary. Chris will be the Chief Scientist aboard the *Bell M. Shimada* overseeing the research and exploration activities.

Dr. Peter Etnoyer, Deep-Sea Coral Team Lead

Peter is a marine biologist with NOAA's National Centers for Coastal Ocean Science in Charleston, S.C. He studies deep-sea coral ecology, health, and diversity using submersibles and remotely operated vehicles (ROVs) to survey the deep seafloor. He is an adjunct professor at the College of Charleston. His lab seeks to understand, describe, and protect deep-sea coral habitats in U.S. waters and neighboring seas. Peter will be leading the deep-sea coral team aboard the *Shimada* to conduct ROV transects, collect corals, and maintain *Lophelia* alive in shipboard aquaria.

Dr. Laura Kracker, Mapping Team Lead

Laura is a Geographer with NOAA's Center for Coastal Monitoring and Assessment, Biogeography Branch in Silver Spring, Md. Her recent work involves broadly applying acoustic technologies to survey fish and seafloor habitats in National Marine Sanctuaries and high priority habitats in the southeast U.S., Gulf of Mexico, Caribbean, and now the West Coast at Channel Islands National Marine Sanctuary. Her research incorporates acoustics (sonar used to determine fish size and abundance in the water column and mapping of the seafloor), Geographic Information Systems (GIS), spatial statistics and modeling to characterize coastal and marine ecosystems as functional landscapes to address resource management issues. An Ocean Science Blog post from one of her previous missions can be found here: https://noaaoceanscience.wordpress.com/tag/laura-kracker/.

Dr. Branwen Williams, Keck Science Department at Claremont College

Branwen is an assistant professor of Environmental Science in the W.M. Keck Science Department of Claremont McKenna College, Pitzer College, and Scripps College. She is a paleoceanographer who uses the skeletons of marine organisms as a tool to generate records of past environmental change. On the *Shimada*, Branwen will collect deep-sea corals to determine the corals' age and how fast they grow in order to better understand their biology and need for protection.

Dirk Rosen, Subsea Operation Manager

Dirk has over 25 years of deepwater engineering experience. As Executive Director at Marine Applied Research & Exploration (MARE), he directs projects using cost-effective and innovative deepwater robotic technology to assess change in marine life to inform ocean management. As the subsea operation manager aboard the *Shimada*, Dirk will lead the research expedition and piloting of the remotely operated vehicles (ROVs).

Sarah Raskin, Teacher at Sea

Sarah is a science teacher at the Haydock Academy of Arts and Sciences in Oxnard, California. She is currently working as a magnet schools grant coordinator at her school site to help facilitate Haydock's transition to an arts and sciences academy with an emphasis on environmental science. Sarah has been teaching for over 10 years, in both Oxnard and Santa Cruz, California. She looks forward to bringing back what she learns from the scientists aboard the *Shimada* to her students in Oxnard.

Andrew Shuler, Marine Biologist

Andrew is a JHT, Inc. contract biologist at NOAA's National Centers for Coastal Ocean Science in Charleston, S.C. There. he works for the Deep Sea Coral Ecology Lab, where he focuses on the taxonomic identification of corals collected from both U.S. and adjacent waters. Aboard the *Shimada*, Andrew will assist with the collection and processing of coral and water chemistry samples, as well as managing the data generated during the cruise.

Andy Lauermann, ROV Operator

Andy has 12 years of experience planning and performing ROV field operations in California, Oregon and Washington coastal waters, as well as 12 years of post-survey data processing, analysis and reporting. He is an expert pilot and navigator of MARE's fleet of ROVs. On the *Shimada* expedition, Andy is the principal ROV operator and will supervise the navigation and geo-referencing of the data collection.

Devyn Parks, Marine Biologist

Devyn is currently a senior at Scripps College where she studies Environment, Economics, and Politics with a minor in Hispanic studies. Devyn recently completed her senior thesis on using deep sea gorgonian corals as proxies to examine oceanic nutrient variations. While aboard the *Shimada*, she will provide assistance to the scientists on board and gain field work experience.

Erin Weller, Hydrographer

Erin is a Physical Scientist with the Office of Coast Survey, Atlantic Hydrographic Branch in Norfolk, Va. She will be working aboard the NOAA Ship *Bell M. Shimada* to assist in the systems integration of the Kongsberg ME70 (multibeam sonar) and Hypack (acquisition and navigation software). Erin has worked as a hydrographer for 10+ years with experience on several NOAA ships, at the Pacific and Atlantic Hydrographic branches, as well as in the private sector. Shereceived a Master's in Geography and GIS at East Carolina University (2006). On the weekends, she enjoys spending time on the beach throwing frisbee with her dog, Buoy.

Leslie Wickes, Marine Biologist

Leslie Wickes is marine biologist working with Peter Etnoyer at NOAA to document the distribution and condition of deep-sea corals in relation to the carbonate chemistry of the seawater. Her expertise is in understanding the relationship between ocean acidification and the ability of deep-water corals to form reefs. On the *Shimada*, she will collect water samples near corals to measure the chemical parameters of the water. These data will help us understand how coral can grow in a relatively harsh environment and potentially provide insight on how other corals will grow as the ocean acidifies globally.

Michael Annis, Hydrographer

Michael Annis is a Physical Scientist with NOAA's Office of Coast Survey and has been working for NOAA since 1994. His work experience in NOAA includes positions as a Survey Technician on the NOAA Ship *Mount Mitchell*, Atlantic Hydrographic Field Party and NOAA Survey Vessel *Bay Hydrographer*. He has also served as a rotating hydrographer at the Atlantic Hydrographic Branch in Norfolk, Va. Michael currently works in systems integration, as a liaison to commercial software and hardware producers and a field support representative for NOAA's hydrographic fleet. He is also a member of the Office of Coast Survey AUV Emergency Response Team. He recently took over as project manager of the ME70 – Hypack Integration project.

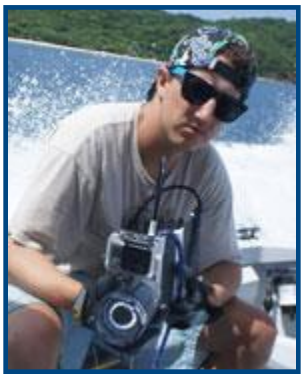
Rick Botman, ROV Operator

While onshore, Rick maintains underwater vehicle systems and develops new capabilities to enhance their value in survey and collection applications. On the *Shimada*, he will maintain and operate the ROVs, as well as manage the topside control and data collection systems. He also provides on-deck support during launch and recovery operations.

Steve Holz, ROV Operator

Steve has over 25 years of experience with the deployment of marine equipment. He is a fisherman and licensed boat captain who has safely lead the deployment and recovery of an ROV over 500 times in the past 10 years. During the *Shimada* research expedition, he will be in charge of safely launching and recovering the ROV.

Will Sautter, Physical Scientist



Will works for the Biogeography Branch at the National Center for Coastal Ocean Science as a marine GIS analyst. He specializes in seafloor mapping using multibeam sonar and he has completed many surveys in the Southeast Atlantic and the Caribbean over the past 4 years. On board the *Shimada*, he will process the multibeam data to generate benthic habitat maps for the ROV team to explore and collect ground validation video. Will was invited to join the team by the Chief Scientist, Dr. Chris Caldow, who was previously his supervisor at NOAA/NOS headquarters in Silver Spring, Md.