

The Virgin Islands Consortium

Seventeen Students Earn Masters Of Marine And Environmental Studies Degree At UVI

Education / **Published On May 21, 2018 09:28 PM /**

Staff **May 21, 2018**



The Center for Marine and Environmental Studies (CMES) at the University of the Virgin Islands announced on Monday that seventeen students received a master of marine and environmental science (MMES) degree during UVI's 2018 commencement ceremonies, noting the number as an exciting time for CMES.

"Given that we have had approximately 50 graduates in the first decade of the MMES program, for us to see 17 finish in a year after such devastation is remarkable," said Dr. Kim Waddell, director of VI-EPSCoR (viepscor.org). This accomplishment speaks to the perseverance of the MMES and CSMES faculty who guided these new scientists towards completing their degree requirements while working without offices and lab space. As for

the graduating students, kudos to them as well and I'm particularly excited to see such relevant research emerge from their theses that can help inform territorial resource managers and scientists alike."

To illustrate the range and complexity of the student's research topics and its relevance to the territory, their abstracts are listed below. CMES said that it is notable that much of the work relies on VI-EPSCoR-sponsored acoustic tracking technology, and is centered within Brewers Bay. The work therefore draws from, and adds to, the wealth of information gathered within the Brewers Bay Ecosystem Analysis Project (<https://viepscor.com/brewers-bay/>).

One consistent theme of the work by these students is their interest in studying the relationship of marine organisms with their environment such as their habitat and food preferences, according to the release. The use of new technology provides these new researchers unique insights in the behavior of these species that are otherwise virtually impossible to track in the sea. Their research findings are particularly important as scientists work to understand the effects of a changing environment on these important marine species.

CMES said VI-EPSCoR's investment in the acoustic tracking arrays within Brewers Bay is being used to support and inform the research. Acoustic telemetry uses tags surgically implanted into or onto marine animals. These tags emit unique pings every minute. The pings deliver information to strategically placed hydrophones or receivers which record the animal's identification code, date and time, according to the release. Scientists turn this information into maps of the animal's movements over weeks and months. Atlantic tarpon, Lane and Mutton snapper, and Green and Hawksbill sea turtles are some of the species tagged and tracked using this technology.

Climate change and environmental disruptions in the form of marine debris, watershed runoff, and coral diseases, are also areas of focus. These are issues that affect the territory as a whole and will help support the work of marine researchers and environmental decision makers, according to the release.

"We have come a long way from our first graduate in 2008. Ten years later, we are graduating 17 students, prepared to work on some of the important issues facing us locally and globally as it pertains to the marine environment," said UVI Provost Camille McKayle. "Each student has worked on a thesis with faculty from UVI's College of Science and Mathematics and Center for Marine and Environmental Studies, and many have published in academic journals. We are extremely proud of the students, and the faculty, for this achievement. The fact that so many finished in this challenging year is a testament to the tenacity and perseverance of faculty and students. This will be a model for many classes to come."

"The UVI Class of 2018 has endured many challenges the past nine months. I believe we are among a short list of institutions to ever experience two natural disasters during a two week period," said Mitchell A. Neaves, vice president of institutional advancement at UVI. "During the aftermath of the storms, these scholars increased their engagement through research and voluntarism to assist with our recovery. As these graduates seek new challenges and research opportunities, we are confident their experience at UVI prepared them for any challenge they may encounter in the future. These scholars are not just

graduates of our Marine Science program, they are our Ambassadors of Excellence."

"My experience at UVI has been educational, challenging and exciting. I am so grateful for the opportunity to research beautiful coral reefs, gain hands-on experience and make life-long friendships while in the MMES program at UVI. This multi-faceted program is truly one-of-a-kind and I encourage others to apply so they can experience it also," said Tanya Ramsayer.

Summary of Theses and Graduates

John Cassell: *Seasonal Patterns of Seagrass Species with Relations to Herbivore Preference in a Small Caribbean Bay*

Michele Donihe: *Assessing Impacts of the Invasive Seagrass, Halophila stipulacea, on Juvenile Southern Stingray (Hypanus americanus) Habitat Preference and Delineation of Diel Movement Patterns in Brewers Bay and Perseverance Bay, St. Thomas, USVI.*

Mareike Duffing Romero: *Spatial-temporal movement patterns of Atlantic tarpon (Megalops atlanticus) and Lane snapper (Lutjanus synagris) in the US Virgin Islands.*

Kari Gerkhe: *Home range and habitat use of juvenile green sea turtles (Chelonia mydas) in Brewers Bay, St. Thomas, USVI*

Sarah Heidmann: *Diel patterns in movements of mutton snapper, Lutjanus analis, within home ranges and on spawning grounds in the US Virgin Islands*

Paul Hillbrand: *Reconstructing Male Hawksbill (E. imbricata) Genotypes in the Nesting Population of Buck Island Reef National Monument, St. Croix: An Assessment of Multiple Paternity and the Breeding Sex Ratio.*

Colin Howe: *The acclimatization of the Caribbean fused stag horn coral Acropora prolifera to non-natal locations.*

Amelie Jensen: *Predictors of and variability in seagrass sediment blue carbon from St. Thomas, US Virgin Islands*

Lora Johansen: *Factors Influencing Activity Space of Juvenile Hawksbill Sea Turtles*

Danielle Lasseigne: *Microplastic abundance influenced by anthropogenic activity in St. Thomas, USVI.*

Sam Mitchell: *The recovery of Seagrass and Chelonia mydas (Green Sea Turtle) after Hurricane Earl in 2010 in Brewers Bay, St. Thomas*

Lauren Olinger: *An Evaluation Of Local And Community-Scale Multispecies Competition Among Corals, Sponges, And Macroalgae On Reefs In The U.S. Virgin Islands*

Tanya Ramseyer: *The Effect Of Herbivory And Nutrient Addition On The Dynamics Of The Macroalgae, Dictyota spp. On Caribbean Coral Reefs In St. Thomas, U.S. Virgin Islands*

Moriah Sevier: *Identifying pathogen sources and vectors: A spatiotemporal ridge-to-reef valuation of a Gorgonia ventalina aspergillosis epizootic in St. Thomas, USVI*

Sara Thomas: *Age, Growth and Reproduction of the Queen Triggerfish, Batistes vetula, from the US Virgin Islands*

Nikita Thompson: *Evaluating the abundance and size distribution of Indo-Pacific lionfish (Pterois spp.) in the US Virgin Islands*

Logan Williams: *The Impact of Coral Species Diversity on White Plague Disease Transmission*

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