

OCOVI -- Ocean and Coastal Observing – Virgin Islands, Inc.
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Subject: Report on the 2020 IOOS/CARICOOS/OCOVI Vembu Subramanian Award in the US Virgin Islands

**To: Dave Easter, Division Chief, IOOS Program Office,
Julio Morell, CARICOOS Executive Director & CEO
Ruperto Chaparro, Chairperson, CARICOOS Board of Directors**

**Copies to: The Awardees; OCOVI's Board of Directors;
Members of the Review Panel; USVI Members of the Board of
Directors of CARICOOS**

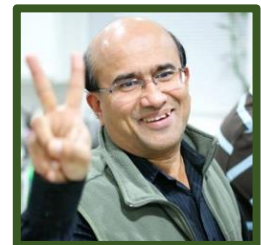
From: Roy A. Watlington, OCOVI Project Director

Date: February 14, 2020

Overview

Three graduate students have been identified as recipients of the 2020 IOOS/CARICOOS/OCOVI Vembu Subramanian Award and have been informed of their success. After accepting the evaluation of applications by its Review Panel, OCOVI announced the winners as Antonio Farchette, Sonora Meiling and Amber Packard and congratulated them on their success. All are graduate students in the University of the Virgin Islands' Masters in Marine and Environmental Science program.

The award honors the memory of the late Vembu Subramanian, noted oceanographer and leader in ocean observing at the South East Coastal Ocean Observing Regional Association (SECOORA), which has described his life as, "... dedicated to uplifting others". Funding for this first offering of the Award is provided by NOAA's program office for the Integrated Ocean Observing System (IOOS). It is distributed through the Caribbean Coastal Ocean Observing System (CARICOOS) to OCOVI, which has made its benefits available in the US Virgin Islands.



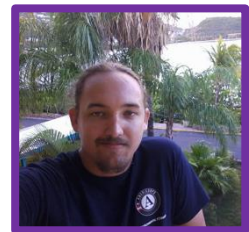
Process

Administration of the Award was designed to mimic SECOORA's Vembu Subramanian Ocean Scholars Award -- modified to reflect the limited pool of eligible applicants and the narrow choice of academic disciplines in which it could be applied. It was divided into three awards of \$3200 each with the

provision that additional funds could be made available for special needs. The Award was announced through the OCOVI webpage, messages to University program managers and advisors, to ocean related government agencies, to present and former OCOVI student interns, to all students whose email addresses were known to OCOVI, and by press release to the general public. A Review Panel composed of one University graduate research professor and advisor, one OCOVI Board Member and OCOVI's Chief Science Officer. Three students applied. All were UVI graduate students in good standing and otherwise well qualified. Each received a full award to facilitate their work, which is described below.

ANTONIO FARCHETTE

Mr. Farchette's thesis work is focused on observing the competition of the non-native seagrass *Halophila stipulacea* with the native *Syringodium filiforme* by transplanting samples from nearby donor beds and growing them alongside each other and by themselves over several months, enabling an understanding of how both species grow while under competition with one another compared to by themselves.



In addition, with the advancement of ocean-observing capabilities in mind, Mr. Farchette will enhance the field experiment by including both temperature and light measurements using OCOVI-provided Temperature/Light data loggers, maintained at monitoring sites to provide data to the OCOVI/CARICOOS accessible database.

The funds acquired from this award will go toward tuition to aid in the competition of the thesis work and contribute to his participation in the Benthic Ecology Meeting 2020.

SONORA MEILING

In the face of the spread of SCTLD (Stony Coral Tissue Loss Disease) and in order to prioritize intervention efforts, Ms. Meiling's study is committed to defining which species of coral are most susceptible to this disease in order to focus efforts and more efficiently use resources. This will be done by monitoring plots around St. Thomas to define species-specific susceptibility by infection incident rate, lesion progression rate, and mortality rate. Monitoring would consist of both radial transects that would be visited biweekly, and marked individual coral colonies that would be monitored weekly with 3D photogrammetry. The monitoring would continue for six months or until complete mortality of targeted corals.



Ms. Meiling will, in addition to her thesis-driven observations, generate some physical data along with the images, for example, temperature with a 0.2 deg C accuracy using a HOBO data logger that can be maintained at monitoring sites

accumulating data to be archived in OCOVI/CARICOOS' public data base. Further, she will help OCOVI in assuring that the results of her investigations are catalogued and made available (post thesis) on publicly accessible sites.

Funds will be dedicated to participating in the International Coral Reef Society conference in July 2020 and to supplementing her graduate assistantship.

AMBER PACKARD

Ms. Packard's thesis investigation seeks understanding of how rising sea temperatures may affect the biology and phenology of parasites in the Caribbean basin through a lab-based temperature manipulation experiment using *Gnathia marleyi*, a species of gnathiid commonly found in the U.S. Virgin Islands. The results of this experiment will aid in building accurate and thorough models to predict changes in the coral reef ecosystem in the face of global climate change.



Ms. Packard accepts the award agreeing to involve ocean observing methodologies whenever possible and to produce a short, public audience-friendly, article for OCOVI based on her research, explaining observed and predicted temperature changes in USVI reefs as well as other less-publicized impacts such as changes in parasite abundance.