

PRESS RELEASE
(date)

Space Invaders: *Halophila stipulacea* in the Virgin Islands

Alien seagrasses are invading the waters of the Caribbean at an alarming pace. Faculty and students at the University of the Virgin Islands (UVI) are meeting this threat to our native marine communities with the full force of research, knowledge and education. The invasive seagrass *Halophila stipulacea* originates from the western Indian Ocean is thought to have spread into the Mediterranean and Caribbean Seas in ship ballasts and by fragmentation caused by anchoring and other bottom disturbances. The native seagrasses, of which *Syringodium filiforme*, *Thalassia testudinum*, and *Halodule wrightii* are most abundant, are threatened by this invasion and competition for resources and space. Flexible habitat requirements, fast growth rate, and ability to regenerate from a tiny fragment characterize *H. stipulacea* as a pioneer species and enable it to rapidly establish new colonies in bare sand. This may have dire consequences for shallow, tropical marine ecosystems, since many organisms rely on native seagrasses for food and shelter and because seagrasses buffer currents, surge, and beach erosion. Another concern is that the invasive species has been observed to grow in the sand halo that typically surrounds coral reefs where native seagrasses are absent.

UVI's Masters in Marine and Environmental Science (MMES) 2013 cohort recently wrapped up a study of the invasive seagrass as a part of the capstone project for their degrees. They hypothesized a lower preference of local herbivores to forage on the *H. stipulacea*. Feeding preference studies in Brewer's Bay and at UVI's MacLean Marine Science Center (MMSC) measured herbivory of three native seagrasses and a local alga, *Acanthophora spicifera*. The projects' results did not demonstrate a strong preference of animals for the native species over the invasive species, but this may have been due to currents dispersing the invasive seagrass more easily than the native plants. Although their study revealed evidence that local animals eat the invasive seagrass, the rate of herbivory is not sufficient to prevent its expansion.

Funded by the National Science Foundation summer research programs at UVI, undergraduates worked with staff from Coral World Ocean Park to help them answer some questions about seagrass cultivation related to plans to develop a seagrass exhibit at Coral World. Their research focused on cultivation of native turtle grass *T. testudium* and compared it with the responses of the invasive *H. stipulacea* to cultivation and stress. Both species were successfully cultivated and recommendations were made regarding methods of collection and propagation. Their project results were presented at UVI's Summer Research Symposium on August 1, 2014.

Currently, UVI researchers are assessing the presence and spread of the invasive species while identifying bays and estuaries that have not yet been invaded. These native strongholds are precious commodities at risk of invasion that need protection from the non-native species. UVI needs the public's help to report any sightings of the invasive seagrass, especially if it appears in any of these native seagrass habitats. An awareness campaign will target mitigation measures to prevent further expansion and any future invasions of non-native species. Careful control of invasion vectors such as boat ballast storage areas and mobile attachments such as the hulls of boats is necessary. Boater education to avoid anchoring in seagrasses will limit damage to our native seagrasses and the fragmentation and dispersal of the invaders. If you have knowledge of the presence of the invader *H. stipulacea*, please report the sighting to the Center of Marine and Environmental Science at the University of The Virgin Islands 340-693-1380.