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Buck Island National Monument News Release

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Greener Pastures: Green turtle grazing dynamics and behavior in seagrass meadows at Buck Island Reef National Monument

CHRISTIANSTED – The National Park Service (NPS) in collaboration with the Archie Carr Center for Sea Turtle Research at the University of Florida (UF) will be conducting research within the seagrass meadows at Buck Island Reef National Monument (BIRNM) from June 2nd through late December 2017. University of Florida researchers will be working from NPS Buck Island Reef Resource Management boats. They will be boating, diving, and deploying/retrieving research equipment in seagrass meadows within the monument (south side of the island) during this time. Research will be conducted over a 7-10 day period, once each month.

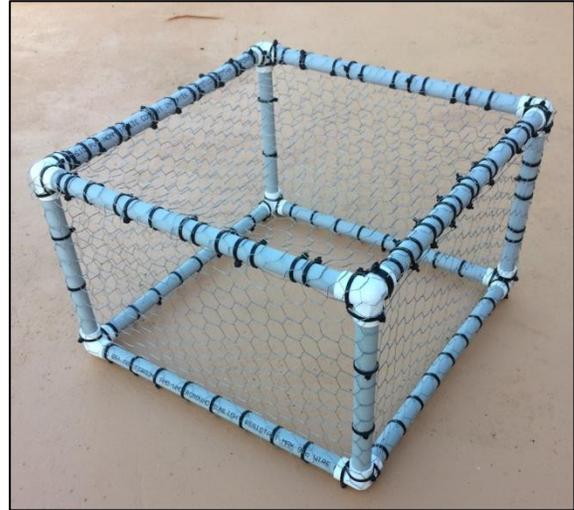


Seagrass ecosystems provide a diverse array of essential ecological and economic services to coastal communities – these services include coastline protection, pollution buffering from shoreline runoff, and providing nursery grounds for many U.S. commercial fishery species. Seagrasses also provide forage for several marine organisms including green turtles. Grazing by green turtles plays an important role in maintaining the health and persistence of seagrass communities. However, the dynamics of this interaction remains understudied and the capacity of seagrass meadows to support the small population of “recovering” green turtles at Buck Island Reef is unknown.

The objectives of this study are to 1) characterize and assess the productivity of grazed and ungrazed seagrass pastures; 2) evaluate how seagrass characteristics may affect green turtle foraging behavior and grazing intervals; and 3) determine the capacity of seagrass meadows at Buck Island Reef to support green turtle populations. The overarching goal of this project is to provide NPS managers with the data and information needed to understand how recovering green turtle populations are utilizing seagrass resources at BIRNM and what is needed to maintain the health and success this ecosystem and green turtles in the monument.



During this study, researchers will establish small temporary sampling plots using herbivore exclusion cages (see photo on right) in shallow (16-20ft) seagrass meadows extending from West Beach to the pier and in deeper (40ft) meadows just south of the island. Researchers will also establish a temporary camera array in the shallow seagrass meadow between West Beach and the pier to observe green turtle grazing behavior. Cages and cameras will be deployed for 7-10 days each month and will be marked with research permit numbers (#BUIS-2017-SCI-0001). Please be aware that divers will be deploying research equipment in areas with high boat traffic. NPS vessels will always display a dive flag, divers will use a surface dive float while at depth, and a marine radio broadcast will be made to notify nearby boaters of research activities. Effort will be made to complete all shallow research activities in the early morning prior to higher boat traffic periods.



What do healthy seagrass meadows look like?



A healthy seagrass meadow in the Caribbean is well represented in the photo above (on left) – note the green turtle grazed portion on the left and ungrazed on the right. However, seagrasses are threatened by many anthropogenic factors, including shoreline runoff, pollution, anchor damage, climate change, and invasive species. Seagrass ecosystems in the U.S. Virgin Islands are currently threatened by an invasive seagrass, *Halophila stipulacea* (see photo on right). This species has NOT yet been spotted at Buck Island. If you see this seagrass, please report to the National Park Service.

If you would like additional information about this study, please contact: Clayton Pollock, NPS Biologist
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The National Park Service thanks all of our community members and friends for 52 years of support for Buck Island Reef NM and we look forward to an exciting year of events celebrating our unique resource.

www.nps.gov/BUIS

Learn about the NPS Mission at Buck Island Reef NM watch [Caribbean Gem](#) on YouTube.



About the National Park Service: More than 20,000 National Park Service employees care for America's 407 national parks and work with communities across the nation to help preserve local history and create close-to-home recreational opportunities.

