

Publications and Presentations

On February 7, a seminar sponsored by the Friends of Virgin Islands National Park explored the history of research on St. John. Ginger Garrison (BRD) discussed research done by scientists since 1975 and summarized ongoing work on the status of the coral reefs and reef-associated fishes of St. John and the changes in these and other resources (e.g. migratory warblers, seagrasses).

In December, Jeff Miller gave a talk on the effects of sedimentation on coral reefs at the 4th Annual Non-point Source Pollution Conference on St. Croix.

Caroline Rogers gave a talk on the stresses affecting reefs in the Virgin Islands at a conference in Puerto Rico in November 1997.

The following paper by Ginger Garrison, Caroline Rogers, and Jim Beets has been accepted for publication in the *Revista de Biología Tropica*: "Of reef fishes, overfishing and in situ observations of fish traps in St. John, U.S. Virgin Islands"



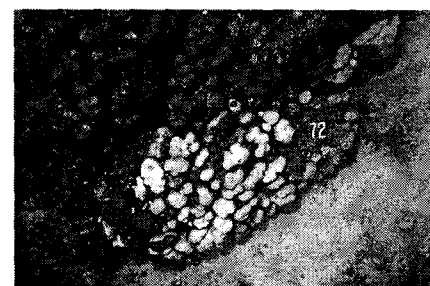
TROPIC BiRD

A Newsletter about Inventory & Monitoring Activities in VIIS, BUIS and DRT0



Sea Turtle Monitoring at Buck Island Reef National Monument

The Buck Island sea turtle monitoring program initiated by NPS Resource Management Specialist Zandy Hillis-Starr is now into its tenth year. From 1988 to 1997, over 100 female hawksbills were tagged, and data are available on nesting success, growth rates, and nesting site fidelity. BRD biologist Brendalee Phillips has taken the lead in the study of juvenile hawksbills foraging in the surrounding coral reef. Over 50 juvenile hawksbills have been tagged. Blood samples from 38 of these revealed that Buck Island's reef provides critical habitat for turtles from all over the Caribbean.



Coral Disease Update

In July 1997, BRD scientists began documenting what appeared to be new coral diseases around St. John using underwater video and still photography. Some of these diseases resemble ones seen off of Florida and other Caribbean islands. Colonies of the dominant coral around St. John have patches without any tissue. These bright white areas of exposed skeleton are rapidly colonized by algae. This disease is even showing up on reefs which are relatively undisturbed by humans. Samples of diseased coral tissue have been sent to microbiologists for examination. In addition, one pathogen, a rare terrestrial fungus which causes disease in sea fans, was isolated from an air sample taken on St. John during an African dust event.

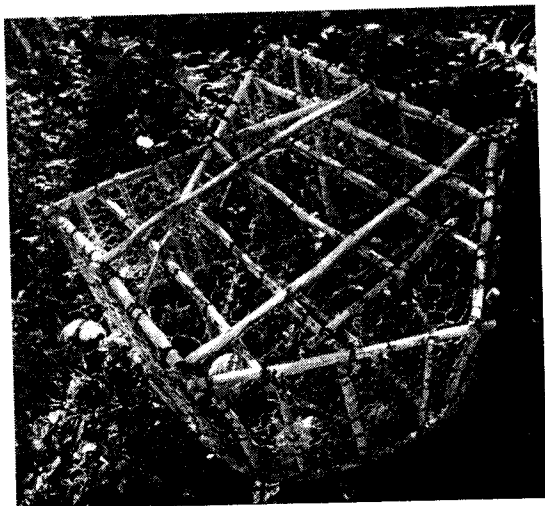
CONTINUED ON REVERSE SIDE

Hurricanes Hugo (1989) and Marilyn (1995) destroyed most of the critical beach forest habitat on Buck Island where hawksbills nest. Beach profiles were done in August 1997 and will be used to monitor changes in the shoreline and in the amount of beach habitat required for turtle nesting.

Brendalee gave a presentation at the 18th Annual International Symposium on Sea Turtle Biology and Conservation in Mexico the first week of March.

Something in the Air

The National Park Service has been working diligently to install an air quality sampling station on St. John as part of the EPA-NPS Demonstration Intensive Site Project (DISPro). The instruments will measure several parameters including ozone, nutrients, and UV-B radiation.



Something Fishy in Paradise

Further analysis of data from reef fish monitoring has provided even more evidence of alarming declines and shifts in relative abundances of these fishes. The St. John trap fishery is exhibiting several patterns associated with overfishing, including fewer fish and smaller fish in traps, more herbivorous fishes and fewer groupers in traps. Based on the information from this and several other projects, Virgin Islands National Park is seriously considering designation of a marine reserve within park waters.

Support from the Friends

Thanks to the Friends of Virgin Islands National Park for vital support for some of our field work on coral reefs and seagrass beds!!

Dry Tortugas Cruise

During last summer's cruise to Dry Tortugas National Park, Jeff Miller and Brendalee Phillips worked with biologists from the Florida Dept. of Environmental Protection and from the National Marine Fisheries Service, making over 150 dives on 12 sites. Jeff Miller has now analyzed 21 underwater videotransects which he and Brendalee Phillips took of Bird Key reef.

Videotapes taken with the digital camera had far better resolution than those from the analog camera. The living coral cover at Bird Key is about 28%. Preliminary analysis of quadrat data collected at this reef and at Pulaski Shoal showed few changes at Bird Key reef but an increase in the number of species and colonies of stony corals at Pulaski since initial measurements in 1989.



Congratulations

Congratulations to Ellen Link for receiving her Masters' Degree from the University of Rhode Island in December and to Rob Waara for the special award he received for his volunteer support of resource management activities for NPS and BRD. Ellen and Rob are now contract employees for BRD and work closely with Jeff Miller in conducting much of the field work around St. John.



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