

Buck Island Reefs Hard Hit by Hugo

Biological Technician Zandy-Marie Hillis reports that Hurricane Hugo left major impacts on Buck Island Reef National Monument (BUIS). Park rangers patrolling the southeast forereef of the Underwater Snorkeling Trail found the reef crest piled one to two feet high with dead coral rubble. Large branches of elkhorn coral (*Acropora palmata*) were broken, showing 8- to 10-inch cross-sections of white skeleton. Extensive breakage was also observed among the other corals in the area. Fire coral (*Millepora complanata*), normally erect along the reef crest, was crumbled and piled up along the foot of the forereef. However, all underwater interpretive signs except one were still in place, and all visitor moorings were still intact.

Patrols of the terrestrial vegetation on Buck Island, on the other hand, revealed extensive damage. All adult trees, including large tamarind, turpentine, sea grape, acacia, manchineel, frangipani, barrel and organ pipe cactus were affected by the storm, in the form of broken limbs, shattered trunks, and trees completely uprooted, eroded out and laid down. Machineel trees were laid down parallel along the north shore like match sticks, up to 20 to 30 trees deep in areas. The south shore, in particular, was affected by a high storm surge that cut 10 to 15 feet deep into the permanent landscape, eroding out adult trees.

The hawksbill turtle nesting beaches at BUIS were also greatly altered by the hurricane. The nesting beaches, shoreline, and beach forest to the southeast were severely eroded, up to 15 feet in some areas. All shoreline trees along the northshore nesting area (predominately machineel) have been laid down parallel to the shore, blocking access to the normal hawksbill

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nesting areas in the beach forest. In addition to the wall of fallen trees, the storm erosion increased the height of the beach berm by up to 3 feet. This has effectively closed these areas to hawksbill nesting.

The effects of Hurricane Hugo on hawksbill nesting success is already apparent. The obstacles along the southeast and northshore areas have pushed the hawksbills to nest on the open beach (West Beach) which is not the normal preferred nesting habitat. Also, it is estimated that more than 80 percent of the 55 confirmed nests on the beach, incubating prior to Hugo, were lost in the storm or unrelocatable due to changes in the landscape and beach profile. Daytime patrols for nesting activities and nest success determination will continue on a boat-available basis for the rest of the nesting season, December-January 1990.