

Buck Island Reef

50th Anniversary 2011

Buck Island Reef National Monument
St. Croix, U.S. Virgin Islands

National Park Service
U.S. Department of the Interior



Uninhabited Buck Island, 6,000 feet long, 2,500 feet wide, rises 328 feet above sea level, 1½ miles from the island of St. Croix. The 19,015-acre Buck Island Reef National Monument includes the 176-acre tropical dry forest island and 18,839 acres of submerged land and coral reef system. Proclaimed a national monument in 1961 by President John F. Kennedy, it was expanded in 2001 to preserve one of the Caribbean's finest marine gardens. Endangered and threatened species live and nest here: four species of sea turtles—hawksbill, green, leatherback, and loggerhead—and the St. Croix ground lizard. Elkhorn coral, the first listed marine invertebrate, surrounds two-thirds of the island. Elkhorn coral patch reefs rise to the surface from the seabed as much as 40 feet below. Prehistoric people would canoe from St. Croix and camp on the beach, likely to fish and gather sea turtle eggs and conch. In the 1700s and 1800s the Danish government set up a signal station on the island's highest peak. A signal keeper, his family, and enslaved workers lived nearby.

LARGE PHOTO © STEPHEN FRANK

Coral Reefs

Coral reefs are complex invertebrate colonies of animals called polyps. Each tiny polyp produces a carbonate skeleton that results in massive, but fragile formations. Filter feeders, polyps eat floating plankton they trap in their tentacles. As polyps die, new ones grow on their remains to expand the reef. Polyps and the algae (*zooxanthellae*) living in them have a mutually beneficial relationship enabling coral reefs to support a great diversity of animal and plant life. Rich with life, coral reefs have existed for millions of years. They are as ancient as rain forests.



Spiny lobsters hide by day and feed at night. Its chitin content makes the shell hard. In the ancient coral reef environment, ways to exploit every

niche have evolved. Here nutrients from the sea get extracted and are redistributed, and many organisms find shelter from predators.



Coral Reefs of the World

Coral reefs (in red) grow in tropical waters whose temperatures are over 70°F all year. The best growth occurs just a few

yards from the surface. Recently coral reefs have suffered the effects of hurricanes and diseases.

Buck Island's Barrier Reef

Buck Island Reef's underwater scene humbles human perception with its variety of shape, pattern, color, texture, and movement. Like fortress walls, thick, branching elkhorn corals rise off the seabed to dominate the underwater world.

The irregular arc of reef around Buck Island's northern and eastern shores creates a lagoon between reef and island. Wide and shallow, the lagoon is seldom over 12 feet deep, and the protecting reef moderates wave action. In these calmer waters brain corals grow larger, almost reaching the surface. Seaward of the barrier reef, elkhorn and star coral patch reefs occur around the island, except to the southwest, where seagrass beds are prevalent.



Elkhorn coral



Blue tangs (above) graze en masse in reef shallows. A flamingo tongue sea snail (right) accents a sea fan.



Coral polyp (800x)

Fragile and Endangered

Worldwide, coral reefs are disappearing quickly. They are slow-growing and vulnerable to pollution, sedimentation, overfishing, warming of the seas, and boat damage. When a coral is stressed, the coral polyps expel the internal algae that help nourish them, causing them to appear "bleached." If severely affected, the corals will die. Because corals thrive only in a narrow range of conditions, biologists see their plight as a planetary danger signal.

The national monument is protected habitat for threatened and endangered species.

Research on hawksbill turtles produces valuable information for their survival in the Caribbean. Human introduction of mongooses and rats, exotic species, may have wiped out the St. Croix ground lizard, which was recently reintroduced on the island (right).



Endangered hawksbill, leatherback, and green sea turtles (left to right) are protected by law. Every two to three summers they migrate here to nest in shoreline forests and on beaches. A

female hawksbill may spend up to 60 minutes ashore, selecting a nest site, digging the egg chamber, laying some 140 eggs, and returning to the sea after carefully covering her nest. Two

months later hatchlings emerge and crawl to the sea. Please do not disturb nesting turtles or birds.

Buck Island Reef National Monument is a Marine

Protected Area. No fishing or taking of animal or plant life is allowed.

Do not collect or even disturb artifacts. They are important pieces of history. Please tell a

park ranger what you saw and where you saw it. All artifacts are protected by federal law, and they teach us more if left in place.

Least tern

Buck Island Reef National Monument is one of over 390 parks in the National Park System. To learn more about national parks and National Park Service programs in America's communities visit www.nps.gov.

Brown pelicans
© SOLVIN ZANKI



© LEE A. FITZGERALD