

# buck island reef



## Closeup on a Caribbean Reef

Surpassing even the familiar beauty of the Virgin Islands is the world of the tropical reef. At its best, this world is incredibly colorful and varied. Intensely alive, the reef is nothing less than a joy to the senses. Swimming and snorkeling in the crystal-clear lagoon just off Buck Island near St. Croix is an ideal way to see one of the best Caribbean reefs firsthand. Well suited to beginner and expert alike, Buck Island Reef offers shallow water snorkeling above the inner reef and deep water exploring along the outer barrier.

Getting to Buck Island Reef requires only a visit to one of the skippers who operate small boats between St. Croix and the island. All boatmen furnish snorkeling equipment. The adventure begins in the morning with a trip directly to the reef for an hour-and-a-half of swimming and snorkeling. Arrow markers and signs on the ocean floor guide snorkelers along the Buck Island Reef nature trail. By following the underwater signs you can snorkel the trail in about 30 minutes.

At lunchtime, the boats stop at Buck Island. Here you may eat, swim, or take a walk on the primitive hiking trail through the tropical vegetation that covers the island. For a spectacular

Most of us, if given a free choice of places to dive would pick the coral reef for several reasons. It possesses by far the gaudiest, most varied, and most luxurious fauna of any place where life is found on earth. In its never-ending nooks and crannies, innumerable animals make their homes, animals which quite frequently have extraordinary habits.

Porkfish  
(*Anisotremus virginicus*)

Carlleton Ray and Elgin Camp,  
*Underwater Guide to Marine Life*

view of St. Croix and the reef areas, take the trail to the top of Buck Island. The National Park Service provides picnic tables, charcoal grilles, a small house for changing clothes, a sheltered pavilion, and restrooms.

## The Coral Reef

Of all the reef residents, the corals have the most extraordinary habits; these are the architects, the builders, and the landlords of the reef. Ranging in size from a pinhead to a raindrop, billions of tiny master builders, called polyps, erect the dazzling array of reef forms that give quarter for all other life in the coral community. As architects of the reef, they must follow natural, but nonetheless strict, "building codes" that keep them within tolerances of light, temperature, salinity, oxygen, motion, depth, and firmness of the base on which they build. World geography even dictates site selection for coral structures.

Usually associated with the shallow waters of offshore tropical islands, coral reefs are seldom found farther than 22° north or south of the equator. They occur only off the east coasts of the world's continents, where prevailing winds and the earth's rotation push tropical waters north and south toward the poles. Reef builders reject, as substandard, building sites along deeper western continental shores; there cold upwelling currents move toward the equator and preclude their growth.

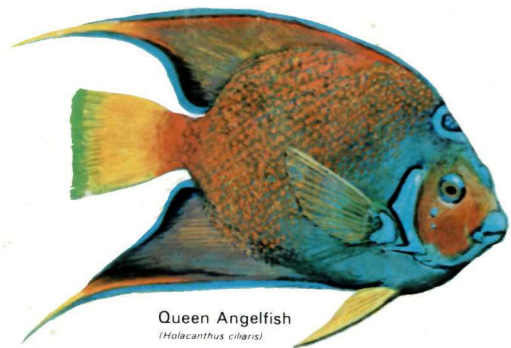
Here in the Caribbean, waters are clear, maximum light is available, and temperatures meet polypean standards—rarely falling below 20°C (68°F). Currents move gently, bringing the plankton—microscopic animals and plants—on which the nocturnally-feeding polyps subsist. In these waters too, polyps find solid foundations at acceptable depths. Reefs seldom develop in water deeper than 45 to 60 meters (150 to 200 feet), and soft or shifting bottoms have poor coral formations or none at all.

Construction of a typical aquatic housing project begins when the free-swimming coral larva attaches itself to some firm surface, becomes a full-fledged polyp, and begins secreting its own limy exterior skeleton. This single polyp and all its many descendants, building on one another, budding new members as they go, erect their communal skeleton outward and upward toward the all-important rays of the sun. Colony after colony in hundreds of shapes and sizes ultimately create the reefs that decorate the ocean floor—spires, trees, shrubs, stone-hard staghorns, huge boulders that appear to be designed after the cortex of a monstrous brain belonging to some supersized being. Each shape and design represents a species of coral.

The larger, more rigid structures become the "buildings" of the coral community. Among them, surrounding them, are the plantlike shapes of near relatives—the gorgonians, sea whips, and sea fans. Only a small percentage of growing things in the reef community are true plants. Reef ecology is one in which the animals far outnumber the plants—the reverse of lush land communities where plants outnumber animals.

Even as the polyps erect their dwellings, multi-colored fishes and other marine creatures already are moving in. These residents comprise a second category of reef inhabitants. To the still backdrop of coralline shapes, they add life and motion and color. The third major group of creatures at the reef are those which come to feed upon its inhabitants. Sharks, snappers, and barracudas, among others, cruise slowly among the corals, seeking the opportunity to flash toward unwary prey. For every creature there is a role to fulfill and a purpose unique to its own kind.

The overall effect is one of pure fantasy. A world so sensate, so unmercifully beautiful, could not have been created by the richest of imaginations. In the coral reef, the gifts of life and beauty are concentrated as they are nowhere else in nature.



Queen Angelfish  
(*Holacanthus ciliaris*)

### Administration

Buck Island Reef National Monument is administered by the National Park Service, U.S. Department of the Interior. The superintendent of Virgin Islands National Park, Box 806, Charlotte, Amalie, St. Thomas, V. I. 00801 has general supervision of the area. A superintendent for Buck Island is stationed at Fort Christiansvaern, Box 160, Christiansted, St. Croix, V. I. 00820. Information can also be obtained at the museum in the Steeple Building in Christiansted.

As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering the wisest use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to assure that their development is in the best interests of all our people. The Department also has a major responsibility for American Indian reservation communities and for people who live in Island Territories under U.S. administration.

National Park Service  
U.S. DEPARTMENT of the INTERIOR

### From Pastureland to Parkland: Buck Island's History

Buck Island, beautiful as it is, bears the scars of long habitation. Since the 1750s, the island has been used for a residence, and for agriculture, pasturage, and lumbering. In 1948, Buck Island became a park and was administered by the Virgin Islands Government; in 1961 the area was transferred to the National Park Service.

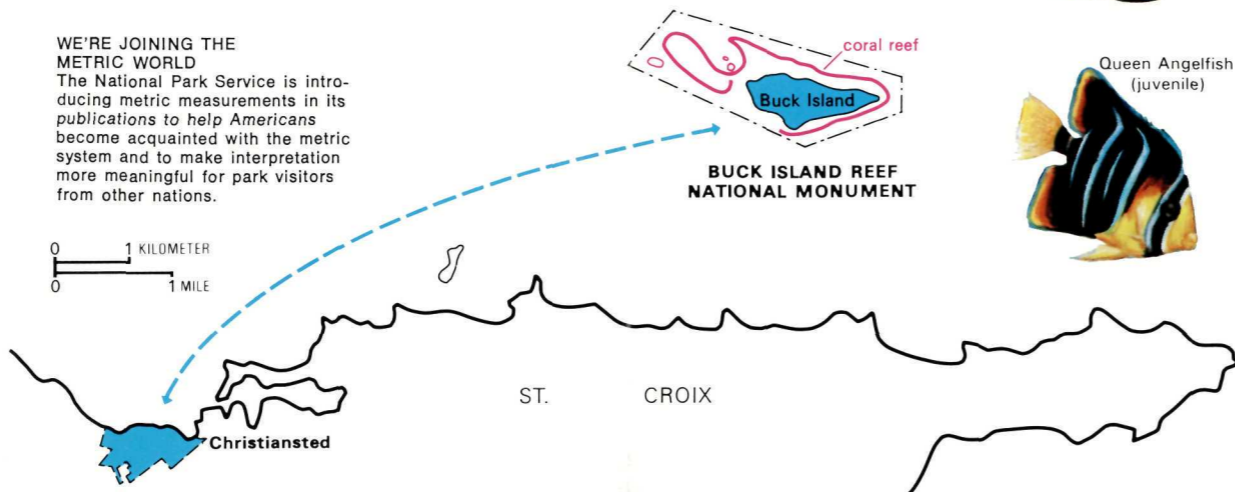
Foureye Butterflyfish  
(*Chaetodon capistratus*)



When whites first set eye on Buck Island in the 1700s, it was covered with *Lignumvitae* trees, locally called Pokholdt trees. The island took its name from these trees. Corrupted by usage, the name changed from "Pocken-Eyland" (Dutch) to "Bocken" and finally to "Buck." The latter two names refer to goats which were pastured on the island beginning in the 1750s. Sometime during the 19th century, the *Lignumvitae* trees were cut for lumber—incidentally creating abundant pasture for the island's goats. When rapid regrowth of the forest threatened the goats in the early 1900s, the eastern half of the island was burned over repeatedly.

### WE'RE JOINING THE METRIC WORLD

The National Park Service is introducing metric measurements in its publications to help Americans become acquainted with the metric system and to make interpretation more meaningful for park visitors from other nations.



Another animal associated with man—the rat—indirectly created a separate ecological problem in the early 1900s. Bubonic plague, which is spread by rats, was epidemic in Puerto Rico at that time. Declaring war on rats, officials introduced mongooses in many areas, including Buck Island. Because mongooses forage during the day, and rats are nocturnal animals, the strategy failed. The mongooses prey primarily on the island's native birds and reptiles, and the rats continue to survive.

Despite the continued presence of some introduced animals, Buck Island belongs more to nature today than at any time in its recent history. The return to nature began with the elimination of the goats in the 1950s. Overgrazing had by that time reduced the island to a more-or-less desertlike appearance. As the vegetation returned at a quickening pace, Buck Island again became home to a variety of native species. The island is now one of the few Caribbean nesting sites left where the pesticide-ridden brown pelican is still producing live young.

French Angelfish  
(juvenile)  
(*Pomacanthus arcuatus*)



Queen Angelfish  
(juvenile)



### Safety on the Reef

Sunburn is the greatest single threat to your physical well-being here. Popular lore concerning ferocious sharks, moray eels, and barracudas notwithstanding, sunburn causes far more discomfort than any other hazard. Visitors snorkeling on the surface with their backs exposed to the tropical sun too frequently forget that the combination of bright sun and seawater can quickly cause sunburn. For this reason we recommend short periods in the sun and the use of protective waterproof lotions.

Second to caution under the sun comes caution in the water. Cuts from coral can inflict painful wounds that may be slow to heal. The common spiny sea urchins are a particularly sharp hazard. Jellyfish, the Portuguese man-of-war, and fire corals can sting and burn, some severely. A good practice is to enjoy the reef by watching, touching nothing unless you're sure of it. Never reach into a dark hole: the moray that may be residing there has not been known to attack a human swimmer outright but would likely strike at an intruding hand and inflict a painful wound. Treat all underwater creatures with respect.

If you haven't snorkeled before, be sure to practice in shallow water before daring the reef. Once at the reef, it's a good idea to swim awhile near your boat. You're now in water over your head—2.5 to 3.5 meters (8 to 12 feet) inside the reef and 9.5 to 13.5 meters (30 to 45 feet) outside. Make sure your face mask fits snugly. The kind that covers eyes and nose only—used with a separate breathing tube—is recommended. For non-swimmers, most charter boats have other apparatus for viewing the underwater life.



### Help Protect the Park and Yourself

You may take part in many activities at Buck Island, but to protect the natural values of the island, a few regulations are necessary:

Fires are permitted, but only in the picnic area grilles.

Camp overnight on board your boat—not on the island.

Enjoy the underwater wildlife, but remember that possession of a speargun within park boundaries is prohibited.

Please do not remove any natural features from the park.

Use litter barrels for trash or, better yet, take all your trash back with you.

Boats should be maneuvered slowly through park waters. Water skiing, speeding, and reckless boating are prohibited.

Leave Buck Island as you found it.



Smooth trunkfish  
(*Lactophrys trigonus*)