

Safety on the Reef

Sunburn is the greatest single threat to your physical well-being. Popular lore concerning ferocious sharks, moray eels, and barracudas notwithstanding, sunburn causes far more discomfort than any other hazard. Visitors snorkeling on the surface, their backs exposed to the tropical sun, too frequently forget that the combination of bright sun and sea water will burn them quickly. 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 which may be slow to heal; the common spiny sea urchins are a particularly sharp hazard; jelly fish, the Portuguese man-of-war, and the 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 can inflict a painful wound. All underwater creatures should be treated with respect.

If you haven't snorkeled before, be sure to get in some practice time 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—8 to 12 feet inside the reef and 30 to 45 feet outside. Make sure the face mask fits tightly. The kind that covers eyes and nose only—used with a separate breathing tube—is recommended.

Bite the mouthpiece firmly, but not too hard; for a watertight fit, let your lip muscles do the work of closing snugly around the mouthpiece. Keep your face down as you float on the surface. The face-down position points the air intake end of the snorkel tube upward and keeps it above the surface. Breathe through the mouthpiece slowly and

easily, staying alert for water that may spill into the open end of the tube by wave-wash or head-tilting. If water does get in, simply blow it out sharply through the mouthpiece. Occasionally you may get too much water to dispel easily. When this happens, don't panic, just surface, remove the mouthpiece, and breathe normally, keeping the hands free by treading water with leg and flipper motion.

After a little practice, a good swimmer finds himself taking a deep breath and diving among the reefs for a minute or more, timing himself to return to the surface for a breath before going down again. Remember, you can't breathe through a snorkel tube while submerged. This may sound elementary, but even good swimmers forget, often with uncomfortable results.

For non-swimmers, most of the charter boats have other apparatus for viewing the underwater life.

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 1707, Charlotte Amalie, St. Thomas, V. I. 00802, is in charge. A management assistant for Buck Island is stationed at old Fort Christiansvaern, Box 160, Christiansted, St. Croix, V. I. 00820. Information can also be obtained at the museum in the Steeple Building.

THE DEPARTMENT OF THE INTERIOR—the Nation's principal natural resource agency—bears a special obligation to assure that our expendable resources are conserved, that our renewable resources are managed to produce optimum benefits, and that all resources contribute their full measure to the progress and prosperity of the United States—now and in the future.

U.S. DEPARTMENT of the INTERIOR
NATIONAL PARK SERVICE



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Buck Island Reef



Buck Island Reef National Monument is your opportunity to view a Caribbean reefscape firsthand

More and more visitors to the Virgin Islands are marking their itineraries for a day of snorkeling, swimming, picnicking, and exploring on little, uninhabited Buck Island, off the northeast coast of St. Croix. The prime attraction is the fine coral reef which lies immediately beneath the ocean's surface, just a few hundred yards offshore. The seaward front of this barrier reef is a solid wall of elkhorn coral which extends like a horseshoe around the land mass, fencing off the clear green waters of the lagoon and diminishing the force of the open sea. Claiming the island's only open quadrant—its southwest shoreline—beautiful Turtle Beach should be the first stop on your trip to the reef.

It's a boating trip, and one of the skippers who operate the small boats between St. Croix and Buck Island will gladly sign you on for a modest fee. Most boatmen furnish snorkeling equipment. They provide some refreshments, but you must bring your own lunch. The day's outing often begins with an impromptu regatta among the several boats headed for Turtle Beach. Prizes for winner and losers alike are a cool swim at the beach, snorkeling tips for beginners, and time to relax or take a walk on the

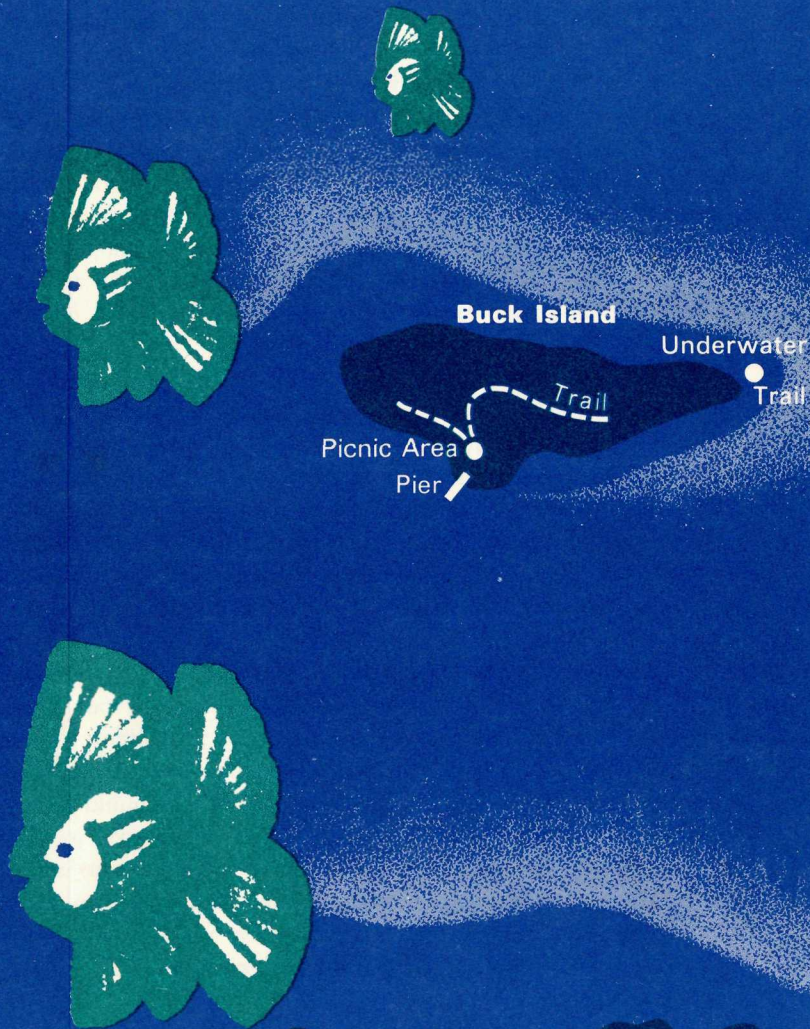
nature trail through the tropical vegetation that covers the island. After lunch the captain hoists anchor for the 10-minute trip to the reef.

Arrow markers and numbered signs on the ocean floor guide the snorkelers along the Buck Island Reef nature trail. By following the underwater signs you can swim the trail in about 30 minutes.

The National Park Service provides picnic tables, small houses for changing clothing, a sheltered pavilion, and restrooms.

There are many activities in which you may take part and things you can do at Buck Island. However, we have a few simple regulations to protect the natural values:

1. Fires are allowed only in the picnic area.
2. You may anchor your boat overnight, but do not camp on Buck Island.
3. Spearfishing and the possession of spearguns is prohibited within the monument waters.
4. Before you attempt to catch, collect, or take any form of marine life, other than fish, you should consult the special regulations.





The Coral Reef

"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."

Carleton Ray and Elgin Ciampi
Underwater Guide to Marine Life

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; here 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 polyp standards—rarely falling below 68° F. Currents move gently, bringing the plankton—microscopic animals and plants—on which the nocturnal-feeding polyps subsist. In these waters too, polyps find solid foundations at acceptable depths. Reefs seldom develop in water deeper than 150 to 200 feet, and soft or shifting bottoms have poor coral formations or none at all.

Construction on 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. "It is one of the deep paradoxes of nature that creatures so small and all but insensate, so lowly in the evolutionary scale, could be such supreme artists and sculptors, jewelers whose 'Rich and various gems inlay the unadorned bosom of the deep.'" (From *The World We Live In*, by the Editorial Staff of LIFE and Lincoln Barnett (c) 1955 Time Inc.)

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, multicolored fishes and other marine creatures already are moving in. These comprise a second category of reef inhabitants. To the still backdrop of coralline shapes, they add life and motion and color.

Shown in this painting are little doctor fish and young French and queen angels darting through branching antlers of staghorn coral. The four-eyed butterfly fish's "second eye" just above its tail fin makes it appear to swim backward. Standing on its head in a clump of sea whips, the trumpet fish is not really showing off. This may be his special defense maneuver, causing him to look like the sea whips in which he hides and with which he sways in perfect rhythm with moving currents. Humans, like his other enemies, must look carefully to find him.

The third major group of creatures of the reef are visitors. These are the fishes that come to call—and to dine. Some are small, such as the three little porkfish at the left; some are larger—amberjacks, barracudas, and sharks that cruise the reef structures in search of unwary dwellers that venture within swallowing range.

Because of the captivating habits of residents and visitors, life in the delicately balanced reef community goes on, with protection, to grow and flourish unharmed. Unless it is protected, human visitors, wielding spear guns, nets, and the like, could wreck the balance of reef life and turn this spell-binding subsea world into an unrenewable aquatic slum.