general management plan
development concept plan
environmental assessment
september 1983

Coastal Zone Management Program
SB482.V6B83 1983

BUCK ISLAND REEF

NATIONAL MONUMENT / UNITED STATES VIRGIN ISLANDS

SB
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1983

BUCK ISLAND REEF NATIONAL MONUMENT

UNITED STATES VIRGIN ISLANDS

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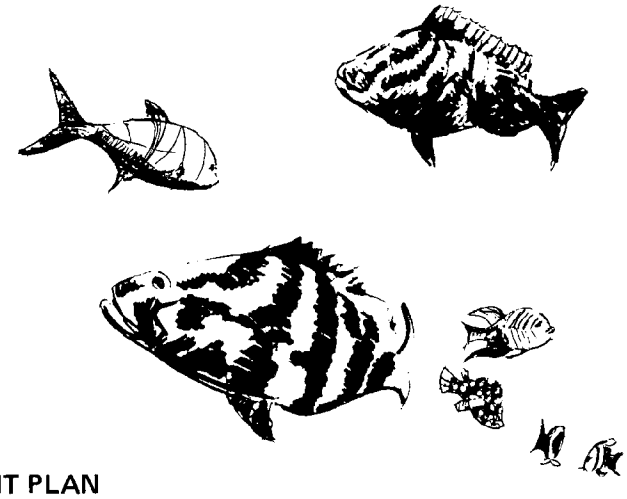

GENERAL MANAGEMENT PLAN
DEVELOPMENT CONCEPT PLAN
ENVIRONMENTAL ASSESSMENT

For Futher Information About This Plan, Please Contact

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SEP 8 1997

UNITED STATES DEPARTMENT OF THE INTERIOR / NATIONAL PARK SERVICE

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SUMMARY

The general management plan selected as a result of this proposal will guide the overall use, preservation, management, and development of Buck Island Reef National Monument, St. Croix, Virgin Islands.

The proposal classifies the monument's 176 acres of land and 704 acres of sea as a natural zone as defined by the National Park Service "Management Policies," with subzones of natural environment (37 acres land, 5 acres sea), protected natural areas (155 acres land, 123 acres sea), and outstanding natural features (16 acres land, 544 acres sea). Its main thrust is to protect marine and terrestrial resources while providing for visitor use. It does this by

affirming the present limitations on the number of boats allowed to enter the popular south lagoon and moor at the east end underwater trail

decreasing the concentration of use by providing additional underwater experience zone if visitation increases to the point where warranted

furnishing other swimming, sunbathing, hiking, and picnicking opportunities through improvement of existing visitor facilities and development of minimal new ones

Under the proposal, monitoring of visitor activity and natural phenomena will be increased and research will be conducted on both natural and man-influenced processes of the reef and island. Expected impacts are minimal because the proposal will not significantly change present operations.

INTRODUCTION

PURPOSE AND NEED

This proposed general management plan describes long-range management strategies for the preservation and use of Buck Island Reef National Monument. It fulfills the requirements of the General Authorities Act of 1970 (as amended) and documents compliance with applicable legislation and regulations. It updates the 1965 Master Plan, the last authorized plan for the monument.

Buck Island Reef National Monument was established December 28, 1961, by Presidential Proclamation 3443 to preserve "one of the finest marine gardens in the Caribbean Sea" for the benefit and enjoyment of the people. The proclamation included the government of the Virgin Islands requirement (Law 800, December 5, 1961) that the agency administering Buck Island "shall not adopt or attempt to enforce any rule, regulation or requirement limiting, restricting or reducing the existing fishing (including landing of boats and the laying of fishpots outside of the marine garden), bathing or recreational privileges by inhabitants of the Virgin Islands, and shall not charge any fees for admission to the area." In February 1975, Presidential Proclamation 4346 added approximately 30 acres of submerged land to the monument "to insure the proper care and mangement of the shoals, rocks, undersea coral reef formations and other objects of scientific and historical interest." These directives, along with the monuments' "Statement for Management" (see appendix A), guide planning for the park.

The impetus for planning stems from a need to provide-long range direction to resources management and research, to upgrade existing visitor services and programs, to provide contingencies should visitation resume the rapid rate of increase of the mid-1970s, and to document the compliance of National Park Service programs with legislative requirements.

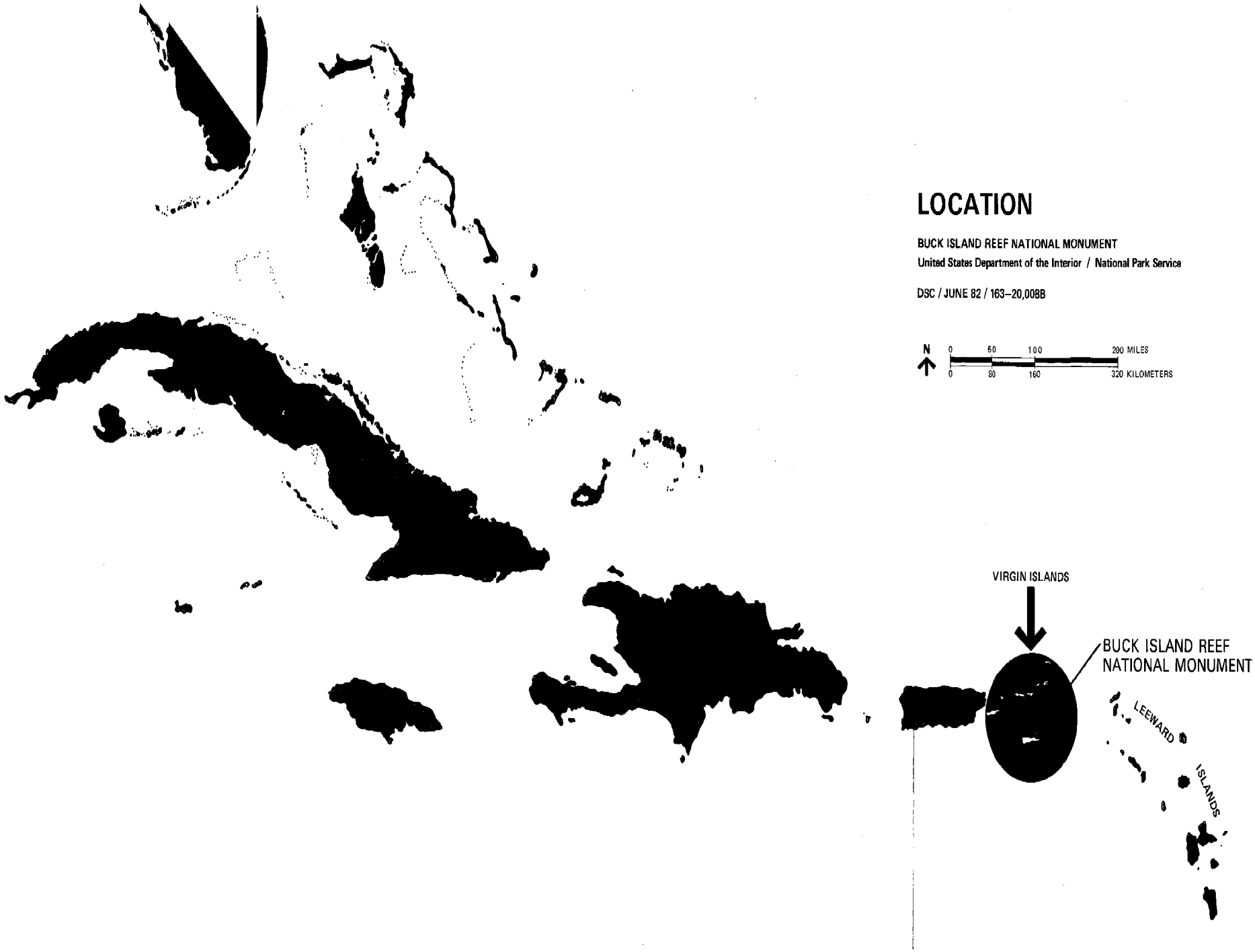
BRIEF DESCRIPTION OF THE PARK

Buck Island lies in the Caribbean Sea within the territory of the United States Virgin Islands. It is 1.5 miles off the northeastern shore of St. Croix, the largest of the U.S. Virgin Islands. The monument totals 880 acres, of which over 700 acres are submerged lands.

The monument's significance lies primarily in its magnificent offshore reef--the marine garden--and associated marine life. The terrestrial plants and animals and cultural artifacts on Buck Island add to the monument's value; the island provides nesting habitat for three endangered species--hawksbill turtle, leatherback turtle, and brown pelican--and one threatened species--the green turtle--and potential habitat for the endangered St. Croix ground lizard. The National Park System Plan (U.S. Department of the Interior, NPS 1972) relates Buck Island's significance to two nationwide natural history themes--"Seashores, Lakeshores, and Islands" and "Coral Islands, Reefs, and Atolls."

Buck Island Reef National Monument is one of three NPS areas in the Virgin Islands. Virgin Islands National Park is approximately 40 miles north of Buck Island Reef on St. John and Hassel Islands. The park is the largest NPS unit in the Caribbean and contains extensive beaches, coral reefs, an upland rain forest, ruins of historic sugar plantations, and other features. Christiansted National Historic Site is located in downtown Christiansted, 3 miles from Buck Island Reef on St. Croix. The historic site includes Fort Christiansvaern and other historic structures in an urban setting.

Although the natural features of Buck Island Reef National Monument are similar to those of Virgin Islands National Park, the monument offers a different visitor experience that complements the offerings of the other two park sites. The coral reef at Buck Island displays one of the finest examples of a coral marine garden in the Virgin Islands, and the water is remarkably clear. The trip to Buck Island from St. Croix in a small boat creates a sense of anticipation and adventure for many visitors, and the relatively small size of the monument adds a feeling of intimacy. Visitors to Buck Island Reef come to swim, sunbath, hike, picnic, and snorkel.


LOCATION
BUCK ISLAND REEF NATIONAL MONUMENT
United States Department of the Interior / National Park Service
DSC / JUNE 82 / 163–20,008B
N
0 50 100 200 MILES
0 80 160 320 KILOMETERS
VIRGIN ISLANDS
BUCK ISLAND REEF NATIONAL MONUMENT
LEEWARD
ISLANDS

VICINITY

BUCK ISLAND REEF NATIONAL MONUMENT

United States Department of the Interior / National Park Service

DSC / AUGUST 1983 / 163-20,009 A

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THE PROPOSAL

The proposal is designed to maintain the current distribution of use in the monument, improve some facilities and services, and provide long-range plans in the event of significantly increased visitor use.

One alternative, the "no-action" alternative, is described and assessed later in the document. It is identical to the proposal except that a contingency plan for increased visitor use is not included. Two other alternative actions not described in this document were considered and dismissed as impractical. One called for initiation of an NPS-provided shuttle from the east end underwater trail to a new dock on the southwestern shore of Buck Island. Another called for providing an NPS-operated ferry from St. Croix to the monument. Both alternatives are economically infeasible at this time.

MANAGEMENT ZONING

Proposed management emphases for the park's lands and waters are shown on the Land Management and Use map. In accord with the National Park Service classification system, all lands, reefs, and waters of the monument are classified into three subzones of the natural zone.

Outstanding Natural Feature Subzone

This subzone will encompass coral reefs and the enclosed lagoon southeast of the island--features of unusual intrinsic value that led to establishment of the park. The subzone will be managed to protect the aquatic resources and to provide for public appreciation and enjoyment to the extent that natural values are not impaired.

Natural Environment Subzone

Land and water in this subzone will be managed to allow environmentally compatible recreational activities. The west end beach/manchineel ecosystem and the adjoining water area will be classified in this subzone. The aquatic ecosystem within this subzone is located along the southern boundary of the monument, outside the barrier reef. It reaches a depth of 50 feet and consists primarily of sandy bottom with occasional patch reefs in deeper water.

This management unit will continue to receive much of the use within the park, mostly on the beach (approximately 500 yards long) and at two small picnic areas. Because of thorn shrubs and sand burrs, visitors seldom move far from these developments. Personnel will be available for visitor protection and resource management.

Leatherback, hawksbill, and green sea turtles nest on Turtle Beach in this subzone at night from April to December. Although Turtle Beach is

the principal recreation beach on Buck Island, current and proposed day use will not jeopardize turtle reproduction, nesting, or hatchling survival (see appendix C). Turtle Beach will continue to be managed for both compatible functions.

Protected Natural Area Subzone

Land in this subzone possesses particular value as wildlife habitat and/or for research; the land will be managed to perpetuate ecological values with little or no human intrusion.

A pelican rookery is located on the northeastern slope of Buck Island and is of prime importance to the endangered brown pelican. This is the only nesting area in the St. Croix area utilized by this bird (see appendix C). Magnificent frigate birds, 50 to 75 in number, roost beside the pelicans, but do not nest on the island.

RESOURCES MANAGEMENT

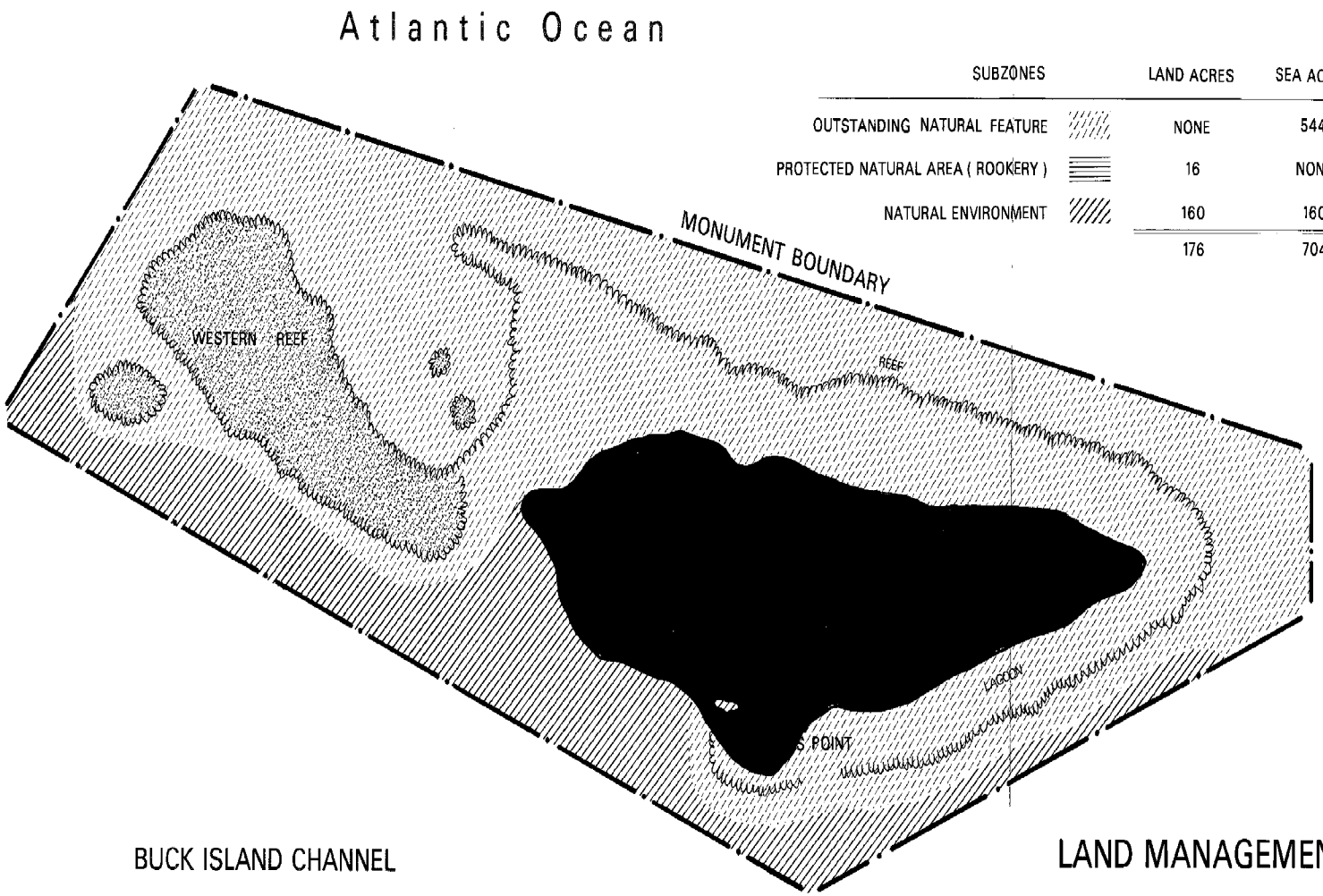
Natural Resources

Fragile coral formations in the lagoon will continue to be protected by designation of an area limited to 11 boat moorings at the east end underwater trail, and should demand warrant, an area with limited mooring will be designated at the north cut area. Use of anchors will continue to be prohibited in the lagoon.

Endangered species will continue to be protected (see appendix C). The brown pelican rookery on the island will be protected from visitor use or disturbance. Turtle Beach will continue to be patrolled to control poaching during the turtle nesting season and no artificial lighting will be permitted on the beach.

Efforts will be continued to eradicate the exotic mongoose through trapping, with technical support of the Division of Fish and Wildlife, Department of Conservation and Cultural Affairs, Virgin Islands government and the U.S. Fish and Wildlife Service. Mongoose predation on sea turtle eggs is a potential threat to turtle reproduction, and eradication of the mongoose is a prerequisite to the successful reintroduction of the St. Croix ground lizard (Ameiva polops), an endangered species apparently extirpated from Buck Island due to mongoose predation. If the program to eradicate mongooses is successful, then reintroduction of the St. Croix ground lizard will be covered by a separate management plan, as discussed in appendix C.

Research programs will continue and new programs will be initiated as needed to provide knowledge for management of natural resources within the framework of National Park Service policy. One particular field of investigation will be an examination of the consequences of continued consumptive uses of marine life by inhabitants of the Virgin Islands, a right provided in the proclamation of establishment. Other research that will be conducted includes



SUBZONES	LAND ACRES	SEA ACRES
OUTSTANDING NATURAL FEATURE	NONE	544
PROTECTED NATURAL AREA (ROOKERY)	16	NONE
NATURAL ENVIRONMENT	160	160
	176	704

LAND MANAGEMENT AND USE

BUCK ISLAND REEF NATIONAL MONUMENT

United States Department of the Interior / National Park Service

DSC / AUGUST 1983 / 163 -20,005C

N

0 1000 2000 FEET

0 300 600 METERS

development of a natural resources base map, including beach migration patterns and a coral inventory

investigation and monitoring of beach processes

analysis of impacts of swimmers, scuba divers, fishermen, boats, and natural ocean and storm processes on the reef

investigation of coral growth rate, productivity, and mortality, particularly in relation to white band disease (currently affecting staghorn and elkhorn coral)

monitoring of turtle nesting, including species composition and reproductive success

monitoring of established exotic plants to determine their growth, regeneration, and detriment to native flora

monitoring and impact analysis of water pollution resulting from commercial and recreational boating and sources outside the monument

monitoring of brown pelican nesting activities

monitoring of other species populations including spiny lobster, welk, and conch

investigating the role of natural fire in determining the structure of the park's vegetation

Cultural Resources

The cultural resources of Buck Island Reef National Monument will be managed according to the National Park Service's "Management Policies" and "Cultural Resource Management Guidelines, NPS-28." The review requirements in section 106 of the National Historic Preservation Act, as amended and implemented by the regulations in 36CFR 800, will be accomplished under the terms of the programmatic memorandum of agreement among the National Park Service, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers (September 11, 1981). All undertakings included in this proposal have been developed in consultation with the Advisory Council on Historic Preservation and the territorial historic preservation officer.

A historic resources study (HRS) will be undertaken to further guide cultural resources management in the monument. The HRS will provide basic data for a proposed underwater survey and will determine other archeological needs. The national monument was last systematically surveyed for archeological resources in 1976 by the NPS Southeast Archeological Center; the 1976 survey will be reevaluated to determine if an updated parkwide survey is necessary.

An underwater survey will be conducted to evaluate submerged resources within the boundaries of the monument. This survey will determine the number and significance of such resources. In addition, the survey will recommend the best management strategy for these resources. The park staff will monitor the known shipwreck site and take appropriate measures to protect the site if the resource appears to be threatened.

The only known prehistoric site on the island has been undercut and possibly destroyed by wave action. However, archeological testing on the area will be undertaken as soon as practical to determine if any portion of the site remains. If this testing reveals any remnant of the resource, recommendations will be made as to the preservation, salvage, or other disposition of this resource.

The remains of the Diedrich Homestead site will be recorded to the level and type recommended by NPS regional cultural resources specialists. The site will then be managed as an archeological resource and be monitored to afford increased protection. If the resource is adversely affected by man or nature, appropriate steps will be undertaken to ensure its preservation.

NPS management policies state that the dynamics of shorelines, such as Buck Island, will be allowed to take place naturally. Buck Island National Monument was created to preserve its natural beauties, and the island is zoned as a natural area. The process of seashore dynamics and island geomorphology might uncover presently unknown cultural resources. Accordingly, the following program will be implemented to identify, evaluate, and determine future management actions for such presently unknown cultural resources:

> Following any natural phenomena that results in significant alteration of the present configuration of any portion of the island, appropriate park and regional office cultural resources specialists will develop and implement a strategy to ascertain the presence or absence of cultural resources in the altered area.
>
> Should a cultural resource be identified, it will be recorded and evaluated as to its integrity and significance by appropriate cultural resource specialists in consultation with the Virgin Islands Historic Preservation Officer.
>
> Following completion of the evaluation study, the cultural resource will be managed in accordance with its integrity and significance.
>
> The Virgin Islands Historic Preservation Officer will be notified of the resource discovery and will be advised of the proposed management strategy by the National Park Service.

No adverse impacts on significant cultural resources are anticipated as a result of this plan. However, should unanticipated natural phenomena threaten a significant resource or if a newly discovered resource is found to be threatened by a proposed action, then NPS regional cultural resources specialists will ensure that all feasible planning or design

measures are taken to avoid or minimize impairment of the resources (XXX form). Unavoidable adverse effects will be mitigated by professional data retrieval involving controlled excavation, architectural recording, archiving, or other acceptable means.

VISITOR SERVICES AND GENERAL DEVELOPMENT

The objective of visitor services, programs, and facilities is to provide a high quality reef and island experience. Water-based activities will be varied enough to serve beginning swimmers through expert divers. Facilities, programs, and recreational opportunities will be accessible to the handicapped as feasible in accordance with NPS policies and the Rehabilitation Act of 1973. The General Development map shows the locations of park facilities.

East End Underwater Trail

The east end underwater trail will be improved with new interpretive signs; the mooring buoys will be retained. An advance reservation system for use of mooring buoys will be initiated if the underwater trail becomes overcrowded or visitor use of the trail adversely affects the coral reef beyond acceptable limits. The coral reef will be periodically monitored for damage. A ranger patrol boat will continue to provide general surveillance of the underwater trail, but boat operators will remain responsible for lifeguard and guide services for their own parties.

New Underwater Trail

In addition to the mooring reservation system, a second underwater trail and associated mooring buoys will be developed at the "north cut" area north of the island if warranted by increased visitor use of monument waters. It will be designed to disperse use and limit impacts on coral communities. Development and management of the trail will be similar to the east end underwater trail.

Other Activities

At the Christensted dock, a wayside exhibit will be installed to orient visitors to Buck Island Reef and Christensted Historic Site and to introduce visitors leaving for Buck Island to the special fragility and beauty of the reef.

Casual use of the west end beach for picnicking, swimming, and sunbathing will continue. Boaters will be encouraged to anchor further off the beach to reduce the number of boats in the swimming area. Should boat congestion near the beach warrant, a swimming area will be designated and marked by buoys. The existing dock will be maintained, and an orientaton/interpretation exhibit will be installed.

The west end beach will continue to receive most of the picnicking use in the monument and will be upgraded with the addition of changing stalls and a few picnic tables. The picnic facilities at Diedrichs Point will be maintained and an orientation/interpretation exhibit will be installed near the existing landing. Toilets at west end and Diedrichs Point will be replaced with vault toilets.

Overnight camping will continue to be prohibited at Buck Island.

The trail from the dock to the summit of Buck Island will be improved. A wayside exhibit interpreting the view of the reef and lagoon will be added at an appropriate overlook along the trail.

The proposed exhibits and changing stalls will be designed and sited to be unobtrusive on the view of the island from the water.

COSTS AND STAFFING

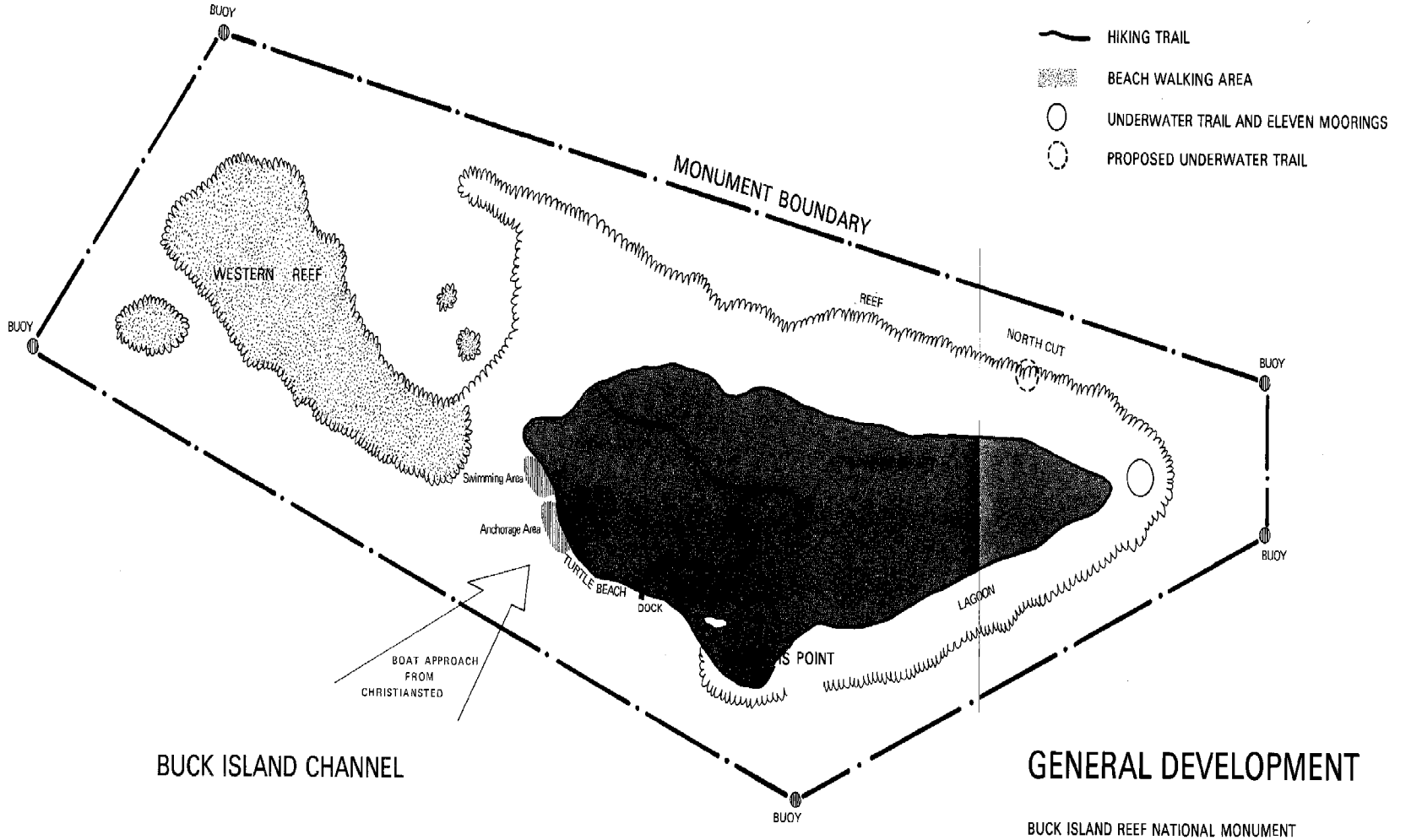
Costs of the development are estimated to be as follows:

Improve existing trails (400 linear feet)	$ 8,800
Produce wayside exhibits for Christiansted dock area, Buck Island, and existing underwater trail	80,000
Add five picnic tables	3,200
Gross construction cost	$92,000

If a new quarter-mile-long underwater nature trail is constructed near the north cut, the gross construction costs will be an additional $30,500 for signing, interpretation, and rest buoys.

Resources management program costs will be estimated as study plans are developed in more detail.

The plan will not require any additional park staff members or maintenance funding.



GENERAL DEVELOPMENT

BUCK ISLAND REEF NATIONAL MONUMENT

United States Department of the Interior / National Park Service

DSC / AUGUST 1983 / 163–20,006C

N

0 1000 2000 FEET

0 300 600 METERS

THE AFFECTED ENVIRONMENT

NATURAL RESOURCES

Setting

Buck Island is 6,000 feet long in an east/west direction, 2,200 feet wide at its widest point, and rises in a single east/west ridge to an elevation of 340 feet. It covers a land area of 176 acres, 90 percent of which is slopes steeper than 30 percent. Near the center of the island's south shore, a sandy bench--Diedrichs Point--extends out from the hillside. Another fairly level area of about 10 acres is located on the west end of the island.

The rocks of Buck Island are sedimentary in origin, as are those of St. Croix, and date to the Cretaceous period. The beach sands are recent and the process of sand transport deposit occasionally reshapes the beaches on the island. Tide changes are small (0.5 feet) and occur twice daily.

The weather is generally mild and pleasant throughout the year. Daily and seasonal temperature ranges are small because of the tempering effect of the sea. The mean annual temperature is approximately 80°F with an average variation of about 13 degrees between summer highs and winter lows. Daytime relative humidity is about 70 percent, and trade winds blow primarily from an easterly direction.

The primary wet season occurs from August through November, with the secondary season during May; minimum rainfall occurs in Febraury and March. Infrequent extreme events such as a stationary tropical depression or a hurricane may result in very heavy rainfalls in limited periods (15 inches in one to four days). No measurements of rainfall have been taken on Buck Island, but the eastern portion of St. Croix receives as little as 20 inches per year, which probably approximates Buck Island conditions. Evaporation is high due to the continual warm temperature and constant flow of wind.

A hurricane is potentially the most destructive factor affecting the marine and terrestrial resources at Buck Island. The hurricane season runs from August through the first half of October, but no major hurricanes have been recorded in the last 30 years. Besides wind damage, storm surge flooding associated with hurricanes can be extensive. Floodplain maps are unavailable for Buck Island, but visitor use areas at Turtle Beach and Diedrich Point are probably within the 100-year flood zone. The hurricane warning and evacuation system is sufficient to prevent danger to visitors, and NPS guidelines for complying with Executive Order 11988 ("Floodplain Management") permit construction of water recreation facilities within the 100-year floodplain.

Marine Environment

The Buck Island Reef extends from about the middle of the southern shore around the eastern tip of the island and along the northern shore.

There are several small passages through the reef that can be negotiated by boat, the largest near the western terminus of reef along the southern shore. On the south the reef is approximately 200 feet from the island, forming a discrete sandy-bottomed lagoon between reef crest and shore. On the north the lagoon is less well defined and is filled with small stands of coral rising to near the surface from 15- to 20-foot depths. The northwest part of the reef consists essentially of a broad area of coral heads approaching the surface from about 10 to 30 feet. This section is not as dramatic as the other reef areas, and water clarity is typically poorer.

The front of major sections of the reef is a solid stand of elkhorn coral (Acropora palmata) that shelves off steeply from the surface to the bottom at about 35 feet, where white sand alternates with patches of staghorn (A. cervicornis) and other corals and sea grass. On the lagoon side of the reef the structure is composed primarily of stinging coral (Millepora alcicornis and M. complanata). Also, there are round heads of brain coral (Diploria strigosa) that vary in size from a few inches to several feet in diameter. Several other species of reef corals inhabit the area, notably the genera Montastrea, Agaricia, Isophyllia, Porites, etc.

A major concern in managing the park's coral garden is white band disease, which has recently infested much of the elkhorn and staghorn coral and left several large patches of dead coral. Very little is known about the disease.

Within heavy visitor use areas, physical damage to coral can occur when snorkelers try to use the coral for handholds or footholds. Scarring and breakage can also be caused by boat anchors or boats grounding on the reef. It is important to recognize and distinguish visitor-related damage from natural processes of reef growth. Destruction and fragmentation of individual colonies and subsequent cementation into the advancing reef platform are prerequisite to long-term reef growth and are, therefore, natural, dynamic attributes of a healthy, active reef complex.

National Park Service photos of coral injury and regrowth at Buck Island demonstrate the ability of healthy coral to generate new growth at a fairly rapid rate. General observations have confirmed the ability of most healthy coral species to repair nonrepetitive visitor-related damage in a minimal length of time (several months to a year). However, two locations within the east end underwater trail failed to show significant signs of recovery. These were brain coral formations used as resting platforms by snorkelers. Recovery at these locations is unlikely as long as they continue to be used as resting platforms.

Other than white band disease and localized coral damage at the underwater trail, it is believed that the Buck Island Reef is in essentially pristine condition. The major potential threats to the resource lie beyond park boundaries at sewage outfalls and dredging sites; although these threats are not currently critical around Buck Island, regional development could bring them to the forefront.

The area's waters are currently affected by four avenues of pollution: oil, sludge, litter, and debris discharged from tankers, cruise ships, and

other watercraft, as well as that drifting in from islands further east. Oil has caused some damage at the monument where deposits mix with rock and sand along shores or beaches. Pollutants from watercraft within the monument and air pollutants are not quantified but are not considered significant.

The reef life is quite diverse. Several types of sea anemones are abundant and colorful, sometimes forming extensive soft mats over hard bottom and lending variety to the sessile sea fauna. The larger invertebrates include the well-known pink or queen conch (Strombus gigas), the whelk (Cittarium pica), and the spiny lobster (Panulirus argus). The whelk and queen conch are under heavy pressure from fishermen and souvenir hunters and possibly face endangered population levels. Crevices of the coral are inhabited by sea urchins and a variety of burrowing, boring, and otherwise hidden animals including worms, mollusks, and crustaceans. Many species of algae--red, brown, and green--are conspicuous on dead parts of the reef and form important species groups on deeper sandy flats.

The coral colonies and their associated marine life are intertwined ecologically. The health of the coral reef appears to affect the presence of certain reef fishes and conversely, the numbers of fishes trapped or harvested may influence the health of the reef and the natural production of carbonate sand. These relationships are poorly understood.

The fish of Buck Island are typical of the Lesser Antilles West Indian area, including surgeon (Acanthus coeruleus and Actanthus bahianus), a variety of parrotfish (Scarus spp.), and porgies (Sparisoma spp.). Other open-water populations of sport and food fish, such as snapper, mackerel, and barracuda, are seen in the lagoon and outside the reef edge. Occasionally shark, porpoise, and tarpon are seen in park waters.

Terrestrial Environment

Buck Island is a steeply shaped sedimentary outcrop with contact metamorphosis. The topography and thin soils of the island severely limit development or agriculture.

The shoreline is predominantly rock or gravel except on the western third of the island, where white coral sands have been deposited at Turtle Beach and Diedrich Point. Seagrape (Coccoloba uvifera) and prostrate plants border much of the beach. Behind this low growth, stands of manchioneel (Hippomane manicinella) mixed with coconut palm (Cocos nucifera) and other trees cover much of the two low benches. The presence of manchioneel, with its poisonous sap and fruit, places some constraints on the recreational value of the level land on the island; however, these sandy flats are the only level shaded sites suitable for recreational development. The steep slopes of the major portion of the island are covered with a low scrub mixed with cactus and grasses.

Lizards are the most abundant form of vertebrate wildlife in the interior habitat. The common tree lizard (Anolis acutus) can be seen both in the bushes and along the ground. Birds are next in abundance, with over

40 species recorded in the park. A bird-nesting rookery is located on the northeastern slope of Buck Island. Of prime importance is the endangered brown pelican (Pelecanus occidentalis). As many as 91 nests have been counted in June and July during the peak nesting season. This is the only brown pelican rookery in the St. Croix area. Magnificant frigate birds (Fregata magnificens), 50 to 75 in number, roost beside the pelican rookery, although they do not actually nest on Buck Island.

There is no known yardstick to determine vegetative cover for Buck Island prior to disturbance by nonaboriginal man, yet it may be assumed that the present flora differs from pre-Columbian times because the island was undoubtedly cut over to produce charcoal, to obtain timber, and to provide browse for domestic goats. It is believed that the ironwood tree (Lignum vitae), once endemic to Buck Island, was removed for these purposes. The island currently exhibits shrub, coastal plain, and mangrove vegetation similar to other small West Indian islands (USDA, Forest Service 1976).

Exotic species include rats, known locally as the tree or fruit rat (Rattus rattus); mongoose (Herpestes auropunctatus javanicus); and tamarind tree (Tamarindus indica). The rat is nocturnal; the mongoose is diurnal. Both subsist on a varied diet of insects, lizards, bird and turtle eggs, and vegetable material. One attempt to eradicate the mongoose did not prove successful, and populations rebuilt quite rapidly once trapping pressure was removed. Tamarind has displaced native vegetation in parts of the dry upland.

Endangered or Threatened Species

In consultation with the NPS, the U.S. Fish and Wildife Service and the National Marine Fisheries Service advise that six endangered species--brown pelican (Pelecanus occidentalis), hawksbill sea turtle (Eretmochelys imbricata), leatherback sea turtle (Dermochelys coriacea), Atlantic ridley sea turtle (Lepidochelys kempii), St. Croix ground lizard (Ameiva polops), and the Virgin Islands tree boa (Epicrates monensis granti)--and two threatened species--green sea turtle (Chelonia mydas mydas) and loggerhead sea turtle (Caretta caretta)--are known to be in the Virgin Islands region.

The brown pelican rookery on the north side of Buck Island is healthy, and there are no known threats to the pelicans within the monument. Buck Island is outside the range of the Virgin Islands tree boa, and the plan will not effect the snake. Turtle Beach on Buck Island is a nesting site for hawksbill, leatherback, and green sea turtles. Turtle nests on Buck Island are frequently destroyed by mongooses (USDI, NPS 1982) but normal visitor recreation on the beach does not interfere with turtle nesting success. Atlantic ridley and loggerhead turtles are rare in the region, and none have been recorded in the park.

Evidence that the endangered St. Croix ground lizard formerly inhabited Buck Island is circumstantial. If it did occur, it was probably extirpated by mongooses about 70 years ago. A few ground lizards were

reintroduced in the early 1970s, but subsequent searches strongly suggest that they were eliminated by mongoose predation. The last known populations of the lizard are on Green and Protestant Keys off St. Croix's northern shore.

Stingingbush (Malpighia infestisima), endemic to Buck Island and St. Croix, is being considered for endangered or threatened status (Federal Register, December 15, 1980). The tree is scattered in beach stands on Buck Island and is protected in the park.

Appendix C provides more information on these threatened or endangered species.

CULTURAL RESOURCES

The turbulent history of the West Indies has had little visible effect on Buck Island. Arawak and/or Carib Indians appear to have inhabited the island, but little more than broken ceramics mark their presence. The Spanish, after a first sighting of St. Croix by Columbus (and a repulse by the hostile Caribs), paid little attention to any of the Lesser Antilles. Other nations moved in, beginning with the English and Dutch. The French came next, but eventually sold to the Knights of Malta. Denmark held St. Croix the longest, through nearly 200 years of prosperity and poverty (1733 to 1917), after which the Islands (including Buck Island) were purchased by the United States. During the 1920s Buck Island was leased for goat raising. This use, plus occasional visits by fishermen and beach users from mainland St. Croix, was all the attention the island received until swimmers with face masks began to seriously explore the reef and came to appreciate its unique and spectacular nature.

The national monument contains three known cultural sites:

The Prehistoric Site: This site on the northwest tip of the island formerly covered approximately 0.5 acre in size. Ceramic materials and conch shell deposits attributed to the Arawak have been uncovered by tidal action here. The site has been undercut and partially destroyed by wave action.

Diedrich Homestead: Located along the ridgeline of the island, this site contains the remains of a house, a trash dump, and a possible privy built by a Mr. Diedrich, who occupied the homestead around 1793 for five years. The homestead was abandoned because of the difficulty of obtaining fresh water (there is a well site at the base of the cliffs, near the eastern edge of Diedrichs Point). Also visible are the remains of a low stone wall, which may have terraced off the top of the hill on which the house was built. The house ruins consist of a stone foundation that supported posts and formed an aboveground cellar. The site is in no danger of further deterioration in the near term. The territorial historical preservation officer has determined that this site is eligible for inclusion on the National Register of Historic Places.

The Shipwreck: This resource lies off the northwest corner of Buck Island in approximately 17 feet of water. Considerable wooden structure still remains. No ballast rock was found; however, large amounts of coal were located with the remains of the hull. Several coal chunks measured 2 feet by 1 foot by 1½ feet, leading to the conclusion that this may have been a mid- or late-19th-century coaling ship bound for St. Croix. The remains do not appear to have been disturbed by salvage attempts. Two other wrecks may be located in monument waters.

VISITOR USE

Buck Island's attractiveness to visitors is based on the ease, dependability, and safety with which this very high quality example of a Caribbean coral reef can be observed, even by novices. This attractiveness is enhanced by the proximity of a recreational beach with lifeguard and ranger protection, easily accessible tourist centers on St. Croix, and protected anchorages.

Visitation to Buck Island has been sporadic. For ten years from the establishment of the park in 1962, vistation steadily increased. It declined significantly in 1973 and 1974, and rose again starting in 1975 until it reached an all time high of 95,435 visits in 1978. Visitation decreased by over 2,000 visits in 1979, and dropped dramatically in 1980 to 78,567 visits. The trend of decreasing visitation continued through 1982, with 49,915 visits, apparently due to the current economic recession.

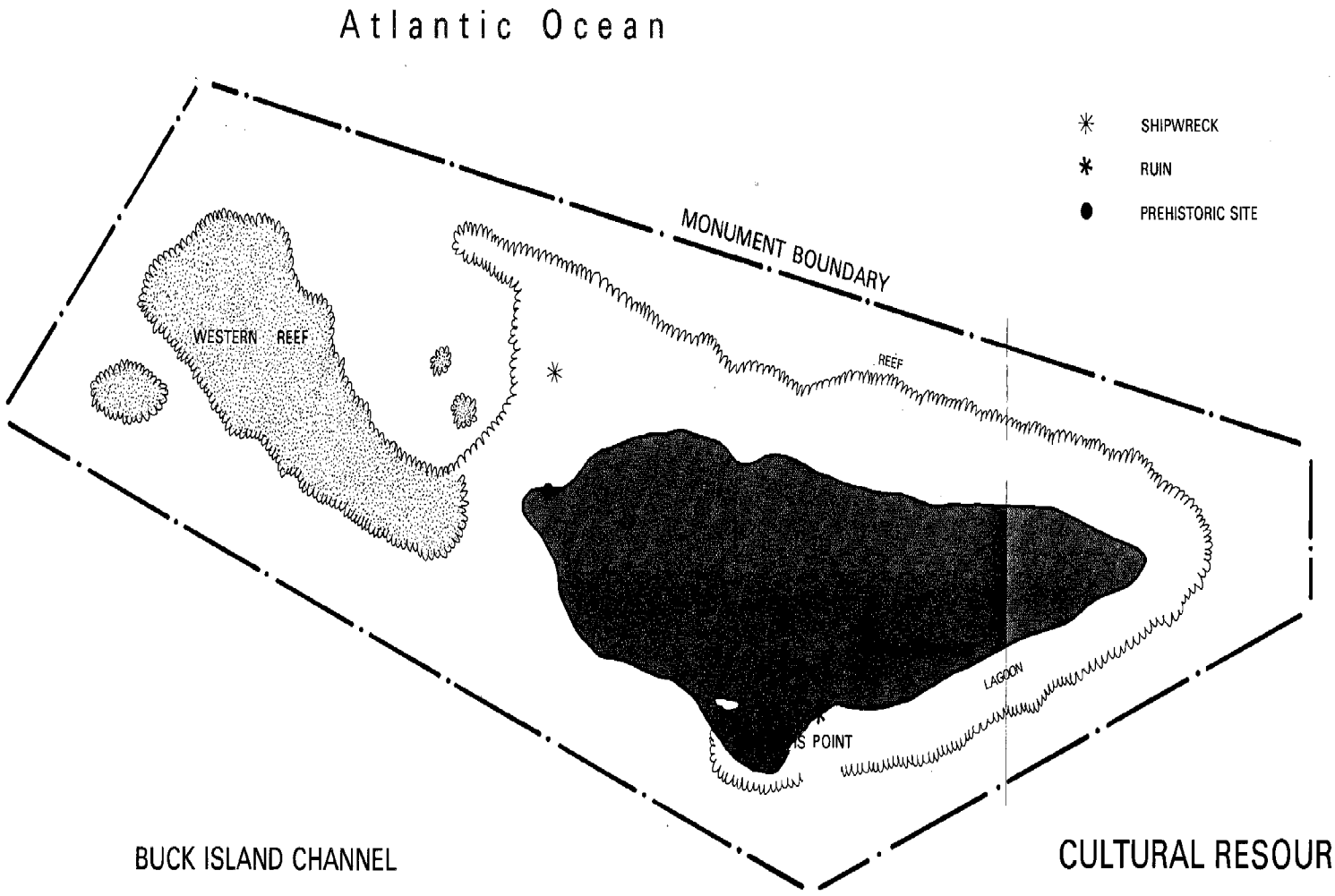
Visits to Buck Island often include an exploration of the east end underwater trail, swimming and sunbathing at Turtle Beach or Diedrichs Point, and return to St. Croix by midafternoon. For the person without a private boat, charter operators provide half or full day charter trips year round. Prices vary according to the nature and length of the trip.

In 1982, there were 13 operators (32 vessels) whose income, at least in part, was derived from charter trips from Christiansted to Buck Island. An average day in the peak month is about 300 visits; peak days approach 450 visits.

A small proportion of visitors arrive in private boats, usually stopping over during an extended cruise of the Caribbean. They follow no set pattern but generally spend no more than a day in the monument. Some anchor overnight. They may use the underwater trail; most are interested in enjoying the beach and the solitude.

Residents of St. Croix boat to the Buck Island beach area for recreation because of the limited number of open beaches on the large island. Native Cruzans also fish in park waters, which traditionally includes setting fish traps.

There has been a limit of 15 vessels on the 11-mooring site since 1977. Prior to that time as many as 23 boats were observed using 11 moorings at the east end underwater trail, resulting in congestion and safety



CULTURAL RESOURCES

BUCK ISLAND REEF NATIONAL MONUMENT

United States Department of the Interior / National Park Service

DSC / AUGUST 1983 / 163 –20,007C

N

0 1000 2000 FEET

0 300 600 METERS

hazards. Reefs on the north and west provide opportunities for additional underwater use; no facilities for boats or swimmers are currently provided at these locations.

The supervisory ranger for Buck Island resides on St. Croix. Reports of abnormal occurrences during unpatrolled hours generally are received by telephone from residents living directly across from the island. Response time from the National Park Service housing to Buck Island can take as much as 1½ to 2 hours, depending upon availability of personnel, weather conditions, and time of day. Ranger service is provided seven days a week.

Typically, reflecting the running time and daily boat preparation/ maintenance chores, ranger presence at Buck Island is provided from 9:30 a.m. to 3:30 p.m. unless special visitor activities are anticipated.

Most visitors also confine their visits to this time frame. Most commercial fish-trap tending takes place in the early morning hours, before the ranger staff arrives.

FACILITIES

The existing facilities at Buck Island consist of two picnic areas containing a total of ten picnic tables, ten charcoal grills, three pit toilets, changing stalls, a small dock, and a combination rain shelter/ranger cabin. A hiking trail connects the Turtle Beach and Diedrichs Point picnic areas with the highest point in the center of the island, where the Coast Guard maintains a signal beacon.

Eleven moorings buoys are provided at the east end underwater trail. The trail itself consists of interpretive signs on the sea floor, a floating platform, and marker buoys.

ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED ACTION AND ALTERNATIVE

DESCRIPTION OF THE ALTERNATIVE

One alternative strategy--to continue existing programs and facilities with no provisions for possible future increases in vsitation (no action)--is assessed. This alternative is almost identical to the proposed action, differing only if visitation to the park increases substantially. Given such an increase:

No reservation system would be established for moorings at the East End underwater trail.

No new underwater trail would be established at the North Cut.

No swimming area would be designated at West End beach.

ENVIRONMENTAL CONSEQUENCES

Impacts of the Proposal

No major impacts are anticipated on the marine environment. If visitation increases (contrary to recent trends), pollution from boats in the lagoon area could increase slightly. If a new underwater trail and mooring area are provided near the north cut, some localized damage to coral communities could result, and there would be an increase in the area of coral affected by visitor use. However, the mooring reservation system would be designed to disperse use and minimize impacts.

No significant impacts to terrestrial resources would occur. In accordance with executive orders 11988 and 11990, implementation of the plan would not result in modification or occupation of floodplains or wetlands. The existing picnic facilities on Buck Island are within the coastal floodplain, but such water-oriented recreational facilities are permitted under NPS floodplain management guidelines (Federal Register, May 28, 1980). To protect visitors from flooding, the monument is evacuated prior to hurricanes or major tropical storms.

In accordance with the Coastal Zone Management Act of 1972, the National Park Service reviewed the Virgin Islands coastal zone management Program to assure that the proposal is consistent with the territorial plan. The National Park Service, in consultation with the Virgin Islands Department of Conservation and Cultural Affairs, has determined the proposal to be consistent (see appendix D).

Implementation of the plan would have no effect on the current status of six endangered species--brown pelican, hawksbill sea turtle, Atlantic ridley sea turtle, leatherback sea turtle, St. Croix ground lizard, and

Virgin Islands tree boa--nor on two threatened species--green and loggerhead sea turtles. A biological assessment (appendix C) discusses the current status of each species and documents informal consultation with the U.S. Fish and Wildlife Service and National Marine Fisheries Service.

Successful removal of the exotic mongoose from Buck Island could improve habitat for nesting sea turtles, the frigate bird, the St. Croix ground lizard, and other species.

There would be no effect on prime or unique farmland soils because none are present.

The plan's increased monitoring of the cultural resources of Buck Island should enhance the preservation of these resources. No negative impacts are anticipated.

Upgrading the hiking trail from the dock to the Buck Island summit could bring more visitors near the Diedrich homestead site, but should have no effect on it. If it is found that divers are damaging the shipwreck site, the park would implement appropriate measures to protect and preserve the site.

Visitors' experiences at Buck Island would continue much as at present. If visitation grows, the expansion of visitor opportunities at the north cut area would spread out the use and thus maintain approximately the same type of experience. The mooring reservation system and marking bouys at swimming beaches would better partition visitor use, reducing use conflicts and safety hazards.

Visitor use would be managed to perpetuate long-term natural productivity of reef and terrestrial ecosystems.

Impacts of the Alternative

The impacts of the alternative would be the same as those of the proposal, unless visitation substantially increases. Should that occur, the primary environmental impact of the alternative would be more intensive, localized damage to corals at the existing east end underwater trail due to increasingly concentrated visitor use. Because an additional underwater trail would not be established, less area of the monument reefs would be affected than under the proposal. No significant impacts would occur to terrestrial or cultural resources.

Visitors would experience increasingly crowded conditions and longer waiting periods at the underwater trail. Increased boat use around the underwater trail and swimming beaches with no new marking bouys or other control measures could increase the safety hazard to swimmers and snorklers.

There would be no new development costs associated with the alternative.

Summary Comparison of Impacts

Neither the proposal nor the alternative would result in significant environmental impacts if visitation does not increase during the life of this plan. Should visitation substantially increase, however, the proposal would, by dispersing use, protect marine resources and mitigate potential crowding and safe hazards. The alternative would not adequately meet visitor needs and would result in more concentrated impacts at the east end underwater trail.

CONSULTATION AND COORDINATION

Local agencies and individuals were consulted in the development of the plan. Government agencies consulted included

U.S. Department of Agriculture, Soil Conservation Service
U.S. Department of Commerce, National Marine Fisheries Service
U.S. Department of the Interior, Fish and Wildlife Service
Virgin Islands Department of Conservation and Cultural Affairs
Virgin Islands Planning Board

APPENDIXES

A: Management Objectives

B: 106 Consultation

C: Endangered and Threatened Species Documentation

D: Coastal Zone Management Program Concurrence

E: Proclamations, Legislation, and Regulations

A: MANAGEMENT OBJECTIVES

The following management objectives are drawn from the approved Statement for Management for Buck Island Reef National Monument.

CONSERVATION OF NATURAL RESOURCES

To assure long-term perpetuation of the barrier reef and its associated biota, as well as the native vegetation, wildlife, and other natural resources of Buck Island itself, and to minimize the adverse effects of human activities on these resources.

To maintain the highest possible habitat quality for the park's endangered and rare speces.

To reduce the adverse impact of exotic species, such as the mongoose and the tree rat, on populations of native flora and fauna.

To ensure that the aesthetic quality of the barrier reef and the island itself is not impaired by structures and other visual intrusions.

To ensure that the recreational taking of conch, whelk, lobster, fish, and other marine life do not adversely effect the ecological balance of the barrier reef.

PRESERVATION OF CULTURAL RESOURCES

To identify, evaluate, preserve, and protect the park's cultural resources in a manner consistent with executive and legislative requirements and the Service's historic preservation policies.

ACQUISITION OF INFORMATION

To secure adequate information, through research, monitoring, or other means, to enable efficient and effective management of the park's natural resources.

To evaluate the effects of subsistence fishing and shellfishing in the western part of the park on the ecological communities of the barrier reef and adjacent waters.

To locate and evaluate sources of pollution that may be having adverse effects on the condition of the park's marine ecosystems.

To evaluate the ecological importance of fire in determining the structure of the park's vegetation.

VISITOR USE

To make available opportunities for day use recreational activities, such as picnicking, hiking, fishing, shellfishing, swimming, and snorkeling, at levels and in locations where they are compatible with long-term perpetuation of the park's terrestrial and marine resources.

VISITOR SAFETY

To promote public awareness of potential hazards associated with boating, snorkeling, hiking, and other activities and thereby to help ensure a safe, enjoyable park experience for all visitors.

To minimize congestion, promote sound seamanship practices, and ensure public safety at the mooring area in the underwater trail area.

To ensure that visitors are well informed on the poisonous characteristics of the manchioneel tree and that appropriate warnings are provided in public use areas where the species occurs.

INTERPRETATION

To promote public understanding and appreciation of the ecology of the barrier reef and the sensitivity of this fragile ecosystem to the adverse effects of human activities.

To ensure that the techniques used for underwater interpretation are effective, provide the visitor with high quality experiences, and do not adversely affect the barrier reef environment.

To foster awareness of the native terrestrial flora and fauna, as well as other natural resources, of the Virgin Islands, the processes responsible for their continuing evolution, and the influences which may adversely affect them, as well as the progressively increasing importance of the park in conserving these resources as other areas of the Virgin Islands are developed.

To promote public understanding of the prehistoric and historic significance of Buck Island.

OPERATIONS

To improve the efficiency of ranger monitoring of environmental conditions and public use of the park.

B: 106 CONSULTATION

Informal consultation was initiated by letters sent to the Advisory Council on Historic Preservation (ACHP) and the territorial historic preservation officer. These letters outlined the proposed action in order to bring the planning process under the programmatic memorandum of agreement of September 1981. Comments from both agencies have been received and incorporated in this document.

Advisory
Council On
Historic
Preservation

1522 K Street, NW
Washington, DC 20005

Reply to:

730 Simms Street, Room 450
Golden, Colorado 80401

February 3, 1983

Mr. Robert Baker
Regional Director
Southeast Region
National Park Service
75 Spring Street, S.W.
Atlanta, GA 30303

Dear Mr. Baker:

John W. Bright, Assistant Manager, Southeast/Southwest Team, Denver Service Center, provided the Advisory Council's Western Division of Project Review a copy of the draft General Management Plan (GMP) for Buck Island Reef National Monument, Virgin Islands, for informal review purusant to the Programmatic Memorandum of Agreement (PMOA) ratified September 11, 1981. John requested that any suggestions which we may have about the draft GMP be forwarded directly to you for consideration.

After reading the draft GMP, we find that we have only one suggestion to offer and that concerns the revised cultural resources management section appended to Mr. Bright's letter to us. Under "Management Policies", item b., we suggest that evaluation of cultural resources within an area subjected to significant alteration by natural phenomena include consultation with the Virgin Islands Historic Preservation Officer and that his comments regarding site integrity and significance be taken into account by NPS cultural resource specialists.

Thank you for the opportunity to review this material. We look forward to receiving additional planning documents from you or the Denver Service Center team as planning progresses.

Sincerely,

Louis S. Wall
Chief, Western Division
of Project Review

C: ENDANGERED AND THREATENED SPECIES DOCUMENTATION

BIOLOGICAL ASSESSMENT OF ENDANGERED AND THREATENED SPECIES
Buck Island Reef National Monument
St. Croix, Virgin Islands

PURPOSE

This assessment is submitted to the U.S. Fish and Wildlife Service (FWS) and the National Marine Fisheries Service (NMFS) to comply with Section 7 of the 1978 amendments to the Endangered Species Act. The National Park Service (NPS) requested information from the FWS and the NMFS concerning those threatened and endangered species which might be affected by NPS actions in the Virgin Islands. The NPS was advised that there are 8 protected species in the region. Six species -- brown pelican (Pelecanus occidentalis), hawksbill sea turtle (Eretmochelys imbricata), leatherback sea turtle (Dermochelys coriacea), Atlantic ridley sea turtle (Lepidochelys kempii), St. Croix ground lizard (Ameiva polops), and Virgin Islands tree boa (Epicrates monensis grantii) -- are endangered, and two -- green sea turtle (Chelonia mydas mydas) and loggerhead sea turtle (Caretta caretta) -- are threatened. No critical habitat has been designated within Buck Island Reef National Monument. One plant species, stinging bush (Malpighia infestisima), is listed as a category 1 candidate for protection under the Endangered Species Act (Federal Register, December 15, 1980).

DESCRIPTION OF ACTION

The National Park Service proposes to adopt a new general management plan for the overall use, preservation, management, and development of Buck Island Reef National Monument. The plan, in accordance with National Park Service Management Policies, classifies the monument's 176 acres of land and 704 acres of sea into the natural zone with three subzones: natural environment (160 acres land, 160 acres sea), protected natural area (16 acre land encompassing a brown pelican rookery) and outstanding natural subzone (544 acres sea); a map of proposed zoning is attached. The plan's main thrust is to devise methods of accommodating visits to the marine gardens in such ways as to minimize destruction of the very resource that attracts the visitors. It maintains the present number of boats permitted to enter the popular southern lagoon and moor at the East End Underwater Trail; provides, should demand warrant, an additional underwater trail (with appropriate facilities and access) off the island's northern shore; and furnishes swimming, sunbathing, hiking, and picnicking opportunities through improvement of existing visitor facilities and development of minimal new facilities (see the attached General Development map). It also proposes that both visitor activity and natural phenomena be increasingly monitored by park staff and that research be conducted on both natural and man-influenced processes of the reef and island.

Endangered species will continue to be protected on Buck Island. The brown pelican rookery on the island will be protected from visitor use or disturbance. Turtle Beach will continue to be patrolled to control poaching during the turtle nesting season, and no artificial lighting will be permitted on the beach; day time recreational use of Turtle Beach will continue. Efforts will be renewed to eradicate the exotic mongoose through trapping by the NPS with the technical

support of the Bureau of Fish and Wildlife, Department of Conservation and Cultural Affairs, Virgin Islands Government. Eradication of the mongoose is perequisite to the successful reintroduction of the St. Croix ground lizard which was apparently extirpated from Buck Island due to mongoose predation. Renewal of actions to eradicate mongoose will be covered by a separate management plan.

SURVEYS CONDUCTED RELATIVE TO ENDANGERED SPECIES

Data collection included on site inspection by park personnel, review of park files, review of published materials, and consultation with recognized experts and appropriate agencies.

Indiviiduals contacted were Mr. Lovett Williams, biologist for the Florida Game and Fish Commission and leader of the FWS Brown Pelican Recovery Team; Dr. Peter Pritchard, herptologist for the Florida Audubon Society and co-leader of the FWS Sea Turtle Recovery Team; and Dr. Ronald Crombie, herptologist with the Smithsonian Institution. Agency personnel consulted were Mr. Don Palmer and Mr. Augie Validos, endangered species specialists with the FWS; Mr. Andreas Mager, Endangered Species Specialist with the NMFS and Dr. David Nellis, Dr. Richard Philibosian, and Dr. Richard Dewey of the Bureau of Fish and Wildlife, Virgin Islands Territorial Government.

RESULTS OF SURVEYS

Virgin Islands Tree Boa: FWS literature on the Virgin Island tree boa shows no records of the snake on St. Croix or Buck Island. Both Dr. Dewey and Dr. Crombie related that it is unlikely that St. Croix or Buck Island are within the boa's distribution which appears to be limited to the northern Virgin Islands and islands adjacent to Puerto Rico. Based on this information, protection of the species is not considered to be a planning constraint for Buck Island.

Brown Pelican: As mentioned, a brown pelican rookery is located on the northeastern side of Buck Island. The birds nest in the crown of trees and shrubs 2-7 meters above the ground. Censuses of the rookery conducted over the period 1975-79 by the NPS and the Virgin Islands Bureau of Fish and Wildlife indicate that the colony is healthy and ranges between 19 and 91 nests. Access to the colony is difficult, and the nesting birds are rarely, if ever, disturbed by park visitors. On water, brown pelicans are tolerant of human presence, and Mr. Williams stated that it is very unlikely that recreational uses of park waters affect the birds.

Sea Turtles: According to park records leatherback, hawksbill, and green sea turtles nest on Turtle Beach (south side of the west end of Buck Island). Nesting occurs at night from April through September along the same stretch of beach used by visitors during the day (overnight use of Buck Island is prohibited). The nests are usually dug high on the beach at the edge of vegetation above the area of greatest visitor use. The buried eggs are tough with flexible shells which can withstand trampling of the sand above them.

Visitors have not shown a pattern of interest in searching for nests. According to Dr. Pritchard normal, day-time beach recreation, such as occurs on Buck

Island, is compatible with sea turtle nesting and reproductive success. During the nesting season incidences of predation by mongoose on turtle eggs have been reported, though it does not appear to be a serious threat to turtle reproduction. Poaching of turtle eggs is controlled by early morning ranger patrols. There are no artificial lights, existing or proposed, on Buck Island to disorient or disturb turtles, and the few lights on boats anchored off Turtle Beach do not appear to pose a problem because of the low-intensity of the lights and their seaward orientation to the beach.

Aerial surveys conducted in 1979 by the Virgin Islands Bureau of Fish and Wildlife for ranking sea turtle concentrations in the St. Croix area show relatively high numbers of green and hawksbill turtles in grassy sea beds south of Buck Island's eastern lagoon and at the western end of Buck Island Reef and moderate numbers in the waters just north of Buck Island. Loggerhead and ridley turtles are rare in the region and there are no reports for either species in the park. Turtles are occasionally seen swimming within the lagoon in the area of the underwater trail in the early morning and evening hours, and they are more frequently observed in waters along the south shore outside the barrier reef. Dr. Pritchard advised that it is unlikely swimming, snorkeling, scuba diving, boating, and other recreational activities permitted in the monument affect sea turtles. Spear fishing and gill netting, activities potentially hazardous to sea turtles, are not permitted within the park.

St. Croix Ground Lizard: The St. Croix ground lizard is apparently extirpated from Buck Island. Although there is no historical record of reptiles for the island, is probable that ground lizards were there prior to the introduction of the Indian mongoose around 1912. Mongoose predation presumably eliminated the lizard. In the late 1960's the NPS began a mongoose control program which initially was very effective. In 1968 sixteen St. Croix ground lizards were released in the western portion of Buck Island, and by September 1970 the lizard population had increased to 1.5 times its original size. However, that same year the mongoose population subsequently resurged. Renewed predation quickly reduced the ground lizards. The last recorded sighting of a St. Croix ground lizard on the island was in January of 1974, despite continued periodic surveys conducted by NPS and Virgin Island Bureau of Fish and Wildlife personnel. From this experience it is evident that successful reintroduction of the St. Croix ground lizard on Buck Island is dependent on complete elimination of the mongoose.

Stinging Bush: There are no threats to the plant in the park, and it will continue to be protected under standard park management.

CONSIDERATION OF CUMULATIVE EFFECTS ON ENDANGERED AND THREATENED SPECIES

The proposals of the General Management Plan for Buck Island Reef National Monument will continue existing protection afforded to brown pelican and hawksbill leatherback, loggerhead, ridley, and green sea turtles.

Although efforts will be renewed to eradicate mongoose from the island, this proposal will not in itself affect the extirpated status of the St. Croix ground lizard. Should the mongoose eradication program prove successful in the future, then the NPS will develop a management plan and biological assessment for the reintroduction of the St. Croix ground lizard. It is anticipated that a "may effect beneficially" determination would be made at that time, and the NPS would enter formal consultation with the FWS.

DIFFICULTIES ENCOUNTERED IN OBTAINING DATA AND COMPLETING STUDIES

No difficulties were encountered during the inventory, and data obtained are considered adequate to assess impacts on listed species.

CONCLUSIONS OF THE NPS INCLUDING RECOMMENDATIONS AS TO FURTHER STUDIES

The NPS concludes that the proposed general management plan for Buck Island Reef National Monument will have no effect on the current status of endangered and threatened species.

The NPS recommends further study for the reintroduction of the St. Croix ground lizard dependent upon the successful eradication of mongoose on Buck Island. Any action toward reintroduction will be preceeded by consultation with the FWS and preparation of a biological assessment.

United States Department of the Interior
FISH AND WILDLIFE SERVICE
15 NORTH LAURA STREET
JACKSONVILLE, FLORIDA 32202

October 13, 1981

Memorandum

To: Regional Director, National Park Service, Atlanta, Georgia

From: Area Manager, Fish and Wildlife Service, Jacksonville, Florida

Subject: General Management Plan for Buck Island Reef National Monument

This responds to your July 22, 1981 letter regarding the General Management Plan (GMP) for Buck Island Reef National Monument (Log No. 4-1-81-142), St. Croix, Virgin Islands and potential impact on listed endangered species.

After reviewing the information contained in your Biological Assessment and an onsite inspection, we concur with your determination that the proposed GMP should not adversely impact federally listed species.

This does not constitute a Biological Opinion as described in Section 7 of the Endangered Species Act; however, it does fulfill the requirements of the Act and no further action on your part is required. If modifications are made in the project, such as the reintroduction of the St. Croix ground lizard, or if additional facts involving potential impacts on listed species arise, consultation should be reinitiated.

Donald J. Hankla

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southeast Region
9450 Koger Boulevard
St. Petersburg, FL 33702

March 24, 1982 F/SER64/AM
893-3366

Mr. Bob Baker
Regional Director, Southeast Region
U.S. Department of the Interior
National Park Service
75 Spring Street, S.W.
Atlanta, GA 30303

Dear Mr. Baker:

This responds to your March 17, 1982, letter (Ref. N2623-SER-550) transmitting a biological assessment (BA) for the general management plan covering the Buck Island Reef National Monument, St. Croix, Virgin Islands. The BA was provided in accordance with Section 7 requirements of the Endangered Species Act of 1973 (ESA).

We have reviewed the BA and concur that endangered or threatened species for which we are responsible would not be affected by the proposed action.

This concludes consultation responsibilities under Section 7 of the ESA. However, consultation should be reinitiated if new information reveals impacts of the identified activity that may affect listed species or their critical habitat, a new species is listed, the identified activity is subsequently modified or critical habitat determined that may be affected by the proposed activity.

Sincerely yours,

D. R. Ekberg
Chief, Environmental and
Technical Services Division

D: COASTAL ZONE MANAGEMENT PROGRAM CONCURRENCE

OFFICE OF
THE COMMISSIONER

GOVERNMENT OF THE VIRGIN ISLANDS OF THE UNITED STATES

Department of Conservation and Cultural Affairs

P. O. BOX 4340
CHARLOTTE AMALIE, ST. THOMAS, V.I. 00801

January 11, 1982

Mr. Noel Pachta
Park Superintendent
V. I. National Park Service
P. O. Box 7789
St. Thomas, Virgin Islands

Re: General Management Plan for Buck Island National Monument, St. Croix, Virgin Islands

Dear Mr. Pachta:

The above-referenced plan has been reviewed by this office for consistency with the V. I. Coastal Zone Management Program as required. It is found to be consistent with such program and will not create any significant impact on coastal resources.

Sincerely,

Darlan Brin
Commissioner

et

E: PROCLAMATIONS, LEGISLATION, AND REGULATIONS

No. 800

(Approved December 5, 1961)

To Authorize the Governor to Transfer Control of Buck Island and Adjacent Submerged Lands and Waters to the National Park Service for Administration as a National Monument.

WHEREAS Buck Island, situated near the northeast coast of St. Croix Island in the Virgin Islands of the United States, and its adjoining shoals, rocks and underseas coral reef formations constitute one of the finest marine gardens in the Caribbean Sea and these lands, submerged land and their related features are of great scientific interest and educational value; and

WHEREAS said Buck Island and certain of its adjoining shoals, rocks, reefs and waters are proposed for establishment by the President of the United States of America as a national monument under authority contained in the Act of June 8, 1906 (34 Stat. 225; 16 U.S.C. 431); and

WHEREAS the Government of the Virgin Islands is desirous that such establishment of a monument be made, consistent with the preservation and continuance of certain existing fishing, bathing and recreational uses of the area by inhabitants of the Virgin Islands; Now, Therefore,

Be it enacted by the Legislature of the Virgin Islands:

Section 1. For the purpose of facilitating the establishment and administration of Buck Island and certain adjoining shoals, rocks, coral reefs and waters as a national monument under the jurisdiction of the Secretary of the Interior, the Governor of the Virgin Islands is hereby authorized, for and on behalf of the Government of the Virgin Islands, to relinquish to the United States such control as is vested in the Government of the Virgin Islands under the Virgin Islands Organic Act of June 22, 1936, as revised and amended (49 Stat. 1808; 48 U.S.C. 1405c), the property described as follows:

> Beginning at latitude 17° 47′ 58″ N., longitude 64° 38′ 16″ W., thence approximately 10,450 feet to latitude 17° 47′ 30″ N., longitude 64° 36′ 32″ W.; thence approximately 1,500 feet to latitude 17° 47′ 15″ N., longitude 64° 36′ 32″ W.; thence approximately 4,500 feet to latitude 17° 47′ 00″ N., longitude 64° 37′ 16″ W.; thence approximately 8,600 feet to latitude 17° 47′ 35″ N., longitude 64° 38′ 37″ W.; and thence approximately 3,075 feet to latitude 17° 47′ 58″ N., longitude 64° 38′ 16″ W., the place of beginning, embracing an area of approximately 850 acres.

Section 2. The Government of the Virgin Islands hereby expressly declares that it is a condition of its relinquishment of control over Buck Island, and the adjoining shoals, rocks, coral reefs, and waters embraced in the description set forth in section 1 of this Act, and a condition to the continued exercise of control over such property by the National Park Service, or any other department, agency or instrumentality of the United States in which administrative control is vested pursuant to the provisions of this Act, that such department, agency or instrumentality shall not adopt or attempt to enforce any rule, regulation or requirement limiting, restricting or reducing the existing fishing (including the landing of boats and the laying of fishpots outside of the marine garden), bathing or recreational privileges by inhabitants of the Virgin Islands, and shall not charge any fees for admission to the area. The faithful performance of the foregoing conditions shall be deemed to be a condition subsequent to the control by any such department, agency or instrumentality over the aforesaid area.

Approved December 5, 1961.

APPENDIX A: PROCLAMATIONS, LEGISLATION AND REGULATIONS

PROCLAMATION

BUCK ISLAND REEF NATIONAL MONUMENT

No. 3443

January 4, 1962, 27 F.R. 31

ESTABLISHING THE BUCK ISLAND REEF NATIONAL MONUMENT IN THE VIRGIN ISLANDS OF THE UNITED STATES

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA
A PROCLAMATION

WHEREAS Buck Island, situated off the northeast coast of St. Croix Island in the Virgin Islands of the United States, was included in the public, government, or crown lands ceded to the United States by Denmark under the convention entered into August 4, 1916, and proclaimed by the President January 25, 1917 (39 Stat. 1706); and

WHEREAS all property thus acquired by the United States from Denmark, not reserved by the United States for public purposes prior to June 22, 1937, was placed under the control of the Government of the Virgin Islands by the act of June 22, 1936, 49 Stat. 1807 (48 U.S.C. 1405–1405c),[1] with the legal title remaining in the United States; and

WHEREAS Buck Island was not reserved by the United States for public purposes prior to June 22, 1937, but has been owned by the United States continuously since the convention with Denmark in 1916; and

WHEREAS Buck Island and its adjoining shoals, rocks, and undersea coral reef formations possess one of the finest marine gardens in the Caribbean Sea; and

WHEREAS these lands and their related features are of great scientific interest and educational value to students of the sea and to the public; and

WHEREAS this unique natural area and the rare marine life which are dependent upon it are subject to constant threat of commercial exploitation and destruction; and

WHEREAS the Advisory Board on National Parks, Historic Sites, Buildings and Monuments, established pursuant to the act of August 21, 1935, 49 Stat. 666 (16 U.S.C. 463),[2] impressed by the caliber and scientific importance of the coral reefs of Buck Island, has urged their prompt protection to prevent further despoliation; and

WHEREAS the Governor of the Virgin Islands, under the authority vested in him by the legislative assembly of the Virgin Islands by an act approved December 5, 1961, has relinquished to the United States, for the purposes of facilitating the establishment and administration of a national monument for the protection of the above-mentioned areas and objects of historic and scientific interest, such control as is vested in the Government of the Virgin Islands by the said act of Congress dated June 22, 1936, over the area hereinafter described; subject, however, to the condition that the United States, including any agency or instrumentality thereof, shall not adopt or attempt to enforce any rule, regulation or requirement limiting, restricting or reducing the existing fishing (including the landing of boats and the laying of fishpots outside of the marine garden), bathing or recreational privileges by inhabitants of the Virgin Islands, and shall not charge any fees for admission to the area.

WHEREAS it is in the public interest to preserve this area of outstanding scientific, aesthetic, and educational importance for the benefit and enjoyment of the people:

1. 48 U.S.C.A. § 1405 et seq.
2. 16 U.S.C.A. § 463.

NOW, THEREFORE, I, JOHN F. KENNEDY, President of the United States of America, under and by virtue of the authority vested in me by section 2 of the act of June 8, 1906, 34 Stat. 225 (16 U.S.C. 431),[3] do proclaim that, subject to valid existing rights, there is hereby reserved and set apart, as the Buck Island Reef National Monument, the area embraced within lines drawn between the coordinates of latitude and longitude recited as follows:

Beginning at latitude 17°47'58" N., longitude 64°38'16" W.; thence approximately 10,450 feet to latitude 17°47'30" N., longitude 64°36'32" W.; thence approximately 1,500 feet to latitude 17°47'15" N., longitude 64°36'32" W.; thence approximately 4,500 feet to latitude 17°47'00" N., longitude 64°37'16" W.; thence approximately 8,600 feet to latitude 17°47'35" N., longitude 64°38'37" W.; and thence approximately 3,075 feet to latitude 17°47'58" N., longitude 64°38'16" W., the place of beginning, embracing an area of approximately 850 acres.

WARNING is expressly given to all unauthorized persons not to appropriate, injure, destroy, deface, or remove any feature of this monument and not to locate or settle upon any of the lands reserved for the monument by this proclamation.

The Secretary of the Interior shall have the supervision, management, and control of this monument as provided in the act of Congress entitled "An act to establish a National Park Service, and for other purposes," approved August 25, 1916, 39 Stat. 535 (16 U.S.C. 1–3),[4] and all acts supplementary thereto and amendatory thereof: *Provided*, that neither the Department of the Interior, nor any other agency or instrumentality of the United States, shall adopt or attempt to enforce any rule, regulation or requirement limiting, restricting or reducing the existing fishing (including the landing of boats and the laying of fishpots outside of the marine garden), bathing or recreational privileges by inhabitants of the Virgin Islands, or charge any fees for admission to the area.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the Seal of the United States of America to be affixed.

DONE at the City of Washington this twenty-eighth day of December in the year of our Lord nineteen hundred and sixty-one, and [SEAL] of the Independence of the United States of America the one hundred and eighty-sixth.

JOHN F. KENNEDY

By the President:
DEAN RUSK,
Secretary of State.

3. 16 U.S.C.A. § 431.
4. 16 U.S.C.A. § 1 et seq.

PROCLAMATION 4346

Reserving Certain Lands Adjacent to and Enlarging the Boundaries of the Buck Island Reef National Monument in the Virgin Islands of the United States

By the President of the United States of America

A Proclamation

The Buck Island Reef National Monument, situated off the northeast coast of Saint Croix Island in the Virgin Islands of the United States, was established by Proclamation No. 3443 of December 28, 1961 (76 Stat. 1441). It now has been determined that approximately thirty acres of submerged land should be added to the monument site in order to insure the proper care and management of the shoals, rocks, undersea coral reef formations and other objects of scientific and historical interest pertaining to this National Monument.

These thirty acres of submerged lands are presently owned in fee by the United States. They will be conveyed to the Government of the Virgin Islands on February 3, 1975, pursuant to Section 1(a) of Public Law 93-435 (88 Stat. 1210), unless the President, under Section 1(b)(vii) of that Act, designates otherwise.

Under Section 2 of the Act of June 8, 1906, 34 Stat. 225 (16 U.S.C. 431), the President is authorized to declare by public Proclamation objects of historic or scientific interest that are situated upon the lands owned or controlled by the Government of the United States to be national monuments, and may reserve as a part thereof parcels of land, the limits of which in all cases shall be confined to the smallest area compatible with the proper care and management of the objects to be protected. The aforementioned thirty acres of submerged lands are contiguous to the site of the Buck Island Reef National Monument, constitute a part of the ecological community of the Buck Island Reef, and will not enlarge the monument boundaries beyond the smallest area compatible with its proper care and management.

NOW, THEREFORE, I, GERALD R. FORD, President of the United States of America, by virtue of the authority vested in me by Section 1(b)(vii) of Public Law 93-435 (88 Stat. 1210), do hereby proclaim that the lands hereinafter described are excepted from the transfer to the Government of the Virgin Islands under Section 1(a) of Public Law 93-435; and, by virtue of the authority vested in me by Section 2 of the Act of June 8, 1906, 34 Stat. 225 (16 U.S.C. 431),

do hereby proclaim that, subject to valid existing rights, the lands hereinafter described are hereby added to and made a part of the Buck Island Reef National Monument, and Proclamation No. 3443 of December 28, 1961, establishing the Buck Island Reef National Monument is amended accordingly.

Beginning at latitude 17°47′30″ N, longitude 64°36′32″ W; thence approximately 1000 feet to latitude 17°47′27″ N, longitude 64°36′22″ W; thence approximately 900 feet to latitude 17°47′18″ N, longitude 64°36′22″ W; thence approximately 1000 feet to latitude 17°47′15″ N, longitude 64°36′22″ W; thence approximately 1500 feet to latitude 17°47′30″ N, longitude 64°36′32″ W, the place of beginning, embracing an area of approximately 30 acres.

IN WITNESS WHEREOF, I have hereunto set my hand this first day of February, in the year of our Lord nineteen hundred seventy-five, and of the Independence of the United States of America the one hundred and ninety-ninth.

Gerald R. Ford

[FR Doc.75-3356 Filed 2-3-75;10:11 am]

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

Proclamation 4359. March 28, 1975

AMENDING PROCLAMATION NO. 4346 RELATING TO THE ENLARGEMENT OF THE BUCK ISLAND REEF NATIONAL MONUMENT

By the President of the United States of America a Proclamation

The boundaries of the Buck Island Reef National Monument were enlarged by Proclamation No. 4346 of February 1, 1975. The description of those lands contained a typographical error.

NOW, THEREFORE, I, GERALD R. FORD, President of the United States of America, by virtue of the authority vested in me by Section 1(b)(vii) of Public Law 93-435 (88 Stat. 1210), and by virtue of the authority vested in me by Section 2 of the Act of June 8, 1906, 34 Stat. 225 (16 U.S.C. 431), and in order to correct a typographical error, do hereby amend the description of the lands described in Proclamation No. 4346 to read as follows:

> Beginning at latitude 17°47'30" N, longitude 64° 36' 32" W; thence approximately 1000 feet to latitude 17° 47' 27" N, longtitude 64° 36' 22" W; thence approximately 900 feet to latitude 17° 47' 18" N, longitude 64° 36' 22" W; thence approximately 1000 feet to latitude 17° 47' 15" N, longitude 64° 36' 32" W; thence approximately 1500 feet to latitude 17° 47' 30" N, longitude 64° 36' 32" W, the place of beginning, embracing an area of approximately 30 acres.

IN WITNESS WHEREOF, I have hereunto set my hand this twenty-eighth day of March, in the year of our Lord nineteen hundred seventy-five, and of the Independence of the United States of America the one hundred ninety-ninth.

GERALD R. FORD

[Filed with the Office of the Federal Register, 5:08 p.m., March 28, 1975]

Title 36—Parks, Forests, and Public Property

Chapter I—National Park Service, Dept. Interior

§ 7.73 Buck Island Reef National Monument.

(a) *Submerged features.* (1) No person shall cut, carve, injure, mutilate, remove, displace or break off any underwater growth or formation. Nor shall any person dig in the bottom, or in any other way injure or impair the natural beauty of the underwater scene. No rope, wire or other contrivance whether such contrivance is temporary or permanent in character or use shall be attached to any coral, rock or other underwater formation.

(2) No person shall destroy, mark, deface, displace, remove or tamper with any underwater sign, notice, float, placard or underwater device.

(b) *Marine operations.* No dredging, excavating or filling operations of any kind are permitted, and no equipment, structures, byproducts or excavated materials associated with such operations may be deposited in or on the waters or ashore within the boundaries of the Monument.

(c) *Wrecks.* No person shall destroy molest, remove, deface, displace or tamper with wrecked or abandoned waterborne craft of any type or condition, or any cargo pertaining thereto, unless permitted in writing by an authorized official of the National Park Service.

(d) *Boats.* (1) No watercraft shall be operated in such a manner, nor shall anchors or any other mooring device be cast or dragged or placed, so as to strike or otherwise cause damage to any underwater features.

(2) Anchoring or maneuvering watercraft within the waters that contain underwater marked swimming trails and interpretive signs is prohibited.

(3) All watercraft, carrying passengers for hire, shall comply with applicable regulations and laws of the U.S. Coast Guard and Territory of the Virgin Islands.

(e) *Fishing.* (1) Taking of fishes or any other marine life in any way except with rod or line, the rod or line being held in the hand, is prohibited: *Provided,* That fish may be taken by pots or traps of conventional Virgin Islands design and not larger than five feet at the greatest dimension, and bait fish may be taken by nets of no greater overall length than 20 feet and of mesh not larger than 1 inch stretched: *Provided further,* That paragraphs (e) (3), (4), and (5) of this section shall apply.

(2) The use or possession of any type of spearfishing equipment within the boundaries of the Monument is prohibited.

(3) The species of crustaceans known as Florida Spiny Lobster (Panulirus argus) may be taken by hand or handheld hook or snare. No person shall take female lobsters with eggs; or take more than two lobsters per person per day; or have in possession more than two days' limit: *Provided,* That paragraph (e)(5) of this section shall apply.

(4) Species of mollusks commonly known as whelks and conchs may be taken by hand. No person shall take more than two conchs or one gallon of whelks, or both, per day, or have in possession more than two days' limit; *Provided,* That paragraph (e) (5) of this section shall apply.

(5) All known means of taking fish, crustaceans, mollusks, turtles, or other marine life are prohibited between the outer fringes of the barrier reef and the shore line of Buck Island eastward of the recognizable extremities of the sand beach on the north and south sides of the island.

[29 FR 17091, Dec. 15, 1964]

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As the Nation's principal conservation agency, the Department of the Interior has basic responsibilities to protect and conserve our land and water, energy and minerals, fish and wildlife, parks and recreation areas, and to ensure the wise use of all these resources. The Department also has major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

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