

interpretive prospectus

# PADRE ISLAND

NATIONAL SEASHORE/TEXAS

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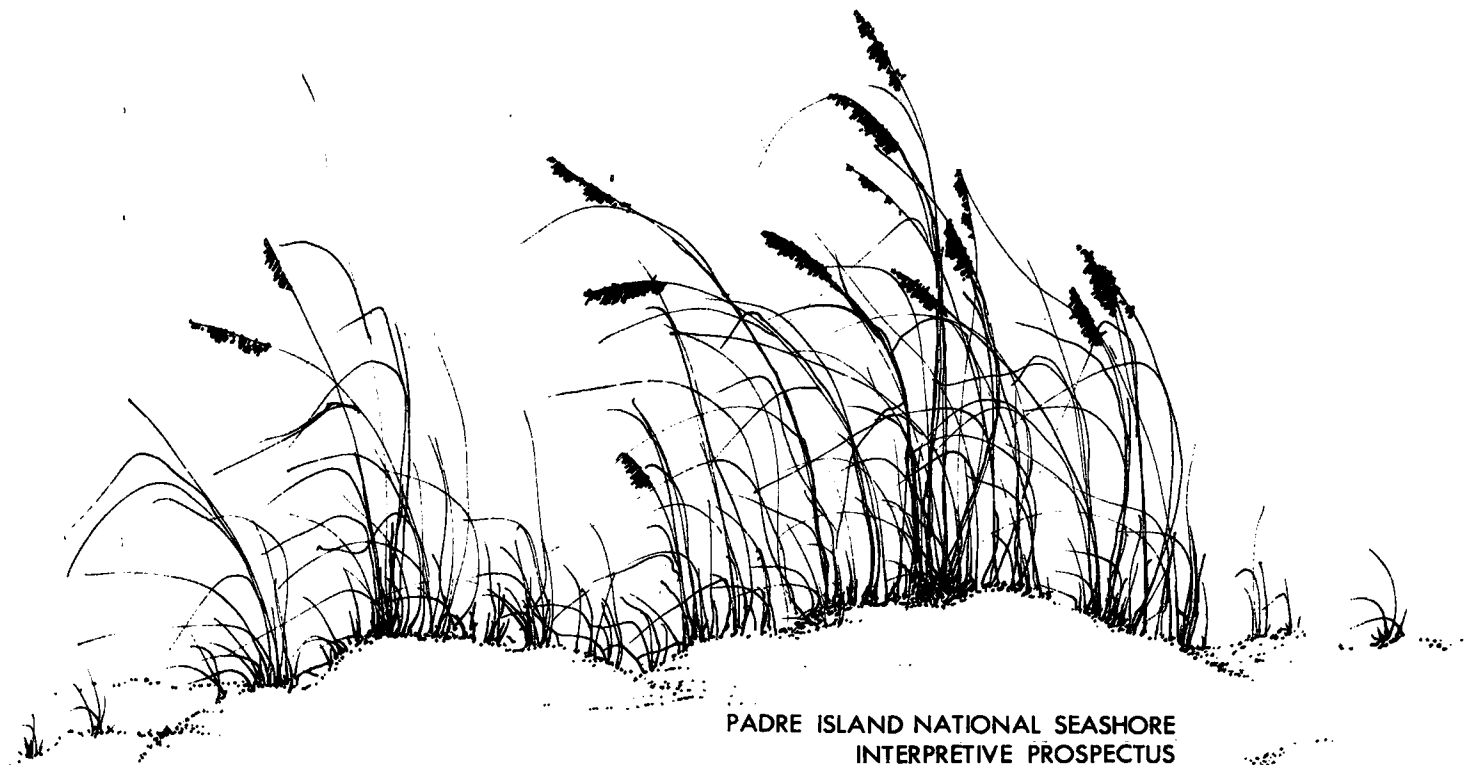
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PADRE ISLAND NATIONAL SEASHORE  
INTERPRETIVE PROSPECTUS

## **C O N T E N T S**

<b>FOREWORD / 1</b>
<b>INTERPRETIVE THEMES / 2</b>
<b>INTERPRETIVE OBJECTIVES / 2</b>
<b>TODAY – EXISTING PROGRAMS / 3</b>
<b>TOMORROW – INTERPRETIVE PROPOSALS / 5</b>
<b>LIST OF PRODUCTS / 15</b>
<b>PLANNING TEAM / 17</b>

## FOREWORD

Here is the ocean, in all weathers and at all tides: now gray and lonely, veiled in winter rain; now sun bright, brilliant blue, and marbled with dissolving foam. Wind and water make the beach an ever-changing, restless army of sand particles. Birds, too, are constantly on the move.

Man, like the wind and water, has brought change to Padre Island. Now there are roads and tracks. A few structures can be sighted. There are signs of oil and gas exploration.

Change is readily apparent at Padre Island. In many cases it is rapid and striking.

## INTERPRETIVE THEMES

The interpretive themes at Padre Island National Seashore are:

*The Gulf of Mexico* — its tides and currents, its effect on the national seashore. What is man's role, and what toll is his exploitation of the gulf resource taking?

*The island* — the role of a barrier island, the winds, the storms, the wildlife, and the vegetation. What happens when man attempts to modify this natural place?

*The wildlife* — why have the populations of birds, mammals, and fish changed? What animals breed here? What animals migrate, and what is known of their migrations?

*The history* — Indian, Spanish, and American (ranching, oil and gas, and recreation).

*The future* — what next? What will happen to Padre Island?

## INTERPRETIVE OBJECTIVES

To stress the historical interaction of man and the natural environment of Padre Island. Visitors should begin to consider their own environment and how they relate to it. What are the effects in both situations?

To help visitors enjoy the recreational resource of Padre Island National Seashore for the natural area it is, emphasizing activity-oriented exploration that does not seriously impact the resource.

## TODAY – EXISTING PROGRAMS

### PRESENT INTERPRETIVE PROGRAMS

Interpretive facilities and programs at Padre Island National Seashore are minimal. Evening programs are conducted at Malaquite Beach on top of a covered water reservoir designed as a public viewing deck. This is generally an unsatisfactory setup for evening programs because the deck is too small to handle summer crowds, and the wind is a problem. One nature trail, summer nature walks, craft classes, demonstrations, and an information desk in the Malaquite Beach visitor facility complete existing interpretation.

A series of mimeographed handouts and a trail leaflet for the nature trail are the only publications generally available.

Emphasis is placed on an environmental education program for primary schools.

### FACTORS AFFECTING INTERPRETATION

Certain factors must be considered in developing an interpretive program for Padre Island.

*Heat* in summer is a problem; shade structures are *required* for exhibits and visitors.

*Wind* off the ocean averages 12 to 18 miles per hour most of the year. Padre Island experiences hurricanes with accompanying flood damage about once every 3 to 4 years.

*Sounds* of the surf are loud enough to drown out any program presentation on the beach. For this reason, beach programs are restricted to very small groups.

*Mosquitoes* by the thousands are found behind the foredunes during the summer. This makes walking and stopping along trails virtually impossible unless there is a breeze. The situation continues until a cold snap or freeze kills the mosquitoes. Viewing platforms that would raise visitors above the dunes would lessen the problem with mosquitoes.

*Corrosion* is severe; Padre Island is located in one of the most corrosive environments in the world. Stainless steel, bronze, plastics, and certain woods such as untreated cedar, which are corrosion-resistant building materials, must be used here.

*Humidity* is high, necessitating humidity control for most exhibit specimens or collections. Condensations of salt spray or moisture could affect other exposed exhibits.

## **ACCESS**

The north boundary of the national seashore is 26 miles from downtown Corpus Christi. A high-standard park road ends at the Malaquite Beach development 5 miles south of this northern boundary. Except for a 5-mile stretch of driveable beach south of Malaquite Beach, vehicular access is by four-wheel-drive vehicles only. The recent master plan proposes construction of a low-standard shell road from Malaquite Beach to Yarborough Pass. South of Yarborough Pass, access will be by four-wheel-drive vehicles only; or, in the future, via a beach bus transportation system, yet to be devised. The master plan also proposes an information/interpretive station and transportation terminal south of the Mansfield Channel, with a ferry system to transport passengers and beach vehicles across the channel, where the proposed transportation system will be available. No road is proposed north from the channel.

## **VISITORS**

There are two distinct groups of visitors: local people (principally beachcombers, fishermen, and users of four-wheel-drive vehicles) and nonlocal visitors. There were 937,362 visitors in 1973; of these, 132,698 were nonlocal campers. Local visitors seldom stay in the park overnight. In 1974 visitation dropped slightly, to 796,325. Local visitation accounts for about 85 percent of the annual travel figures. When present advertising campaigns by local business interests become more effective in the Midwest and North, nonlocal use will increase.

Local visitors are interested primarily in recreation. Their specific needs are to become familiar with regulations affecting the use of the seashore and to expand their horizons through the introduction of new facets of time-worn activities and new types of recreational outlooks. Nonlocal visitors at Padre Island need orientation — what to see and do, and how to do it safely; interpretation — of the natural and historic resources; and recreation — the same activities as local visitors.



## **TOMORROW — INTERPRETIVE PROPOSALS**

### **OVERVIEW**

To acquaint visitors with three major cultural phases of Padre Island history:

Indian — large sectional Indian exhibit

Spanish — large sectional Spanish exhibit

American — Novillo site and accompanying wayside exhibits, large sectional American exhibit

To encourage visitors to learn more about the history of Padre Island:

General history sectional exhibit

Handbook on the history of the seashore — to be made available (see publications section)

To give visitors an understanding of the dynamics and ecological relationships of a barrier island:

Beach dune dynamics — the elevated boardwalk complex in the dunes and the associated wayside exhibits

Ecology and natural history — aquariums, seashell exhibit, changing exhibit, sound listening lounge, pond and grassland trails

Weather — weather exhibit, seasonal exhibit at bird observation tower

To encourage recreational use of the national seashore resources without impairment of the environment:

Things to do — kaleidoscope exhibit in the lobby of the visitor center

Recreational interpretive facilities — bicycle trail, road pulloffs

Recreational interpretation — demonstrations on recreational pursuits and interpretive evening programs

## **NORTH ENTRANCE**

From the north entrance of the park, it is 1½ miles to the first beach access. No interpretive development is proposed between these two points. A manned entrance station, serving as a checkpoint with no interpretation other than the park minifolder, is proposed at the beach access.

### **Radio Message Repeater (Proposed)**

Visitors will need current safety messages about beach conditions, such as whether or not Portuguese man-of-war jellyfish are currently in the area, and a few park regulations, such as the illegality of using metal detectors. This information will be given by a proposed radio message repeater (short-range) installed in the parking area just beyond the ranger station. Even though specific questions will be answered by the ranger at the entrance station, the radio message will provide further pertinent daily information and will function even when the station is unmanned.

### **Grasslands Nature Trail (Existing)**

The existing Grasslands Nature Trail is used as part of the environmental education program and is designated as a National Environmental Study Area (NESA) trail. The existing ¾-mile loop trail is basically a good route and should not be changed, in spite of a seasonal mosquito problem. The stake-and-leaflet interpretation presently used should be retained. One wayside exhibit is proposed that would introduce the fragile dune grasslands, identify the types and functions of dune grasses, and explain the process of continual change. The recovery of the grasses since the removal of cattle also should be mentioned. The exhibit should be low in profile so as not to intrude upon the natural scene. Vandalism may be a problem here, and this factor should be considered in the design of the waysides. Near the beginning of the trail a sign should caution visitors to watch for rattlesnakes and to leave them alone.

### **Fresh Water Pond Trail (Proposed)**

A trail should be constructed around a pond (the specific pond to be selected by the park staff) in the vicinity of the Malaquite Beach development. The best concentration of ephemeral ponds is in this area. The unusual environment of these ponds, including plant and animal life below and above the water surface, will be introduced by a wayside exhibit at the beginning of the trail. This exhibit will essentially be a sensitizing device to help visitors see, feel, and hear the pond environment. No other interpretive media will be used on the trail.

The trail should also be used for guided walks, in which the interpreter will have the opportunity to use examples (such as water birds present during particular seasons) as catalysts for understanding this interesting resource. Due to changing pond perimeters and water levels, a raised, wooden, covered walkway would be a desirable method of routing visitors and protecting the environment.

## NOVILLO

This line camp is the best remaining example of the cattle ranching operation, the primary historical land utilization on Padre Island from 1800 to 1971. Located immediately adjacent to the line camp, and consequently a visual and audio distraction, is a Chevron Oil Company separation plant. It is conceivable that in the future this installation will be terminated due to gradually diminishing production.

There are three interpretive themes here: first, the role of the line camp and cattle ranching as it happened on Padre Island; second, a comparison between the different types of land use by man (ranching and oil and gas production) and their impacts on the environment; third, the role of recreation in modern man's scheme of things, emphasizing the reason that the Park Service is administering the seashore.

Historian James Shiere suggests an interpretive approach in the Padre Island Historic Resource Study:

Cattle ranching documents historical interaction between man and his environment on the island. The camp illustrates adaptation of an economic form to the island's environment. Examples of this adaptation are:

- a. The use of materials at hand, driftwood from the beach, in structure construction. The structures themselves document adaptation, e.g., the thick bunkhouse doors necessitated by the high wind potential, the bunkhouses raised above the sand, and the absence of hardware.
- b. The shape and length of the island determined the number of "hands" which in turn determined the number of bunkhouses at the line camp. At Novillo one thus finds two bunkhouses — one for the white patron and the other for the 12 or 13 Mexican vaqueros.
- c. The island topography influenced the drive or roundup. Because cowboys could in a single day drive the cattle 15 miles up the island and get them penned before dark, line camps were located 15 miles apart. Dunn adapted the technique of the cattle roundup to the island's conditions.

Interpretive development at Novillo should be simple. A small parking area, a short trail from the existing Chevron Oil Company access road, and several wayside exhibits conveying the above concepts are all that are needed.

A historic structures report is necessary for the restoration and stabilization of the cattle camp. The proposed exhibits should be located outside the historic compound.

Portions of the oil company access road are closed to the public. Unless arrangements to open necessary segments of the road to park visitors can be made, the Park Service will have to build additional roads.

## LAGUNA MADRE ACCESS

Public access to the Laguna Madre is proposed near the Permian tank and the dock located west of the present ranger station. Most of the users of this area will be boaters, swimmers, or fishermen.

A sunshaded exhibit near the proposed pier and launch ramp will describe the recreational opportunities of the spoil banks and how to safely enjoy them. Another interpretive idea that should be introduced is the story of the spoil banks as bird sanctuaries and the need to protect these sanctuaries from man and natural hazards. One of the recognized problems of exhibits such as these is that casual visitors rarely take the time to read them and in many cases will not even walk a short distance to look at them. Therefore, the exhibits must be eye-catching and present the material in such a manner to permit quick grasping of the concepts.

Near the proposed development, the dunes are changing rapidly. A wayside exhibit near the parking lot might illustrate how these dunes, which are moving and therefore different from beach dunes, are formed and how rapidly they change. Photos could illustrate the change that has occurred over a period of several months. This wayside exhibit will invite visitors to explore the dunes in this area, although blowing sand and heat might prevent much investigation. It will also explain why it is not advisable to walk on other more fragile dunes. This wayside exhibit could point out how, with the changing vegetation and ecological conditions of the area, only a few live oaks of a once large forested area now exist.

## MALAUQUITE INTERPRETIVE FACILITY

At the present time there is no area or visitor facility near Malaquite, the only major public development in the seashore, that can be identified with the National Park Service. The original development concept plan for Malaquite Beach called for considerably more development than exists today. The recent master plan calls for a review of the development concept plan that could result in a reduction in scope of development. Nonetheless, there is a need for a *modest* interpretive facility that is an integral part of the existing building group. The suggested location would be adjacent to the water/viewing tower, which would allow the continued use of that structure. The interpretive facility would be connected to the existing development, probably by a westward extension of the existing concrete walkway. Several functions would be served by this facility: It would be a visitor center, exhibit area, naturalist and environmental education center, and a ranger's (district) office.

### **Information Area**

The entrance and inside lobby would have a manned information desk where visitors could learn what to see and do. A kaleidoscope device that would continuously flip through a series of activities that visitors can enjoy at Padre Island National Seashore might be used to encourage visitors to ask questions and motivate them to visit the areas. Enough photos for two 1-minute sequences would be adequate.

Adjacent to the desk should be a changeable exhibit indicating current tidal, weather, and fishing information. A colorful card chart is the best solution for something that must frequently be changed.

A cooperating association publications sales area with a defined browsing space should also be included.

### **Exhibit Space**

A curtain wall in the lobby would divide the lobby from the exhibit space. The "curtain" would be a piece of sculpture consisting of a variety of objects, including the shells, driftwood, and flotsam and jetsam that visitors might find washed up on the beach. Visitors should be able to touch the sculpture in their attempts to determine what the various objects are. The sculpture could be a way of showing the effects of currents and drifts that exist in the Gulf of Mexico. A single label might ask: How long can we afford to use the Gulf as a trash-dumping ground? If we do, what are the implications?

The proposed historical exhibit area would be divided into three subject zones: Indian, Spanish, and American. The overall exhibit might be in a circular or semicircular shape, with the dividers between the zones supporting materials that put the subject in context. The floor or base of the exhibit might be sand.

The Karankawa Indians, who have long disappeared, should be portrayed in a realistic manner, with emphasis on the harshness of the environment they encountered in their daily functions. Artifacts, graphic illustrations, and maps of travel could be used.

The Spanish period features noblemen, explorers, and settlers in a changing relationship between Spain and the New World; Spanish galleons, storm-threatened routes, and life aboard ship; and a new life in the Americas. Artifacts, maps, photographs, and other documentation could be used to advantage here, also.

During the American years, Padre Island has been an avenue of traffic and commerce, with wagons hauling goods, military scouting during 1846 and 1847, cattle operations, and oil and gas exploration and extraction. Maps and pictures of the Dunn cattle operation, along with ranching implements, would be illustrative of one colorful period of history.

Suitable space should be provided for aquaria. Marine life from the gulf side of the island, the Laguna Madre, and the 7½-fathom reef could be exhibited. A variety of changeable labels should be made up to name and describe typical specimens to be displayed.

One of the main visitor activities at Padre Island is the collecting of seashells and flotsam and jetsam. Therefore, a seashell exhibit in the form of a visitor identification game is desirable. It might be devised in such a way that it could be two games, one for adults and one for children, utilizing one set of shells. The children's game should be placed within their reach. Habitats might also be worked into the design of the game.

Padre Island is constantly changing; the seas and the wind are forever bringing new things to the shores. Provision should be made for the park to have a changing exhibit space for these new "finds."

Visitors are amazed to learn that there are so many sounds in the sea. A lounge of up to six listening chairs should be positioned in a secluded portion of the visitor building. As there may be problems bringing in live sounds from the sea, a series of taped marine sounds would be desirable. The tape could identify the sounds or leave some unidentified, letting visitors guess what made them, and provide answers later. Graphic illustrations of the forms producing the sounds could be shown on the walls or panels surrounding this area.

#### **All-Purpose Rooms**

Space should be provided in this facility for two all-purpose rooms. One would be regularly used for evening programs and presentations during the day. In between times, it could be used by large groups for special programs or activities, if feasible. The room should be able to handle 150 to 180 people and should have a setup for both motion picture and slide presentations.

The second and smaller multipurpose room would be used for environmental education workshops, craft classes, study projects, and other programs. The room should be equipped to provide audiovisual presentations to groups of up to 40 people.

#### **Outdoor Exhibit Complex**

Interpretation of the dunes at Malaquite will be accomplished by a wayside exhibit facility that is proposed as an adjunct to the visitor center. The intended purpose of this outdoor exhibit series will be to interpret the role and dynamics of the Gulf of Mexico and Padre Island, especially the dunes, against a framework of ecology.

From the visitor center a low boardwalk, or other alternative, should lead directly to the interpretive wayside exhibits near the beach. The elevated boardwalk and kiosks or waysides must be designed carefully. Entrance to the unit should be constructed in a natural low area between the foredunes. It must be at a 90-degree angle to the beach, with visitors entering in a northerly direction. An entrance in any other direction would act as a funnel for the sand and create a sand trap. The walkway leading through the main dune area would be another potential sand trap. Its design should not top the dune ridge but should be some feet below it, even though the best view could be had from the top. Careful engineering should be undertaken with the advice of coastal geological engineers. Dr. C. Mathewson of the Texas A. and M. University Geology Department could be a source for this information.

The first kiosk exhibit will explain the effect of waves and water currents on the island. As the elevated walk leads near the top of the dunes, small exhibits will further develop this theme. At the last kiosk, from which another walk will return to the public-use area, an exhibit will explain the ecology and dynamics of this barrier island. A good view of the area should be possible from this point.

## **THE DUNES ECOLOGY**

The fragile dunes are fascinating places to explore. Their survival is critical to the survival of the island.

The shell road from Malaquite Beach ends at Yarborough Pass. From there, trails will provide access to the beach across the dunes. To protect the dune line and its integrity, it will be necessary to construct some means of beach access to Little Shell Beach. Due to the uncertainty of the routing of this shell road and the number of pulloffs and parking areas involved, no specific proposals can be ascertained at this time. However, it is thought that concepts mentioned in the previous section on elevated walkways could be put to use here. Natural low areas between dunes would have to be selected for 180-degree (half circle) walkways perpendicular to the beach face. Each walkway could have a theme to develop — human impact on and stabilization of the dunes, varieties of plants found on the dunes, and others.

## **YARBOROUGH PASS**

The auto shell road will end at Yarborough Pass, where certain trailhead facilities and necessary services are indicated by the master plan: Laguna Madre access, information and interpretation, concessioner services, and the unresolved beach transportation system and its route. A miniprospectus should be developed when the beach transportation situation is resolved.

## **THE BIRDS**

Of primary interpretive importance are the birds that live on the ephemeral ponds from late fall to early April. A viewing tower that would allow visitors to observe birds more easily, from a level above the mosquitoes, is proposed. The park staff should determine the best location and height for this tower. It should be high enough that visitors can see across the island to Laguna Madre and its intercoastal shipping activities. If this first tower proves to be popular, consideration should be given to the construction of additional structures. Several problems, including vandalism and exposure to the elements, should be considered in the design of the tower.

Many visitors will bring their own bird identification books and binoculars. For those who do not, a series of wayside exhibits should be provided illustrating the variety of birds that may be observed. These exhibits should be flexible to allow for changing seasons and changing varieties of birds. The birds should be shown in natural environments with brief copy conveying the importance of this environment to their survival.

## **MANSFIELD CHANNEL**

As the needs of Mansfield Channel develop and are defined, a miniprospectus will be needed for this development.

## **PERSONAL SERVICES**

Because change occurs so rapidly on Padre Island, particularly on the beach and dunes, elements of flexibility and experimentation should be incorporated in personal services wherever possible. This holds true not only for changing natural conditions but changing visitor needs and desires as well. Emphasis should be placed on informal involvement and participatory programs in a continuing search for the best programs to meet changing recreational needs.

Guided walks designed to illustrate beach dynamics should not follow a trail but simply be strolls along the beach. Sketching walks, beachcombing, surfing, and surf-fishing demonstrations offer opportunities to discuss marine life and the implications of consistent polluting of our ocean resources.

A bicycle trail should be developed that leads from the beach along the beach access road, then parallel to the main road, and into the campground. It would serve as a recreational facility for visitors and could also be used for guided bike tours. This trail should connect with the one to Yarrowborough Pass.

Photographic and pond observation pulloffs should be incorporated along present and proposed roadways. Presently there are no places where people can stop, get out, and observe or take pictures.



## **PUBLICATIONS**

Publications should play a strong interpretive role at Padre Island. At the present time there are virtually no publications available except the minifolder (also available in Spanish), the Grasslands Nature Trail leaflet, and a series of mimeographed checklists.

A handbook is needed to help visitors understand the relationships between the island, the gulf, the laguna, the plants, and the animals. The handbook would treat the park as a complex of ecosystems, using key plants and animals to illustrate the functioning of these systems. It would not be a guide, as such, but rather a beginning toward understanding environmental relationships.

Peterson's field guides and others applicable to the area should be sold. In addition, there should be a series of guides specifically for Padre Island, including a general guide to the seashore. Subjects such as coastal geology, biology, meteorology, and history should be covered. The basis for the history guide is available in the Padre Island Historic Resource Study. The history guide should elaborate upon the exhibit materials in the interpretive facility.

A series of monographs on technical subjects, as well as topographic maps and navigational charts, should also be made available. Much of the research for such projects would be available to the park from local universities.

The park has a cooperating association to handle publication sales. Its major sales outlet will be at the Malaquite visitor center. Space should be provided at the information desk for display of sales items and related functions. The major sales stock storage point will be at park headquarters rather than Malaquite, because security and environmental protection are better at headquarters.

## **COLLECTIONS**

Natural history collections should be kept to a minimum. Cooperation should be sought between the staffs of Texas A. and I. University at Corpus Christi, the Corpus Christi Museum, and Padre Island National Seashore. Duplication of effort is a very strong possibility because of the extensive and varied research occurring in the Corpus Christi area. The park staff should keep in mind that other institutions in the area have the personnel and facilities that make it possible for them to have more extensive collections than the park possibly can. The staff should collect only enough to keep themselves properly informed.

Collections should be an interpreter's tool, not a main activity requiring massive collecting or complicated care. Interpreters have little time to work with collections of a perishable nature, and this should be kept in mind when adding to the collection. A nucleus of perishable specimens is already present in the park herbarium.

History collections, stored or displayed, should be limited to objects directly associated with the gulf, the Laguna Madre, and the island itself. Comparative objects should not be collected. Present storage space is a serious problem, and this will act as a limiting factor.

Archaeological collections should also be limited to specimens found on the island. No comparative material is needed. Research can be done elsewhere.

## **ENVIRONMENTAL EDUCATION**

The park staff will develop environmental education workshops for teachers whenever possible. Materials used in the environmental education program should be updated periodically. An environmental education specialist should be making contacts with teachers in the area to help in the development of environmental study areas. Programs to interpret these sites for school groups should be scheduled whenever possible, as well as presentations about the use of the park's varied resources, including trails. Living history demonstrations, special workshops, and other projects should be arranged.

## **ACQUISITION OF SPANISH ARTIFACTS**

The State of Texas has been conducting an underwater archaeological salvage program along the outer coast of Padre Island. WASO and SWRO officials have expressed interest in the Park Service accepting the entire collection of artifacts if it is offered by the State of Texas. The Spanish collection is large and will increase as explorations continue.

It is understood that the entire collection would have to be housed and displayed near Corpus Christi, Texas. Except in unusual cases, only replicas of artifacts would be displayed on Padre Island. If the Park Service took over the collection, additional staffing and funding would be required by the park. The staff would need to be specially trained for the preservation, display, and protection of the collection.

The matter of this acquisition will be the topic of another interpretive prospectus when, and if, the collection is turned over to the National Park Service.

## LIST OF PRODUCTS

### HARPERS FERRY CENTER

#### Division of Exhibits

Malaquite interpretive facility	8
Information desk and bulletin board	9
Sculpture	9
Publication sales areas	9
Indian exhibits	9
Spanish exhibits	9
American exhibits	9
Aquaria exhibit	10
Seashell exhibit	10
Temporary exhibit	10

#### Branch of Wayside Exhibits

Grasslands Nature Trail, wayside exhibits (4)	6
Freshwater pond trail, wayside exhibit	6
Novillo, wayside exhibits (3)	7
Laguna Madre access, wayside exhibits (3)	8
Outdoor exhibit complex, wayside exhibit series (4)	10
Dune walks, wayside exhibit series (6)	11
Yarborough Beach, exhibit shelter (manned) and exhibit series (5)	11
Laguna Madre viewing tower, wayside exhibits (4)	8
Environmental study area	14

#### Division of Publications

Handbook	13
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#### Division of Audiovisual Arts

Parking area (radio repeater, tape producer)	6
Malaquite interpretive facility	8
Random-select slide projector and screen	9
Education sound/slide program	10
Listening lounge	10

#### Division of Museum Services

Novillo bunkhouse furnishings	7
Novillo demonstration materials	7
Malaquite exhibit space	9
Malaquite sculpture	9

Malaquite Indian artifacts	9
Malaquite Spanish artifacts	9
Malaquite American historical and contemporary materials	9
Historic structure report	7
Aquaria exhibit	10
Seashell exhibit	10
Museum collection management and storage	13

## **DENVER SERVICE CENTER**

### **Historic Preservation**

Historic resources study	7
Restoration	7
Preservation	7

### **Facilities**

Parking area	6
Freshwater pond trail	6
Novillo parking area, road, and trail	7
Sun shelter	8
Malaquite interpretive facility	8
Malaquite walkway	10
Malaquite interpretive addition	10
Malaquite outdoor exhibit complex walkways	10
Malaquite boardwalks	10
Malaquite towers	12
Malaquite bicycle trail	12
Malaquite photographic pulloffs	12

## **PADRE ISLAND NATIONAL SEASHORE**

### **Research For All Exhibits**

Freshwater pond trail location	6
Novillo demonstration materials	7
Changeable exhibit texts	9
Sculpture collection materials	9
Research for sound/slide programs	10
Seashell collection	10
List of marine specimens for aquaria	10
Source list of marine life sounds	10
Publication for sales materials	13
Publication for ESA	14

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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.