Memorandum

To: Director, Southeast Region

From: Wilderness Coordinator, Office of Environmental Planning and Design, ESC

Subject: Preliminary Wilderness Study, Gulf Islands

A trip report, covering observations made by the undersigned at Gulf Islands from June 7 through 9, is enclosed for your information and consideration. The report contains 8 pages of narrative, 22 3 1/2 x 5 inch color photos, and a roadless area drawing.

W. Drew Chick, Jr.

Enclosures

cc:
Supt., Natchez Trace, w/c. enc.
Mr. Stokes, Gulf Island NS, w/c. enc.
ESC-EPD, Mr. Chick, w/c. enc.
ESC-PM

WDChick:mlm 7/15/71

at request of Ray Finch, by telephone

Copy of trip sent to Joe Brown, Supt. Everglades 6/15/71

Sam Werner, Space Ass't to Dir. SE Region

PLEASE RETURN TO:

TECHNICAL INFORMATION CENTER
DENVER SERVICE CENTER
NATIONAL PARK SERVICE
Memorandum

To: Acting Chief, Office of Environmental Planning and Design, ESC

From: Principal Planner Resource Management and Wilderness Coordinator, Office of Environmental Planning and Design, ESC

Subject: Wilderness Study of Gulf Islands National Seashore

Introduction: Pursuant to your request, I made a field trip to subject seashore on June 7, 8 and 9. While there, Dick Stokes and I traveled together on observation trips to the barrier islands by air and by boat, and we did some walking on the islands. Dick shared generously with me his wealth of knowledge about the area and of the Gulf Coast in general. I visited with Mesars, Lionel N. Eleuterius (botanist) and J. L. Christmas (zoologist) of the Gulf Coast Research Laboratory staff to learn something of the resource values of the Mississippi Islands.

Purpose of Study: Section 3 of the Seashore Act (P.L. 91-669) requires that the Service study the Seashore and report through the President to the Congress by January 8, 1975 which part or parts are suitable or not suitable for wilderness designation in accord with the Wilderness Act (P.L. 89-577).

All roadless areas containing at least 5,000 contiguous acres of Federal land must be studied. (Note: Land acquisition is underway.) No mainland areas in Florida or Mississippi, Santa Rosa Island or Perdido Key meet these criteria so they do not qualify for study. On the other hand, Petit Bois, Horn and Ship Islands in Mississippi, together with the adjacent submerged lands included in the Seashore, are all roadless and contain more than 5,000 acres each: Petit Bois Island Roadless Area = 10,275.06 acres; Horn Island Roadless Area = 25,960.59 acres; and Ship Island Roadless Area = 15,744.90 acres. These are shown on the map enclosed. Therefore, each must be studied for its suitability for wilderness and a recommendation made following a public hearing.
Discussion:

1. Ship Island. This was the westernmost of the three. It has been used almost continuously by man from 1699 when the French established a settlement there and operated a port at the west end for receiving and transhipping supplies to New Orleans. Later the port became a naval base and, prior to the Civil War, a brick structure called Fort Massachusetts was built. Later a quarantine station was established near the east end of the island. Fort Massachusetts is the only evidence remaining of this long history of man's activities on the island.

Much of Ship Island was denuded of trees during the Civil War so the Fort's gunners could use their cannon more effectively. Over the years, the sea had washed a channel across the middle of the island thus severing it in two. Hurricane "Camille", August 17, 1969, washed away more of the mid section leaving only both extremities. Fort Massachusetts was damaged and the quarantine station was swept away by this storm.

During the summer season, two sightseeing boats each carrying up to 300 passengers make two round trips daily from Biloxi to Ship Island where people visit Fort Massachusetts. They picnic and they may swim or fish in the Mississippi Sound or the Gulf of Mexico. Therefore, man's past and present use of the west end of Ship Island make it unsuitable for wilderness.

On the other hand, the extreme east end of Ship Island does appear to qualify for wilderness. A part of the island, labelled "Northwest Bluff" on the maps and charts, consists of a sand dune stabilized by vegetation. There are other dunes and marshes, ponds, and beaches on this island and each has its associated plant and animal life. A grove of slash pine trees grows there, too.

The land remaining around the quarantine station site may qualify. However, if ruins of the buildings still exist, it is doubtful that they could be considered of cultural and historic value. I did not have time to explore this small island on foot and this should be done before the Service's wilderness proposal is finalized.

2. Horn Island. Until the Seashore designation, about 2/3 (2,419 acres) of this island was administered by the U.S. Bureau of Sport Fisheries and Wildlife as a national wildlife refuge. NPS lands people find only 438 acres titled to the U.S. with some 200 owners claiming the balance. Horn is the largest of the three Seashore islands in Mississippi, it rises higher above sea level (dunes exceeding 15 feet elevation are common), it is the most scenic, and its vegetation is more nearly climax. The only
sand dune bluffs in Mississippi remaining in public ownership are on
Horn and the other barrier islands in the Seashore. Much of Horn Island
is covered with mature slash pine and there is thrifty pine reproduction
in the understory. Live oaks grow there also like those on the mainland.
Some of the pines and oaks are being buried by shifting sand dunes.
Ponds, marshes and dunes have their associated plant and animal life.
Noteworthy among the animals are alligators, rabbits, raccoons, nutria,
and wild hogs. The last two are not native to the island. Water and
shore birds are abundant and there are colonial nesting sites for terns.
Several osprey nests were observed and one bird was seen. Among the
snakes, the poisonous water moccasin and copperhead are said to abound.
Noxious insects include many species of mosquitoes and biting flies
which make life uncomfortable to visitors at certain times of the year.
On the Sound side are beds of submerged sea grasses which are rich in
food for fishes, many of which were observed in the shallow water from
our boat. Porpoises are common also. We saw sharks in Gulf waters just
offshore at the west end of the island. Stinging sea nettles are also a
hazard to swimmers.

The richness of the fauna and flora of Horn Island may be visualized
by the following tabulation compiled by Dr. E. Avery Richmond in Volume
2, Number 3, 1968 of Gulf Research Reports:

<table>
<thead>
<tr>
<th>Type of Organism</th>
<th>Families</th>
<th>Genera</th>
<th>Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Animals</td>
<td>434</td>
<td>977</td>
<td>1364</td>
</tr>
<tr>
<td>b. Plants</td>
<td>77</td>
<td>147</td>
<td>204</td>
</tr>
<tr>
<td>Total Collections</td>
<td>511</td>
<td>1124</td>
<td>1568</td>
</tr>
</tbody>
</table>

There is a significant relationship between the vegetation of Horn
Island and that of central Florida, certain Atlantic Coastal areas,
and the pine barrens of New Jersey.

From the air, the parallel paths of the storms through the island's
forests are clearly apparent. These storms appear to cross Horn
Island in a northwesterly direction from the Gulf of Mexico.
Similarly, there is surf on the Gulf side, but none on the Sound side.
The waters of the Gulf are more saline than those of Mississippi Sound
because of the input from the major mainland rivers.

A family lived on Horn Island for two or three generations and they
raised cattle. Little evidence remains of their occupancy. Near the
beach along the north shore about 1/3 of the way down the island from
the west end there is a chimney and this is about all that can be seen
of a military reservation active in the 40's. A frame cabin on pilings,
a corrugated metal storage building and a high, woven wire fence enclosure mark the wildlife refuge headquarters. These structures all show storm damage and results of vandalism, but they can be repaired easily. Near this site and the chimney, mentioned above, are flowing artesian wells. Offshore on the Sound side east of the cabin is the rusting hull of a barge partially awash. No shipping navigational aids have been erected on the island or offshore.

Public use of Horn Island now consists of boatmen who picnic and camp along the shore and among the dunes; swim; fish by hook and line and with nets from boats, wade, and cast from shore; and there is some waterfowl hunting in season. It is pleasant to walk along the strand, but the unstable dune sand which prevails over the island, dense plant growth in places, marshes, heat, noxious insects, and poisonous snakes make walking inland less attractive to most visitors.

Except for the refuge buildings and environs and the chimney site, all of Horn Island qualifies for inclusion in the National Wilderness Preservation System.

3. Petit Bois Island. Although half the size of Horn, Petit Bois contains many of the same features. It averages probably 5 feet lower in elevation and the vegetation appears to be less diverse. Proportionately there is more open dune area and only a small pine forest. The plant called sea oats is more prolific. In short, there are fewer habitats on Petit Bois Island. There may be no alligators and probably no wild hogs, but nutria tracks were seen. A flock of terns, perhaps 100 birds, was resting on a sand spit at the east end of the island. There were a few osprey nests. Again, the beds of submerged sea grasses in the Sound attracted fish and porpoises in great numbers. About half of this island of approximately 1,450 acres was contained in the former national wildlife refuge; the rest is owned by a corporation.

Over Horn Island Pass, the shipping channel between Petit Bois and Horn Island, about a dozen frigate birds were soaring. The Pass is dredged periodically by the Corps of Engineers and spoil has been deposited at the west end of Petit Bois in the form of a high mound of shell and sand. There are several ship navigational aids on this end of the island and offshore on pilings. In the Sound, adjacent to the Pass, about 30 shrimp trawlers were anchored; the crew fish at night in the Gulf.

Occupants of small boats were observed sport fishing adjacent to Petit Bois in the Sound and in the Gulf. One visitor was wading in the shallow water and casting a throw net to catch fish. On shore, at the east end
of the island, piles of trash were seen which had been left behind atop the dunes by campers or picnickers.

During our boat trip to the islands, several small jet aircraft from the Naval Base at Pensacola made low passes over Petit Bois and the east end of Horn Island travelling in both directions. A large military helicopter flew over also but at an elevation higher than the jets.

Except for the spoil bank and navigational aids at the west end of Petit Bois, there are no permanent works of man in evidence nor have I learned of any habitations ever erected on the island in the past. Therefore, all but the western tip of Petit Bois is suitable for designation as wilderness.

4. Wilderness and the Seashore. By definition, wilderness recreation is a very low intensity use compared with the high carrying capacity typical of national recreation areas. Nonetheless, Congress recognized the possibility that some part or parts of the Gulf Islands National Seashore may provide "outstanding opportunities for solitude or a primitive and unconfined type of recreation."

The current master plan bestows wilderness status on Petit Bois Island and lists the following compatible uses: "zoned beach and fishing access, primitive day-use zoned areas, colonial and pioneer flora and fauna interpretation and perpetuation." All of this seems to be compatible with wilderness. It has been suggested that a "courtesy" dock be constructed at the west end of the island, but I see no need for one. Small boats can be beached easily and the sandy bottom of the sound and Gulf provides good anchorage.

According to the master plan, development of Horn Island is to be more extensive calling for "boat docking, airstrip, swimming, primitive camping facilities, zoned beach and fishing access, concession bicycle and jitney trails, history and natural history interpretation, and ranger station." The potential carrying capacity of these facilities was not stated.

From the point of view of wise resource management, I question the desirability of providing an "airstrip and concession bicycle and jitney trails" on Horn Island. Light planes can land and take off from loose sand, but such a strip would not meet FAA regulations. Hence a suitable area would have to be cleared and paved with attendant adverse environmental impact. Bicycle trails would also require paving or other sand stabilization. The jitney trails meandering over the dunes of Perdido Key, if allowed on Horn, would be intolerable. These kinds of use would be destructive of the resource to the point where Horn Island would lose its scenic attractiveness to the visitor.
In my view, at least the east half of Horn Island should be held for its present uses of swimming, picnicking, primitive camping, fishing, hunting, nature study, photography, and sightseeing by those who provide their own boat and gear. These recreational uses are all compatible with wilderness designation and with the environment. Similar use and wilderness status is appropriate for Ship Island-East.

To accomplish these recommendations would require a change in the master plan. Clearly this is in order for Congress requested the Service to study the application of the Wilderness Act to all parts of the Seashore. The present land classification was developed prior to the wilderness study required by the legislation.

In time, it might become necessary to initiate some sort of a permit system up to a predetermined carrying capacity to assure "low key" use of the island wilderness areas. This is the dominant use at present and people use the islands at will regardless of the mixture of public and private ownerships. Use could increase as population pressures become greater, and would increase if public transportation is provided.

5. Administrative Agreement with BSF&W. A memorandum agreement between Director Gotschalk of the BSF&W and Acting Director Bill of the NPS dated May 10, 1968, was directed to the Assistant Secretary for Fish and Wildlife and Parks. It provides "that the management and development of the Horn and Petit Bois Islands be in accord with plans mutually agreed upon so as to give maximum protection to wildlife values, and that, under existing agreement between the two agencies, the BSF&W will assist NPS in planning wildlife and habitat management program on lands administered by NPS."

In its management of Horn Island and Petit Bois National Wildlife Refuges, the BSF&W closed certain parts of the islands at appropriate seasons of the year to protect both the colonial bird and the sea turtle nesting areas. In addition, the refuges were closed to public use entirely during the fall and winter to protect wintering waterfowl. Public hunting was allowed. All of this is in concert with NPS policy for national recreation areas, but the BSF&W attempted some habitat improvements like dune stabilization and rats were poisoned. Some wildlife and habitat management programs are not compatible with wilderness. What bearing does the interbureau agreement have on NPS with respect to proposing wilderness for former wildlife refuge lands? Indeed, is the development contemplated for Horn Island consistent with giving "maximum protection to wildlife values?"
6. Other Wilderness Areas. Within 200 miles of the Seashore, the only area recommended to Congress for wilderness designation is the Breton National Wildlife Refuge. It consists of a chain of low islands, inlets and marshes, sparsely vegetated, known as the Chandeleur Islands which extend for 35 miles in a north-south direction separating the Gulf of Mexico from the Mississippi River delta, plus Breton Island. The area is noteworthy for its nesting shore birds and turtles, and for sport fishing. The most northerly point of the Chandeleurs is about 19 miles south of Ship Island.

While there is some wildlife common to all the barrier islands, the habitats are more varied on Ship, Horn and Petit Bois. Hence, these islands support a greater variety of animal and plant life. Therefore, the Breton Wilderness, if established by Congress, would complement the Seashore wilderness, but not replace it.

7. Basic Wilderness Research. Title to Seashore lands in Mississippi is not yet all vested in the United States nor has the BSR&W turned over its deeds to former refuge lands. A search of deeds will have to be made to determine whether there are any reserved rights such as submerged pipeline rights-of-way, uncharted ship channels, spoil disposal areas, navigational marker sites, minerals, etc.

The Mississippi legislature has enacted a bill which conveys to the United States title to the submerged lands one mile outward from the shoreline of the islands. As at Isle Royale, it is presumed that this area would provide the Class III buffer required around wilderness.

Whether any of the water areas of the Sound should be wilderness is a most philosophical question in my mind at present. The beds of submerged grass may need protection from damage by propellers or other causes. Class IV designation may accomplish this if warranted. Lionel N. Eleuterius of the Gulf Coast Research Laboratory staff is publishing, later this year, a research paper on these grasses which should be helpful in evaluating this resource.

The significant natural values on Horn Island should be delineated on a map to provide the basis for an accurate land classification plan and environmental statement.

Summary and Recommendations: The Seashore Act requires the Secretary of the Interior to review the area and recommend as suitable the suitability or nonsuitability of any area within it for preservation as wilderness.

Subject to the vesting of fee title in the United States, I concur in the current master plan's recommendation that all but the west tip of Petit Bois Island be proposed for wilderness designation.
For reasons stated above, I recommend that the master plan be changed so that all of Ship Island-East and at least the east half of Horn Island be proposed for wilderness.

Thus the most accessible lands of the Seashore—the mainland areas in Mississippi and Florida, and the barrier islands in Florida—would continue to receive the most intensive use. The Mississippi Islands in the Seashore would be used least intensively. Such range of use is consonant with the intent of Congress in establishing the Gulf Islands National Seashore.

Until fee title to the Mississippi Islands is secured by NPS, a wilderness proposal cannot be made, but it is hoped that land acquisition will be completed within two years. Meanwhile, if you concur, the opinion of the Director, Southeast Region, should be sought regarding the following points:

1. The effect, if any, of the BSF&W-NPS agreement on wildlife and habitat management programs within wilderness, and

2. Expansion of the wilderness proposal to include parts of Horn and Ship Islands in addition to most of Petit Bois.

When these management decisions are made and fee title is obtained, a wilderness proposal can be prepared in anticipation of a public meeting.

A set of photographs is enclosed to help in visualizing the resource values of the Seashore.

(Sgd.) W. Drew Chick, Jr.

W. Drew Chick, Jr.

Enclosures

cc:
Director, SERO, w/c. enc.
Supt., Natchez Trace, w/c. enc.
Mr. Stokes, Gulf Islands NS, w/c. enc.
WASO, LW, w/c. enc.
ESC-EPD, Mr. Chick, w/c. enc.
ESC-PH,

WDChick:mlm 7/13/71
PROPOSED WILDERNESS: Approaching Petit Bois Island from the east (6/9/71)

PROPOSED WILDERNESS: Stand of slash pine on Petit Bois Island; Gulf of Mexico in distance (6/7/71)
PROPOSED WILDERNESS: Mid section of Petit Bois Island (6/9/71)

PROPOSED WILDERNESS: Tidal pond along Sound (north) side of Petit Bois Island (6/7/71)
PROPOSED WILDERNESS: Flock of terns in flight at west end of Petit Bois Island (6/8/71)

PROPOSED WILDERNESS: Surf of Gulf of Mexico washing south shore at east end of Petit Bois Island (6/8/71)
PROPOSED WILDERNESS: Believed to be "sea oats", this plant grows more profusely on Petit Bois Island than elsewhere in the Seashore (6/8/71)

OUTSIDE WILDERNESS: West tip of Petit Bois Island showing navigational markers; note mound of shell and sand deposited from dredge spoil (6/8/71)
OUTSIDE WILDERNESS: West end of Horn Island; Gulf of Mexico with surf at right; Mississippi Sound in distance (6/7/71)

PROPOSED WILDERNESS: Easterly tip of Horn Island; Gulf at right, Sound at left, Horn Island Pass (ship channel) at upper right (6/7/71)
PROPOSED WILDERNESS: Dunes, ponds and slash pines at west end of Horn Island (6/7/71)

PROPOSED WILDERNESS: Ponds near Sound side at east end of Horn Island (6/7/71)
PROPOSED WILDERNESS: Sand bluff along north shore of Horn Island (6/8/71)

OUTSIDE WILDERNESS: BSFW field station-cabin at left, corrugated metal storage building at right (6/7/71)
PROPOSED WILDERNESS: Portion of Ship Island-East. Sound waters below; Gulf waters above (6/7/71)

OUTSIDE WILDERNESS: Fort Massachusetts and portion of Ship Island-West. Sound waters below; Gulf waters above (6/7/71)
PROPOSED WILDERNESS: Campers on sand bar at east end of Horn Island (6/8/71)

PROPOSED WILDERNESS: Unburned trash left on top of a dune at east end of Petit Bois Island (6/8/71)
OUTSIDE WILDERNESS: Fort Pickens at west end of Santa Rosa Island, Florida  (6/9/71)

OUTSIDE WILDERNESS: Maze of dune buggy and motorbike trails on the dunes of Perdido Key, Florida  (6/9/71)
RECOMMENDED WILDERNESS: Closeup view of part of Chandeleur Islands, Breton National Wildlife Refuge, Louisiana (6/9/71)

RECOMMENDED WILDERNESS: Typical view of sand, marsh, ponds, and inlets of Chandeleur Islands, Breton National Wildlife Refuge, Louisiana (6/9/71)
HORN ISLAND
ROADLESS AREA
25,960.59 ACRES

ULF OF MEXICO

CAUTION

Temporary changes or defects in aids to navigation are not indicated on this chart.

See Notice to Mariners

Improvised channels shown by broken lines are subject to shoaling, particularly at the edges.

CAUTION

Small craft should stay clear of large commercial and government vessels even if small craft have the right of way.

All craft should avoid areas where the skin divers flag is aerial square with a diagonal white stripe is displayed.

CAUTION

Mariners are warned to stay clear of the protective range surrounding navigational light structures shown

PLANE COORDINATE GRIDS

Alabama State grid, west zone, is indicated by dashed ticks at 10,000-foot intervals.

Mississippi State grid, east zone, is indicated by dashed ticks at 10,000-foot intervals.

The last three digits are omitted.

CAUTION

Oil well drilling structures may exist within the area of this chart.
Comments on GUIS Trip Report

By CT Reed

General

An excellent report, complete and comprehensive.

Page 1, last paragraph

Section 3 (c) of the Wilderness Act directs the Secretary to review every roadless island within national wildlife refuges and game ranges. Since Petit Bois and Horn Island NWRs were abolished by Section 7 of P.L. 91-660, I believe the roadless area restriction of 5000 acres must now apply (see later comment about roadless areas).

Page 6, second paragraph

This statement is in apparent conflict with the land classification plan in the master plan.

Page 9, third paragraph

Again, this statement is in apparent conflict with the land classification plan in the master plan.

Page 10, Agreement with BSF&W

This agreement calls for maximum protection of wildlife values. I don't agree that wilderness designation would automatically and arbitrarily accomplish this. Wildlife management practices might be necessary now or later which would not be acceptable in wilderness; or conversely, wilderness designation might in the future preclude application of ideal wildlife management practices.

Page 11, Basic Research

Here and on page 3 are about the only examples of hesitancy in proposing wilderness for portions of the Seashore. There is much to be done before wilderness can be proposed, and resolution of existing rights of various kinds, if any, is one of those things. Here is also mentioned the Mississippi legislature's action in extending the Seashore boundaries one mile outward from the shoreline of the islands. This appears already to have been accomplished by the enabling act, which sets the boundary of the Seashore at that distance. Perhaps what the State's action does is to donate State submerged lands for this purpose.

Roadless Areas

One of the first things to be done in a wilderness study is to draw up roadless area boundaries of 5000 acres or more. This should be done prior to any discussion of wilderness potential.
Comments on Gulf Island Trip Report

Rationale For Wilderness Suitability

Petit Bois Island: Proposed wilderness designation for the major portion appears justified based upon the condition of the resource and the concept and plan for use as outlined in the Master Plan.

Ship and Horn Islands: While proposed wilderness designation of Ship Island - East and the eastern portion of Horn Island appears logical in terms of the condition of the resource and compatible types of use, it may not be logical in terms of appropriate intensity of use. Such a proposal should be firmly supported by an approved concept and plan for use which assures, "outstanding opportunities for solitude or a primitive and unconfined type of recreation." Implicit in the definition of wilderness is a limited human use situation - if the plan for the Seashore assures this, OK!

Submerged Grass Beds, etc: These areas, primarily on the Sound side of the Islands, are extremely important ecologically in the natural process of island formation and movement of the island shoreward. Therefore, there is great logic in including these presently submerged lands in the proposed wilderness if they also qualify on the basis of the concept and plan for their use. The thought expressed on page 12, 1st paragraph, "to protect the submerged grass beds from damage by propellers or other causes", is not a basic reason for wilderness suitability. Valid basic reasons would be the qualifying wilderness character of the area and a concept and plan for use and preservation which supports wilderness suitability.
Donald M. Bradburn, M.D.
Chairman, Delta Chapter
Sierra Club
465 Audubon St.
New Orleans, Louisiana 70118

Dear Dr. Bradburn:

Secretary of the Interior Morton has asked us to thank you for your letter of January 31 concerning wilderness at the Gulf Islands National Seashore.

We appreciate your views on the Gulf Islands, especially since you have a thorough knowledge of them born of long familiarity. We are sending copies of your letter to our Regional Office and Service Center in order that those persons who conduct the wilderness suitability study for Gulf Islands may have the benefit of your thoughts.

Sincerely yours,

/s/ Richard K. Griswold

Richard K. Griswold
Chief, Division of Legislative Coordination and Support

cc:
Director, Denver Service Center w/c inc.
January 31, 1972

Honorable Rogers Morton  
Secretary of the Interior  
Washington D.C.

Dear Secretary Morton:

I would like to reiterate the Sierra Club's belief that both Horn and Petit Bois Islands in the Mississippi area of the Gulf Islands National Seashore meet all the qualifications for protection under the Wilderness Act of 1964. These two small islands represent the only areas of their character that can so qualify along the Central Gulf of Mexico and as such are extremely valuable and irreplaceable resources. I have known both of these islands for forty years and presented the Sierra Club's testimony before the House Interior Committee in which we along with other Conservation organizations requested Wilderness designation for Horn and Petit Bois Islands. I should like to reaffirm the request that the National Park Service review both of these islands for possible inclusion under the protection of the Wilderness Act.

Respectfully yours,

DONALD M. BRADBURN, M.D.  
Chairman, Delta Chapter  
Sierra Club  
465 Audubon St.  
New Orleans, La. 70118

DMB/ms

cc: George Hartzog  
Rep. William M. Colmer  
Dr. Gordon Gunter  
Nathaniel Reed