







A REPORT ON THE

Seashore Recreation Area Survey



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# A REPORT

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# SEASHORE RECREATION AREA SURVEY

of the Atlantic and Gulf Coasts

National Park Service Department of the Interior

1955



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#### INCEPTION OF THE SURVEY

The National Park Service was asked early in 1954 what were the remaining opportunities to preserve outstanding stretches of the Atlantic and Gulf coasts -- not only places valuable for their scenic qualities and for public recreation, but areas desirable as sanctuaries for unique or rare plant and animal communities.

The question made us stop to think. About 20 years ago the Service conducted a seashore recreation area survey with emergency funds and was able to identify many important, unspoiled natural areas which seemed deserving of preservation for future public use and enjoyment. But time had passed swiftly; a war had intervened, followed by a period of great economic growth and development. No one seemed to know how far development might have spread up and down the coast as a whole, spilling over into or engulfing the quiet natural areas we had once known.

The National Park Service had neither the personnel nor the funds to answer these questions. But as the result of a generous donation of private funds for the purpose, the Service was able to assemble a small professional staff and undertake an 18-month study of the coast and off-shore islands between the Canadian and Mexican borders.

This report records briefly the history of the survey and attempts to classify the 126 areas which were found--many probably too late.



#### ACKNOWLEDGMENTS

The National Park Service is especially grateful to the anonymous donors, whose generosity made this Survey possible, and to the United States Coast Guard and its efficient and cooperative personnel for providing transportation, largely by helicopter, over the entire length of the Atlantic and Gulf coasts.

The Service is indebted, too, to the many State park and planning officials who furnished consultative services and who, in many cases, took part in field investigations; to the Fish and Wildlife Service, Nature Conservancy, the Audubon Society and to the several universities and many individuals who extended their advice and assistance in the Survey.



### PLAN OF SURVEY AND REPORT

The task assigned, "to identify the major remaining opportunities for conservation of natural seashores or coastal areas for recreational or other public purposes", necessitated consideration of certain factors which, combined with the exercise of judgment, formed the basis of the selection of the major areas.

The seashore is a limited and diminishing resource of scenic and scientific interest, of first rank importance in the natural heritage of the Mation. But so much of the seashore has been preempted by commercial and private developments that the term major, in some cases, is difficult to define.

If a length of seashore was observed to be undeveloped, or at least only sparsely developed in relation to the density of improvements within the general vicinity, it automatically became eligible for consideration. And if it possessed qualities of vastness, contrast, picturesqueness, or a combination of those intangible elements that are generally recognized as contributing to inspiration, understanding, and appreciation it was judged to be worthy of further study and consideration as an area of first importance. Or if the undeveloped section contained unique biotic communities that were in a natural, unmodified condition, or could become wholly natural if

left undisturbed for a reasonable period of years, it was considered worthy of preservation and further study as an area of first importance.

Undeveloped areas that possessed these scenic values or biotic communities to a lesser degree, or whose natural qualities had been impaired, were considered to be worthy of preservation but, perhaps, of less than national concern.

It is realized that these appraisals were relative and for practical reasons had to be based largely on the informed judgment of the survey technicians and others consulted such as State park directors, university professors, Fish and Wildlife Service biologist, State historians, and others.

The suitability of these undeveloped areas was further evaluated by judging whether they were (1) of such character as would accommodate the number of visitors that might be anticipated if the areas were properly protected, developed, and administered, and (2) if they were adaptable for development and operation as public recreational areas.

It was understood that the preliminary reconnaissance could do little more than spot the remaining major undeveloped areas along the shoreline. The areas that appeared to have the greatest potentialities were to be given as much study as time and funds permitted.

The shoreline was determined to be the general shoreline, in accordance with the United States Coast and Geodetic Survey type of measurement for this classification, i.e., the shore line of bays and sounds included to a point where such waters narrow to a width of a unit measure (30 nautical miles or 34.5 statute miles).

During the period of plane and ground reconnaissance, a report form was used (copy included in appendix) which provided opportunity to list certain essential descriptive material necessary in judging the values of an area. In addition, other information was written on the geodetic sheets, as the areas were seen from the air and observed on the ground.

Insofar as possible, the following kinds of data were collected for each area:

### I. Physiographic Features

- A. Scenic values: the degree of inspirational qualities of seascape and landscape and the likelihood of attracting visitors from great distances.
- B. Length and wi th of area and shore the extent of undeveloped or only sparsely developed land and seashore.
- C. Extent, type and condition of vegetative cover.
- D. Dunes: location, extent, stability, height.

- E. Bays, sounds, and ponds (fresh and salt): extent, marine and vegetative life, waterfowl habitat.
- F. Salt marshes: wildlife habitat, biotic communities.
- G. Beach (surf, ocean, bay and sound sides)
  - 1. Extent: length, width
  - 2. Slope: gentle, steep
  - Condition: sand, gravel, rock, texture, color, debris
  - 4. Degree of erosion
- H. Foreshore: degree of slope, undertow or riptide conditions.
- Geologic formations: cliffs and rock formations, extent and type.
- J. Water color, cleanliness, amount of surf, tide, pollution.

# II. Adaptability for Use

- A. Present land use
  - 1. Developed portion
    - a. Extent and type
  - 2. Undeveloped portion
    - Extent and type, including adequate space for parking, services, and structural facilities
    - b. Degree of deterioration caused by adverse influences
      - 1. Timber cutting
      - 2. Grazing

- 3. Oil and gas operations
- 4. Hunting and trapping
- 3. Roads: type, condition, extent, ease of access from main highways.
- B. Accessibility: areas reached by car or that can be connected by road without excessive costs; cost of making isolated areas accessible.
- C. Relationship to population centers: the density of population within the area from which a high percentage of visitors might be drawn.
- D. Relationship to areas of similar character: existing seashore areas that may be serving the same centers of population, adequately or inadequately.
- E. Estimated value of land: extent of improvements, accessibility, degree of surrounding real estate activity.
- F. Estimated availability of area for public use: pattern of ownership, number of holdings, likelihood of owners placing holdings on market.
- G. Insect and arachnid problem: the extent of activity, whether tolerable or unbearable.

### III. Natural History

#### A. Scientific values

- 1. Biotic communities in a natural, unmodified condition.
- Biotic communities that can be wholly natural if left undisturbed for reasonable period of years.
- 3. Biotic communities that harbor rare or uniquie species of either plants or animals.
- 4. Biotic communities that are important as a breeding ground for birds or other animals.

#### B. Recreation values

- 1. Biotic communities that:
  - a. Provide esthetic qualities
  - b. Produce shade
  - c. Are conducive to nature study and photography

### IV. Historical and Archeological

- A. The role of the site in history: political, social, economic, cultural—and whether significant to local, regional or national affairs.
- B. The role of the site in archeology
  - Its contribution to knowledge of historic and prehistoric times.
  - 2. Prospects of artifacts in the site.
- C. Extent of visible remains, atmosphere of original character and association retained.
- D. Adaptability to interpretation.
- E. Sites adjacent which might strengthen its importance.

#### SUMMARY OF FINDINGS AND RECOMMENDATIONS

Of the 3,700 miles of general shoreline constituting the Atlantic and Gulf coasts, there are 240 miles, or  $6\frac{1}{2}$  percent, in Federal and State ownership for public recreation purposes.

Within these 240 miles there are 39 areas: 2 national parks, 1 national seashore recreation area and 36 State seashores. There are in addition 4 national wildlife refuges with ocean beaches which are not primarily utilized for public recreation.

Over 50 percent of the 240 miles is contained in the Cape Hatteras National Seashore Recreation Area and in Acadia and Everglades National Parks. However, neither Acadia nor Everglades National Park contains much beach frontage suitable for seashore recreation activities.

The 1955 seashore survey identified and reported upon 126 undeveloped areas. Of this total 72 were eliminated from further consideration because they lacked recreation potentialities or were unavailable for public use.

The remaining 54 areas were believed to be of interest to local, State or Federal agencies as possible public seashores. These 54 areas, which contain about 640 miles of beach and comprise 17 percent of the shoreline of the Atlantic and Gulf coasts, constitute the major remaining opportunities for conservation of seashore resources.

Of the 54 areas most suitable for public seashore recreation, 6 of the areas and one-third of the total beach mileage are in one State - Texas; two of the 54 areas were considered to be superior to all the others. (Twenty-eight areas were judged to be of exceptional importance and the respective States are negotiating for 8 of these.)

There was a striking parallel between this recreation survey and the two-year inventory of the wetlands of the United States, conducted by the Fish and Wildlife Service. Of the 54 most desirable areas listed by this survey, all but 6 had been rated in the wetlands inventory as possessing high or moderate value of birdlife.

Within the most densely populated section of the seashore, between Massachusetts and Delaware, there are 18 undeveloped areas containing 118 miles of coastline. The extreme importance of acquiring additional seashore in this region is vividly emphasized by

the conclusion of the recent Yale University City Planning Survey: that the entire 600-mile area of the eastern seaboard from Portland, Maine, to Norfolk, Virginia, can be designated as a single, linear city containing one-fifth of the Nation's population.

In 1935 a survey of undeveloped seashore areas conducted by the National Park Service recommended that 12 major undeveloped areas with a total shoreline of 439 miles be preserved as national seashores. Only one of the 12 areas - Cape Hatteras - was set aside for this purpose, and 10 of the 11 areas which were recommended for preservation in 1935 are now in various stages of private or commercial development.

The movement to buy up seashore property for commercial and private use has had its great st impetus since 1945, and an economic boom in seashore property is a phenomenon of the entire coast. Extensive and costly developments now line mile after mile of seashore which before World War II was uninhabited.

One of the areas recommended as a national seashore in 1935 was 30 miles long and could have been purchased for \$260,000. Less than 9 miles remain undeveloped today, and the cost of purchasing the land now would be more then \$1,000,000 - an increase in value of 1200 percent in 20 years.

A second area selected in 1935 was - and is - accessible only by boat. Despite this handicap, the island has been subdivided and a majority of the 5,000 lots sold - with no access in sight. The price has skyrocketed from \$26 an acre to \$65 a front foot.

Every factor exerting influence on the pattern of use of the seashore will tend to make conditions far worse in coming years. Outdoor recreation is fast becoming a major industry. More and more persons and interests will be competing for less and less available beach.

The Census Bureau estimates that in 20 years - by 1975 - the population of the United States will jump to over 200,000,000. The fact that the population will nearly double in 50 years does not mean the number of visitors to the beach will merely double.

From 1934 to 1954 the number of visitors to the national parks increased from 6,000,000 to 48,000,000. In 40 years, the ratio of visitors to the national parks to total population has increased from 1 in 300 to 1 in 3. Within the 20-year period, 1934-1954, visitation to New York State Park beaches has increased from 5,000,000 persons to 61,000,000.

Considering these facts, it is recommended:

That at least 15 percent of the general shoreline of the Atlantic and Gulf coasts be acquired for public recreation purposes. If public agencies acquire half of the suitable undeveloped seashore land remaining, they would then have, including their existing areas, the recommended 15 percent.

That highest priority be given to the acquisition of the following 16 areas:

Great Beach, Cape Cod, Massachusetts Cumberland Island, Georgia Fire Island, New York Shinnecock Inlet, New York Padre Island, Texas Smith Island, North Carolina Bogue Banks, North Carolina St. Joseph Spit, Florida Mosquito Lagoon, Florida Parramore Island, Virginia Kiawah Island, South Carolina Marco Beach, Florida Debidue Island, South Carolina Popham-St. John, Maine Crescent Area. Maine Brazos Island, Texas

That prompt action be taken to acquire available beach sites before the best of the remaining areas are acquired for private or commercial development. The attention of all persons and organizations in a position to give aid should be solicited.

That the acquisition of areas be related as directly as possible to the distribution of tributary population, excepting those areas that are of such outstanding quality that the need for their preservation justifies acquisition regardless of location.

That ample quantities of hinterlands of marsh and swamp, which provide a valuable habitat for a large and interesting variety of bird and animal life, be acquired in connection with acquisition of beach property.

That biotic communities of great scientific interest found along the seashore be acquired and preserved regardless of the desirability of the adjoining beach, and that consideration be given to biotic communities at present in a modified condition but which might return to a more natural condition if permitted to remain undisturbed.

That more detailed studies be made of selected coastal areas of unusual importance, giving consideration to proper boundaries and long range planning for best utilization of recreation values.

### THE REMAINING OPPORTUNITIES

The survey group inspected and reported upon 126 undeveloped areas in the 18 States along the Atlantic and Gulf coasts. A brief description and evaluation of each is contained in the following pages. The 54 most outstanding areas are grouped below and listed from north to south, and the 16 areas judged to be of highest priority for acquisition and conservation by a public agency are underscored.

#### Maine:

Roque Island
Castine
Popham-St. John
Pemaquid
Prouts Neck-Scarboro
Crescent
Crescent Surf

#### Massachusetts:

Plum Island
Duxbury Beach
Great Beach (Outer arm, Cape Cod)
Sandy Neck
Monomoy Island
Nantucket Island
Marthas Vineyard
Washburn Island
Naushon Island
Horseneck

#### Rhode Island:

Charlestown Beach

#### New York:

Gardiners Island
Shinnecock Inlet
Fire Island

### New Jersey:

Little Egg Harbor Seven Mile Beach

#### Delaware:

Rehoboth Beach North

## Maryland:

Assateague Island

### Virginia:

Assateague Island Parramore Island Hog Island

#### North Carolina:

Core Banks
Shackleford Banks
Bogue Banks
Onslow Beach
Federal Point
Smith Island

### South Carolina:

Waiter Island
Debidue Island
Kiawah Island

### Georgia:

Ossabaw Island St. Catherines Island Sapelo Island Cumberland Island

### Florida:

Melbourne Beach-Vero Beach

Mosquito Lagoon

Keys (Big Pine, Summerland, Cudjoe, Ramrod,
No-Name, Big Torch, Middle Torch)

Marco Beach

St. Joseph Spit

### Mississippi:

Horn Island Ship Island

#### Louisiana:

Grande Terre Island

# Texas:

East Coast
Galveston Island
Stephen Austin Island
Matagorda Peninsula
Padre Island
Brazos Island

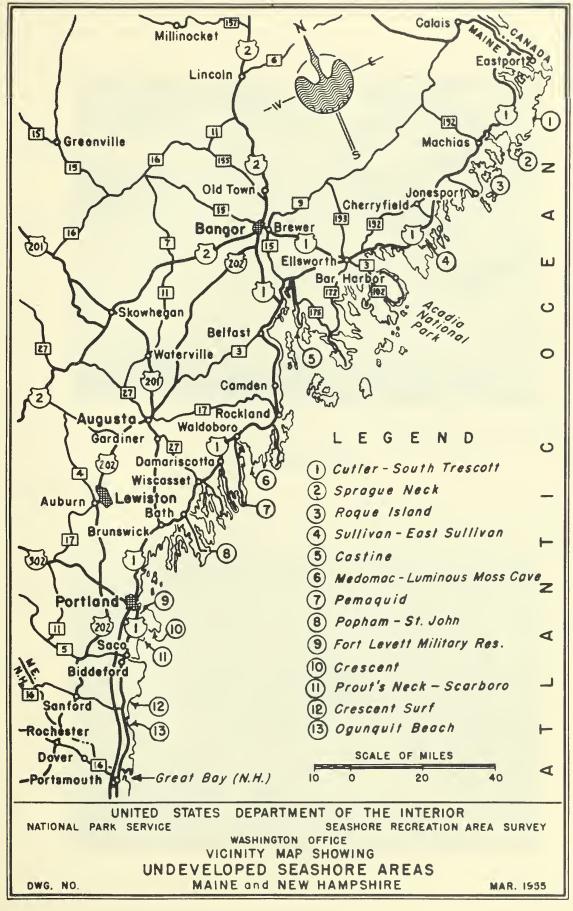


### DESCRIPTIONS

The following pages contain brief descriptions, some with photographs, of the 126 areas investigated. The areas are arranged by States, according to their geographic locations -- from the Canadian to the Mexican border. Following the map of each State, the areas considered to be of unusual interest are described at the beginning of the section, followed by less detailed descriptions of other areas studied.

Special detailed studies were made in connection with the 16 most important areas.







Roque Island



# Roque Island Group

### Maine

Location:

Off mainland about 10 miles south-southwest of Machias, Maine.

Accessibility:

By boat only.

Description of Area:

One of the most picturesque groups of islands along the Maine Coast, Roque, Great Spruce, Little Spruce, and six smaller islands, together contain about 12 miles of shoreline and 1,500 acres of land. Roque Island has two good beaches, each over a mile in length, fairly wide, white in color, gently sloping; the coastline is rugged. The group contains an extensive cover of spruce-fir forest with some white pine, white birch, sugar maple and beech, many ferns, mosses and lichens. There has been extensive cutting but some of the forest is still in virgin condition and very important biologically. The area is relatively undeveloped.

Present Use:

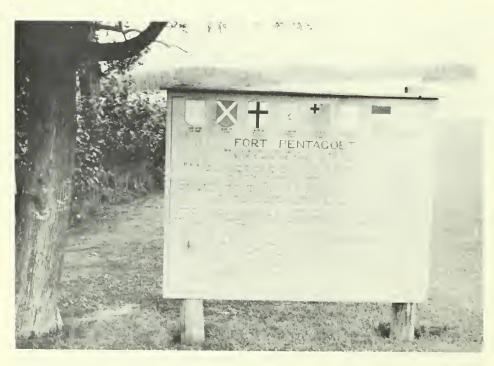
Owned by Roque Island—S. P. Gardner Corporation, members being heirs of the Gardner family. Used as summer residence with some farming, sheep grazing, and selective timber cutting.

Analysis:

An area of unusual park-like qualities, including scenic attraction, natural history interest, and potentialities for organization camps featuring nature studies. Difficulty of access, limited seasonal use, and good conservation practices of present owners indicate that further consideration of this desirable area may be deferred until circumstances warrant action.



Fort George, Castine



Fort Pentagoet, Castine

# Castine

### Maine

Location:

On Penobscot Bay, 40 miles south of Bangor, Maine.

Accessibility:

State Highway 166, 17 miles from junction with U. S. Highway 1.

Description of Area:

Castine is a lovely old New England village of beautiful homes -many of which date to 1800 or before — overlooking the bay. It was the stronghold of French influence in Maine and for two centuries a center of intrigue and international rivalry involving England, France, Holland, the United States and the Indian tribes. Castine was occupied by the British during the Revolution and the War of 1812. Earthwork remains of forts and battery positions, including the wellpreserved Fort George, built by the British in 1779, are scattered through the town.

Present Use:

The town is a summer colony with several small hotels and restaurants and a golf course. Fort George Memorial is a Maine State park. More than 100 markers scattered throughout the town describe incidents of Castine's history. Wilson Museum contains excellent historical and archeological collections.

Analysis:

The historical features of the town are worthy of more extensive interpretive development, which might be sponsored by the Fort George Memorial. Of outstanding historical importance, the town should be considered for possible designation under the Historic Sites Act of 1935.



St. John Beach



Fort Popham

### Popham-St. John

### Maine

Location:

Between Cape Small and the Kennebec River, 17 miles south of Bath.

Accessibility:

By paved road.

Description of Area:

The area has wide stretches of beach interspersed with rocky crags rising to hills covered with hemlock and spruce. Popham Beach is about 2 miles in length, St. John Beach, 1 1/4 miles; the two are separated by a narrow tidal stream, the Morse River. Both are unusually attractive northern New England Beaches, broad and clean. The tiny Fox Islands are just off Morse Point; the largest of these is joined to the beach at low tide. The area is historically important as the site of the first English colony in New England.

Present Use:

The community of Popham owns the western one-third of the 2-mile long beach included in the Popham area; the town of Phippsburg owns a central section of the Popham area; the remainder involves nearly 200 separate ownerships. Nearly all of the St. John area is owned by Mr. George St. John. The Popham area is used as a summer colony; the St. John area is a private holding.

Analysis:

Acquisition of this area is recommended because of the scarcity of public use beaches in this region. The Popham Colony site, of outstanding historical importance, is presently undeveloped but could be administered and interpreted by the Fort Popham Memorial. The site should be considered for possible designation under the Historic Sites Act of 1935.



Fort William Henry (restored)



Pemaquid Beach

## Pemaquid

### Maine

Location:

East side of Pemaquid Neck, 12 miles south

of Damariscotta, Maine.

Accessibility:

By paved spur road from State Highway 130

at New Harbor.

Description of Area:

Located in a typical setting of the rugged Maine coast, Pemaquid is a small fishing and resort town, whose wharf and small, rocky beach border on Johns Bay. Historically, it is one of the most significant sites in Maine, and played an important role in the early history of New England. One of the oldest settlements in New England, Pemaguid was the most vital English outpost against French colonial expansion from the north in the century-long struggle between France and England for possession of eastern Maine.

Over a span of 150 years four forts were built

and destroyed at Pemaquid.

Present Use:

The town attracts a considerable number of summer tourists. Fort William Henry Memorial, a State park, is a partial reconstruction of the stone fort captured by the French in 1696.

Analysis:

This outstanding historical site is being given good interpretive treatment by the State; however, archeological investigation would be a valuable addition to the program. Pemaquid should be considered for possible designation under the Historic Sites Act of 1935.



### Prouts Neck-Scarboro

#### Maine

Location:

A coastal promontory 8 miles south of Portland; west of Old Orchard Beach.

Accessibility:

By car, State Highway 207.

Description of Area:

An hourglass-shaped area with the east and west sides of the triangular portion of the shape forming Scarboro and Prouts Neck Beaches respectively. Scarboro Beach is about 1 1/4 miles long, fairly wide, gently sloped, reasonably free of shells and debris. Behind low, stable dunes is a large freshwater pond and a small expanse of marsh. upland meadows and forests are fast disappearing because of the development taking place on all sides. Prouts Neck Beach, similar in character to Scarboro Beach, but wider, flatter, and cleaner, is about 1 1/2 miles long. The beach is interrupted midway by a river outlet. The ground between the river and the beach is low and marshy.

Present Use:

Scarboro Beach is used by tenants of certain resort properties. The portion of Prouts Neck Beach east of the river's mouth is bordered by a golf course and clubhouse. The portion of the beach west of the river's mouth is now undeveloped but lies in the path of Old Orchard Beach and Pine Point expansion programs.

Analysis:

Prouts Neck-Scarboro area does not have unusual or spectacular character but it does have nearly 3 miles of undeveloped seashore, readily adaptable for recreational use, in the midst of extensive shore developments and adjacent to centers of population. It is believed, however, that this area will be developed for private purposes through the expansion of the communities around it.



Crescent Area, Richmond Beach in Foreground

### Crescent

### Maine

Location:

7 miles south of Portland.

Accessibility:

By road.

Description of Area:

Lying just off the principal traffic routes along coastal Maine, within a few miles of Portland, the largest population center on the Maine coast, the Crescent area possesses fine stretches of sandy beach and interesting natural resources and is easily accessible by road. The beach on the mainland is about 3 miles long and on Richmond Island about 1 mile in length. The mainland area contains about 2,140 acres, and Richmond Island about 220 acres. The vegetative cover is sparse and unimportant. A great variety of marine plants and animals to be found on or near the beach and the breakwater make up a biotic community well worthy of study.

Present Use:

Nearly 70 percent of the mainland portion of the area and all of Richmond Island are owned by the Sprague Corporation. The remainder involves several ownerships. The area is used for summer residence, farming, and commercial installations.

Analysis:

It is one of the very few undeveloped good beach areas remaining in Maine, and is easily accessible from the largest concentration of population in the State.



Drake's Island



Crescent Surf, Drake's Island in Background

### Crescent Surf

### Maine

Location:

On the mainland, about 4 miles south of Kennebunk and 2 miles east of Elms.

Accessibility:

By car, off State Highway 9.

Description of Area:

The western half of Crescent Surf and the eastern half of Drake's Island, two long, green-covered, fingerlike ridges dipping down into the sea, cover about 3 miles of undeveloped beach. The beaches are from 200 to 300 feet wide, clean, and gently sloping. The sand is medium fine, hardpacked and clean. Sand dunes are low, flattopped, regular, stable and grass-covered. Plant cover in a natural condition is found in a forest of white pine, birch and maple, with many ferns, mosses and lichens, back of the beach in the western part of the area.

Present Use:

Crescent Surf section is owned by members of the Parsons family and used as a private summer residence. Drake's Island section is undeveloped but its western portion supports a summer colony, a trend that is rapidly spreading eastward on the island.

Analysis:

The area merits serious consideration above others because of the excellent quality of its beaches, vegetative cover, dunes, marshes and ridges, its adequate size to support recreational development and use, and its proximity to centers of population and principal tourist routes.



Cutler - South Trescott



Sprague Neck

#### Maine

# Cutler-South Trescott

The coastal area between the two villages, approximately 10 miles long, and 1 1/2 miles wide, between Grand Manan Channel and U. S. Highway 1, contains about 9,000 acres of land. The shoreline is rocky and rugged with the uplands reaching a height of 200 feet thickly covered with evergreens. The rugged character of the land limits its possible development and usability for recreational purposes.

## Sprague Neck

A T-shaped area extending westward into Machias Bay, 14 miles southeast of Machias. The shores of the area are narrow (30 feet), steep, and stony gravel in texture. The foreshore water is deep and muddy. The water is too cold and unattractive for bathing. Other areas in the immediate vicinity are superior to it for recreational use.

### Sullivan-East Sullivan

A 5-mile stretch of coast between these two communities, along the northeast side of Frenchman Bay, which at low tide presents a wide mudflat. It has no sand beaches and very little vegetative cover. The area is very inferior to other public areas in this vicinity.



Fort Levett



Ogunquit Beach

### Maine

### Medomac -Luminous Moss Cave

Two small areas, 8 miles east of Damariscotta and 10 miles south of Waldoboro, on both sides of the Medomac River. Hog Island, the area on the west side of Medomac River, is of interest because of its birdlife, and the area on the east side of the river has, in a cave, an unusual species of luminous moss. The Audubon Society has some acreage on Hog Island and is interested in acquiring both points of interests in these areas.

### Fort Levett Military Reservation

The Reservation occupies about one-fourth of an island in Casco Bay, approximately 1 mile offshore and directly east of South Portland. The shoreline is rocky and rugged and there is little vegetation on the island. The Reservation is not of historical importance and has little recreation value.

### Ogunquit Beach

A municipal beach, 1 1/2 miles long and from 600 to 800 feet wide, which lies east of the town of Ogunquit and is owned and operated by that political agency. The beach is one of the finest in the region with its broad, clean, gently sloping area for bathing. The sand dunes are moderately high, generally regular, and flattopped. The area is already in public ownership and is a very desirable asset.

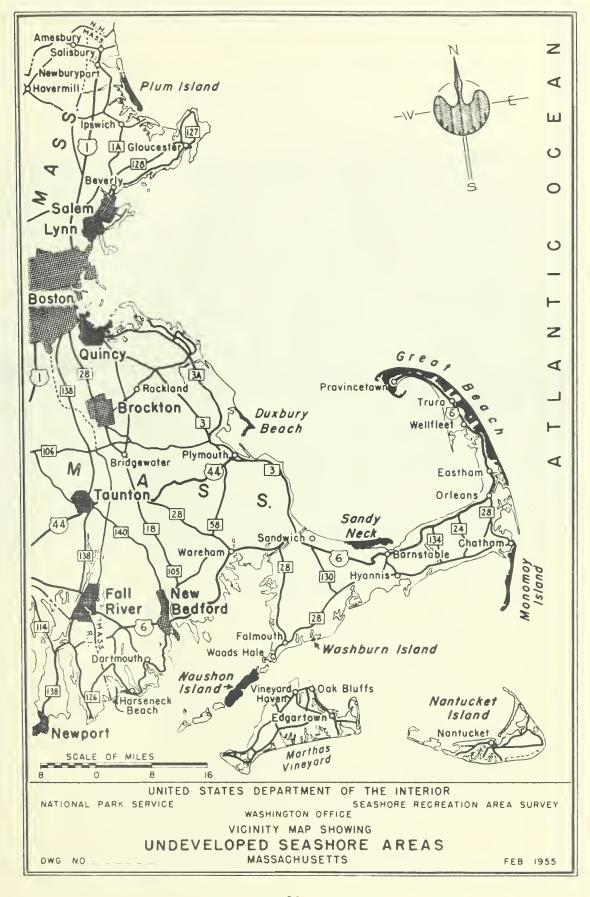


### New Hampshire

# Great Bay

A 10-mile long tidal basin in the western outskirts of Portsmouth some 7 miles inland, this is the largest remaining undeveloped section in New Hampshire that borders salt water. A severe pollution problem results from domestic sewage and industrial wastes contained by the eight streams flowing into the bay. There is a great deal of forest in the area, mostly white pine and sugar maple, but it is nowhere continuous for any great distance, being interspersed with farm land and pasture land. The forested area has been cut over many times. The bay would be suitable for many recreation activities such as bathing and picnicking, camping, nature study, and riding, if it were free of pollution, a situation not foreseeable in the immediate future.







Plum Island

### Plum Island

### Massachusetts

Location:

An island running nearly parallel to the mainland, about 5 miles east of Newburyport.

Accessibility:

By car, off U. S. Highway 1.

Description of Area:

Plum Island is one of three outstanding areas along the Massachusetts coast, easily accessible by car and extensive enough to include natural, scenic and biological features that can be preserved for public use without severe modification. There are six miles of gently sloping beach, and clean, white sand; dunes are up to 50 feet in height and generally stable. Some of the best beach vegetation is to be found along the coast, such as beach grass, beach heath, beach plum and bayberry; there are small trees of red maple, pitch pine, and wild cherry. It is an excellent habitat for migratory waterfowl.

Present Use:

Under the jurisdiction of the Fish and Wildlife Service as a migratory bird refuge.

Analysis:

The quality of its beaches, picturesque dunes, unusual beach vegetation, and its ease of access make it very desirable for public recreation use. A compatible use arrangement with the Fish and Wildlife Service would be most advantageous.



Duxbury Beach



## Duxbury Beach

### Massachusetts

Location:

A slender peninsula lying about 2 miles directly east of Duxbury.

Accessibility:

By hard-surfaced road from Green Harbor, and by bridge from Powder Point.

Description of Area:

Duxbury Beach is a 5 1/2 mile long barrier beach of sufficient size to accommodate adequately an active recreation program without destroying its natural features. Its biological and beach values are not as superior as those of Plum Island. The beaches are wide and gently sloping but contain extensive gravel deposits. The dunes are low and irregular, subject to blowouts from storm tides. The tree and shrub communities which appear only in the middle and southern portions of the area are sparse and not well developed.

Present Use:

The northern portion is used as a public beach by the Town of Duxbury. In the southern portions, Gurnet Point and Saquish Head are being developed as summer colonies.

Analysis:

The area's size, ease of access, proximity to large centers of population, and undeveloped status make it of prime importance in the plan for preserving certain seashore areas for public recreation use. The State has included Duxbury in its long-range plan of acquisition of seashore recreation areas.



Great Beach

### Great Beach

### Massachusetts

Location:

The eastern shore of the outer arm of Cape Cod.

Accessibility:

By road, train, boat, airline.

Description of Area:

Great Beach has the longest unbroken and undeveloped sweep of beach in New England, combined with a picturesque and fascinating hinterland. It is one of the two most outstanding areas reviewed on the Atlantic and Gulf coasts and is believed to be of national significance. The section under consideration should include a maximum of 33 1/2 miles of seashore, in addition to the Province Lands, and a minimum of 15 miles, with an average width of three-quarters of a mile. The beach is excellent in places, quite variable, and backed by cliffs 150 feet high in some sections. The dunes are spectacular, some more than 50 feet high; the vegetative cover is seminatural but varied. The geology of the area is interesting and the history outstanding.

Present Use:

There are numerous private ownerships, and it is a very important summer resort area.

Analysis:

The area is outstanding and deserves every consideration as a public seashore recreation area. Careful study should be given, however, to the possible boundaries of this area in order to determine if acquisition of its natural features without excessive cost is possible.



Sandy Neck



"Sunken Forest", Sandy Neck

### Sandy Neck

### Massachusetts

Location:

A peninsula along Cape Cod Bay, 10 miles southeast of the Cape Cod Canal and directly north of Barnstable.

Accessibility:

By car, paved road off State Highway 6A.

Description of Area:

Sandy Neck is a superior undeveloped area, second only to the Outer arm, of those areas accessible by car along the Massachusetts coast. There are 7 miles of wide beach, gently sloping, sometimes gravelly in texture but generally clean, white and fine. The vegetation is among the most varied and interesting to be found along the coast, with "sunken forests" of pitch pine. There are areas of shrub and heath types of vegetation with such plants as blueberry, bayberry, beach plum, beach heath, barberry and cranberry. There is an extensive salt marsh and the dunes are high, stable and spectacular.

Present Use:

The western end of Sandy Neck is used by the Town of Barnstable as a recreation area. An occasional cottage or shack is spotted along the shore at the easterly end of the peninsula, where there is a summer colony of about 20 cottages.

Analysis:

This is one of the best undeveloped recreation areas seen along the Atlantic Coast; it is near large centers of population, and is accessible by car. The area is desired by the State and is included in its long-range plan of acquisition of seashore recreation areas.



Monomoy Island



### Monomoy Island

### Massachusetts

Location: An island running directly south into

Nantucket Sound from Chatham, at the

"elbow" of Cape Cod.

Accessibility: By boat or plane.

Description of Area: Monomoy Island is a 10-mile stretch of sandy

beach without the spectacular dunes or unusual vegetation of Plum Island and Sandy Neck, but extensive enough to support recreation activities without destroying its natural features. The beach and foreshore are gently sloping, with white, clean sand. Dunes, some as high as 15 feet, exist in the northern and southern portions of the island. There is an oak-pine forested area in the northern portion while the remainder of the island is almost barren of vegetation. The biological importance of the island is primarily that of a migratory bird refuge.

Present Use: The island is under the jurisdiction of the

Fish and Wildlife Service.

Analysis: This is an excellent beach adjacent to a

popular resort area. The State is ne-

gotiating with the Fish and Wildlife Service for its acquisition for public recreation.



Long Pond Beach, Nantucket Island



Great Point, Nantucket Island

### Nantucket Island

### Massachusetts

Location:

An island about 30 miles south of Cape Cod, and 12 miles east of Martha®s Vineyard.

Accessibility:

By boat and plane.

Description of Area:

Nantucket Island is one of the most interesting and unusual islands inspected on the survey. Cobblestone streets, old shops, homes, and museums in quaint villages, bring to mind a sense of the past when the town of Nantucket was a great whaling port. The island is about 14 miles long with an average width of 3 1/2 miles. It is smoothly rolling with practically no forest but extensive shrub cover. Good sandy beaches extend around the island, the south shore being rather steep while the north shore is gentle. The beaches range in color from yellow to blinding white.

Present Use:

It is understood that the county of Nantucket owns the beaches around the island to high water line, by a recent act of the State legislature. Land above high water line is owned by private individuals. The island is principally a summer vacation center.

Analysis:

The antipathy of the residents of the island toward public ownership of lands and the recent legislation that makes the beaches available to the public, preclude the possibility of recommending sites for public recreation areas.



Gay Head Cliffs, Marthas Vineyard

### Marthas Vineyard

### Massachusetts

Location:

Off mainland 5 miles south of Cape Cod and 12 miles west of Nantucket Island.

Accessibility:

By boat only.

Description of Area:

Marthas Vineyard is a land of serene old houses, summer cottages, small farms, interesting villages and picturesque boat harbors. The island is about 20 miles long and 10 miles wide with lands that are hilly and broken by rocky outcroppings and tree-filled ravines. Spectacular multicolored cliffs appear at the southwestern end of the island. The beaches are generally sandy along the south shore but the foreshores are rather steep. There are no extensive stretches of land along the seashore that do not contain improvements of some sort. The system of well-constructed roads around the island receives considerable use.

Present Use:

The island is principally a summer vacation center. It receives much heavier use than Nantucket Island, as it is closer to the mainland.

Analysis:

There are at present three public beaches—
one State and two town—located on the island.
In addition, it is believed, recent legislation
provides that the beaches are the responsibility of Dukes County, and the public has
right of access to them.



### Washburn Island

### Massachusetts

Location:

Situated in Town of Falmouth at mouth of Waquoit Bay and adjacent to South Cape Beach.

Accessibility:

By car, off State Highway 28.

Description of Area:

The primary significance of this area is the public beach recreation opportunities it offers in a heavily populated, highly developed resort area. There is nearly a mile of beach on the ocean side and about one-half mile on the bay. The beaches are fairly wide, some gravel, gently sloping, and comparatively clean. There are no dunes or shrub or tree communities of significance in the area.

Present Use:

It is held in private ownership and is not

now being used.

Analysis:

The beach area is highly desirable for public recreation. Its undeveloped status in this section of Cape Cod is quite unusual. The State is now negotiating for its use as

a public recreation area.



Naushon Island



## Naushon Island

### Massachusetts

Location:

Largest of the Elizabeth Islands, lying between Buzzard's Bay and Vineyard Sound.

Accessibility:

By boat only.

Description of Area:

The largest in this chain of islands, Naushon Island is about 6 miles long and possesses a rugged shoreline, dotted with occasional gravel beaches. Rolling topography and good cover add to the charm of the area. There remain on the island remnants of the type of oak-beech forest that once covered most of the Cape Cod area. Exotic plants have been introduced in great numbers. Private residences and outbuildings of the owners are located on the north end of the island.

Present Use:

It is used as a private summer residence of the heirs of the Forbes estate and their guests. Large numbers of sheep are grazed on the island.

Analysis:

The island does not possess good beaches but should be preserved because it contains the only proved climax oak-beech forest surviving in New England. Authorities contend that the forest at the northern end of the island has never been cut in historic times and that the southern end has not been

cut since 1820.



Horseneck Beach

#### Horseneck

## Massachusetts

Location: Near Massachusetts-Rhode Island line,

southeast of Westport Point.

Accessibility: By car, off State Highway 6.

Description of Area: Horseneck is considered by the Division of

Public Beaches to be the best undeveloped beach remaining in the State. The beach extends for about 3 miles, a portion of which was well-developed prior to Hurrican Hazel in 1954. The hurricane cleared many sections of beach developments. There are no dunes or biological life of significance in the area. The beach is wide, gently sloping, with some

gravel and rocks.

Present Use: Prior to the hurricane, it was used as a

private bathing beach for property owners

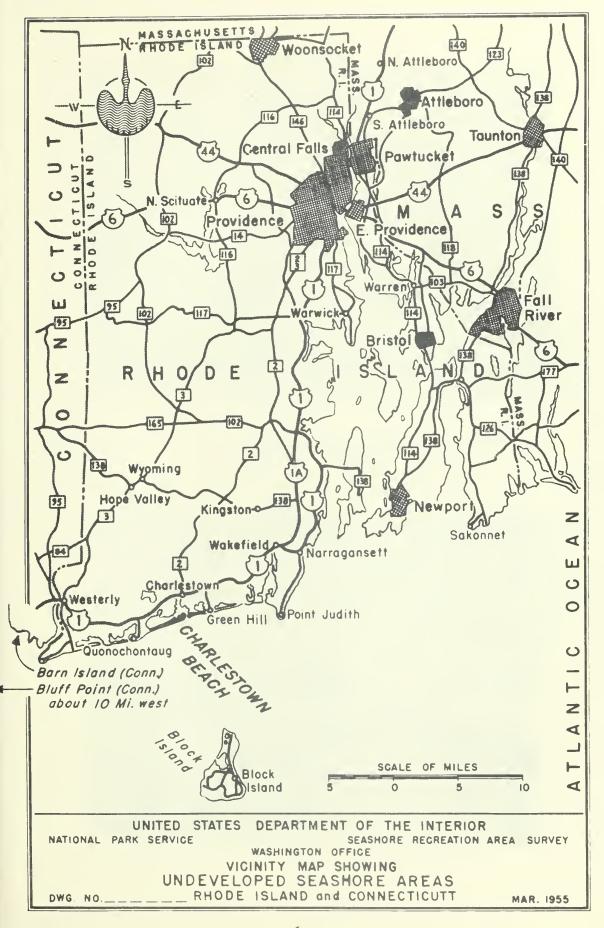
and their guests.

Analysis: The Governor of Massachusetts has requested

an appropriation from the Legislature (1955) to acquire and develop the 3 miles of beach. It will meet a definite need for public beach

recreation in this section of the State.







Charlestown Beach



#### Charlestown Beach

#### Rhode Island

Location:

A barrier reef, between Quonochontaug

and Green Hill, Rhode Island.

Accessibility:

By car, off U. S. Highway 1.

Description of Area:

A 5-mile barrier reef, Charlestown Beach has an average width of 400 yards and is almost barren of vegetation. The salt ponds between the beach and the mainland are biologically interesting because of the large numbers of aquatic plants and animals. The beach is mostly wide, gently sloping, and contains considerable gravel. The foreshore varies in slope, and there is evidence of undertow activity. Dunes appear intermittently and, at times, reach 20 feet

in height.

Present Use:

Prior to the hurricanes of 1938 and 1954, it was developed and used by its many

owners as a summer resort area.

Analysis:

The Governor of Rhode Island has requested an appropriation from the legislature (1955) for the purchase of 2 miles of beach front (at Misquamicut and East Matunuck), outside the boundaries outlined above. These areas were badly hit by the 1954 hurricanes. The State will, no doubt, enter into negotiations for the Charlestown area sometime in the

future, and thus tie together in one unit the

desired beach frontage.



Barn Island



Bluff Point

#### Connecticut

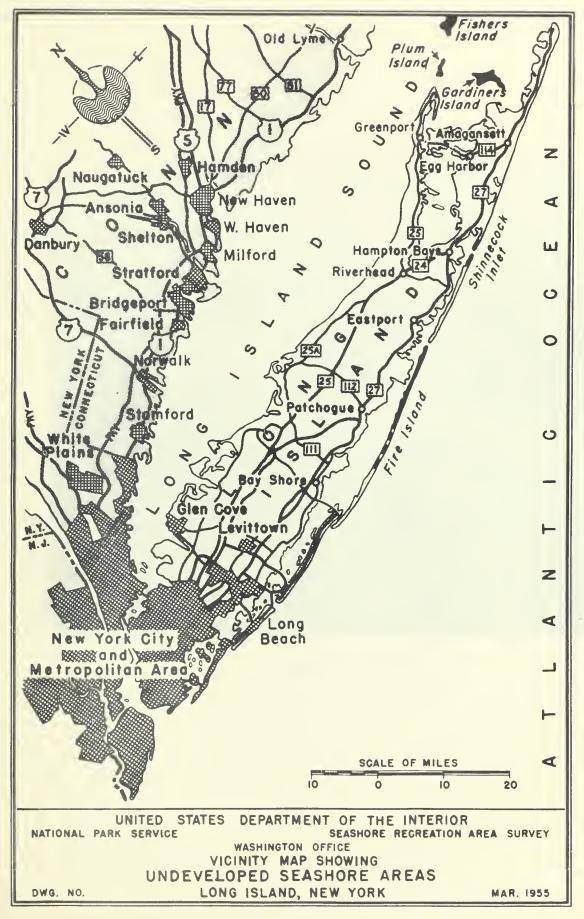
#### Barn Island

A peninsula, about 2 miles long and over 1 mile wide, containing approximately 1,600 acres of low marshy land and wooded upland, which lies on the coast of Connecticut near the Rhode Island-Connecticut line, south of Pawcatuck, Connecticut. Its shores are stony and the water is polluted. The area is under the administration of the State Game Commission. If industrial waste can be eliminated from the Pawcatuck River, a portion of the shoreline could be adapted for public recreation use.

# Bluff Point (Mumford Point)

A peninsula, approximately 1 1/2 miles long, 1/2 mile wide, on the coast of Connecticut, 3 miles southeast of Groton, containing about 550 acres of partially wooded land and beach. It contains a fine cattail swamp and a small forest with oaks, hickory, beech, hornbeam, and hawthorn being the most prominent trees. The beach is pebbly and backed up by low, eroding rock outcroppings, and sand and boulder cliffs. It is privately owned, has little development and is easily accessible from large centers of population. The State has had this area under consideration for acquisition for some time.







Gardiners Island

#### Gardiners Island

#### New York

Location: Off shore of eastern end of Long Island,

northeast of Hampton, Long Island.

Accessibility: By boat only.

Description of Area: An island of unusual interest because of its

wildlife, near virgin forest, fresh-water ponds, and varied shoreline. It is about four miles long, three miles wide, with hills reaching heights of about 130 feet. The seaward side of the shoreline is eroded, forming steeply sloping sand cliffs at the base of which a narrow, sand and boulder-strewn beach slants off abruptly into deep water. Fresh-water ponds near the beaches have been formed and are fed by streams from the hilly area in

the center of the island.

Present Use: The island is in private ownership and is used

as summer residential property.

Analysis: The Fish and Wildlife Service is negotiating

for the acquisition of the island as a wildlife area. It is believed no further

study is necessary at this time.



Shinnecock Inlet



#### Shinnecock Inlet

#### New York

Location:

Southern shore of Long Island, 90 miles east of New York City.

Accessibility:

By paved road.

Description of Area:

This seven-mile stretch of privately owned seacoast has relatively few ownerships, is easily accessible by road and is one of the few remaining seashore recreation opportunities available to the largest population center in the United States. The reef is about 1,200 feet wide and is bisected by Shinnecock Inlet. About 1/3 of the area lies east of the inlet, the other 2/3 to the west. The quality of the beach is outstanding. It is wide, clean and gently sloping. The vegetation is sparse, the dunes low and partly stabilized. The area also has historical interest.

Present Use:

At the time of the reconnaissance of this area, 82 percent of it was in the hands of the Henry Phipps estate. It is understood now, however, that this portion has been sold to real estate interests. The remainder involves 15 to 20 separate ownerships. The area is used as a fishery station, for sun and surf bathing, and as a beach club, and has some summer cottages.

Analysis:

The area is not as extensive as Fire Island but is only slightly less accessible to Metropolitan New York.



Fire Island Beach



Sunken Forest near Point O'Woods

## Fire Island

#### New York

Location:

South shore of Long Island, about 50 miles

east of New York City.

Accessibility:

Bridge is planned and funds are available for its construction at Smith Point; elsewhere by ferry.

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Description of Area:

The sunken holly forest on this island is one of the most unique biotic communities to be found along the Atlantic Coast. Fire Island's proximity to the largest population center in the United States and its 18 miles of undeveloped beach make it of unusual significance. The beach is wide, clean and gently sloping. The dunes are for the most part stabilized and reach a height of 20 to 30 feet. Other than the holly forest, vegetation is not abundant or unusual. Salt marshes border the Great South Bay. The area has considerable historical value.

Present Use:

A State park, a county park, botanical preserve, communities, subdivisions, and numerous small ownerships are contained on the island.

Analysis:

The area is of extreme importance because of its natural features and its close proximity to large centers of population. It would be very difficult and expensive to acquire.



Long Island, North Shore

#### New York

#### Fishers Island

A long, narrow island, possibly 6 miles in length, located in Long Island Sound south and west of the city of New London, Connecticut. Its beaches are narrow and stony, with deep water just beyond. The rolling sparsely wooded hills break off sharply, here and there, at the beach's edge, to expose crumbling rock ledges or to become sand-and-boulder cliffs. In the central area of the island are several freshwater ponds. Access to the island is by boat and plane. On the western end are important military installations which protect the submarine pens on the Thames River and sea operations in this area. There are several extensive residential developments on the island. It is believed that further study of the island is unnecessary at this time.

# Long Island (North Shore)

The north shore is approximately 125 miles long and consists of hilly terrain with steep sand-and-boulder cliffs and narrow boulder-strewn beaches. The shore is marked by almost continuous development from west to east and from the shore inland. There are three State parks and numerous municipal beaches along the shore, with a number of bays and harbors being used for boat anchorage. The area contains many large estates and farms between the several communities along the coast. The undeveloped areas are, for the most part, held in large estates. The shoreline and beaches are not as conducive to public recreational use as those on the southern shore of Long Island.

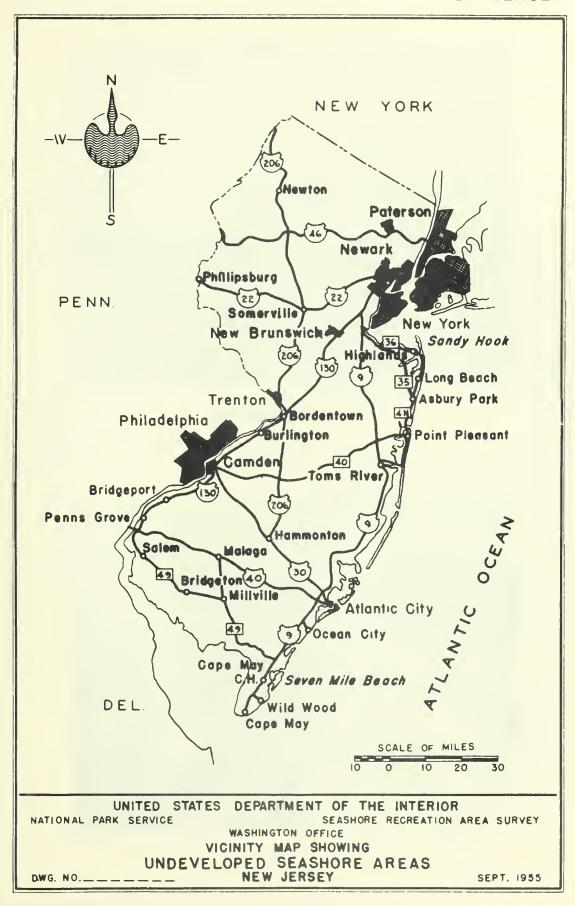


## New York

## Plum Island

A triangular-shaped island 1 1/2 miles long and 3/4 mile wide with a mile-long sandspit "tail" extending eastward from the main body. It is located in Long Island Sound, about 1 mile northeast of Orient Point. The beach areas are narrow and stony and the foreshore becomes deep rather quickly. Interrupting the beach areas are sandy cliffs. Behind the cliffs, the terrain is hilly and generally treeless. Near the west-central end of the island is a small fresh-water pond. The island is quite highly developed, including military installations, and it is understood the United States Department of Agriculture has leased a portion of the area from the military and is developing a multimillion dollar research laboratory. The existing developments and those planned indicate this area will require no further study at this time.







Beach Haven, Long Beach



Brigantine Inlet North

## Little Egg Harbor Area

## New Jersey

Location:

The beaches and harbor of Brigantine Inlet in the vicinity of Beach Haven.

Accessibility:

By paved road to below Beach Haven; by boat to other portions.

Description of Area:

Considered the most valuable coastal marsh area along the Atlantic Coast. It is the wintering grounds of the Atlantic brant and contains the largest colony of laughing gulls along the east coast. The beaches to the north and south of Brigantine Inlet are about five miles in length. The undeveloped portions of the beaches are washed over and unstable. A study is being made by the Corps of Engineers to determine the rate of erosion and probable cost of stabilization of this section of the seashore.

Present Use:

A portion of the coastal marsh area is under the administration of the Fish and Wildlife Service. The southern terminus of Long Beach is privately owned and the beach south of Brigantine Inlet is owned by the Borough of Brigantine.

Analysis:

The area should be preserved because of its outstanding biological values. The northern portion of this area is now under consideration for addition to the Brigantine Wildlife Refuge and is admirably suited for that purpose.



Bird Sanctuary, Stone Harbor



Seven Mile Beach

#### Seven Mile Beach

## New Jersey

Location:

Portion of the barrier reef between

Avalon and Stone Harbor.

Accessibility:

By paved road.

Description of Area:

There are 2 1/2 miles of undeveloped beach, from 100 to 200 feet wide. The sand is clean but dark, and the beach area slopes rather steeply into the water. The dunes are numerous and stable, and some reach 25 feet in height. The bird sanctuary within the Borough of Stone Harbor is of great scientific importance because of a heron rookery and because the biotic community is typical of plant and animal life as it existed on the strand before human

existed on the strand before num

habitation.

Present Use:

There are occasional residences and some

evidence of real estate promotion.

Analysis:

If the communities of Avalon and Stone Harbor expand, they will encroach upon the undeveloped area which lies between them. This

procedure seems inevitable.



## Sandy Hook

## New Jersey

Location: Northern terminus of long barrier reef

extending from Long Branch to north of

Highlands.

Accessibility: By paved road.

Description of Area: One of the best areas within the metropolitan

zone of Greater New York and the New Jersey cities of this vicinity. Its four types of biotic communities—beach grass, shrub, forest, and salt marsh—are as typical and as nearly natural as any in New Jersey. They contain a good variety of plant species including American holly and beach plum. There is a coast line of about 13 miles on both the Atlantic Ocean and Sandy Hook Bay. The beach is 200 to 300 feet wide and somewhat steeply sloping into the water. The sand is light-colored,

clean, hard and fine.

Present Use: The entire peninsula is a United States

Military Reservation of great strategic

importance to the defense of New York.

Analysis: Its importance to the military precludes the

possibility of its use for recreational purposes at the present time. Its value as a public recreation area should never be dismissed, however, and it should eventually be

put to this use when circumstances permit.



Beach at Coneskonk Point

#### Conaskonk Point

A 267-acre triangular plot of land thrusting northwardly into Raritan Bay. The land is low, marshy, and subject to partial tidal inundation. The beach is narrow, about 8,000 feet long, and is littered with driftwood and other debris. There are no sand dunes or shrub or forest communities, and the water appears to carry some pollution.

## Seabright Beach

A narrow, 4,000-foot long, portion of a barrier reef extending from Sandy Hook to Long Branch. The beach area is barren of vegetation and the small amount of undeveloped land remaining is gradually being replaced by residential properties.

## Long Branch Beach

An extremely small piece of land close to the city of Long Branch completely surrounded by residential developments and void of sand dunes and vegetative cover.

# Manasquan

A strip of coastal shoreline, about 2,400 feet in length, south of Sea Girt and north of Manasquan. The remaining small portion of undeveloped land is being encroached upon by the two expanding communities.



# Long Beach

The undeveloped southern end of Long Beach is a barrier island, about 3,000 feet long and 2,000 feet wide, and contains approximately 150 acres of land. There is some grass, but there are no trees or shrubs. A considerable portion of the beach is inundated at high tide and is unsafe for bathing because of undertow and riptides.

## Absecon Inlet Beach

About 260 acres of land are contained in the 1 1/4 miles of undeveloped beach on the southern tip of Brigantine Beach. The beach is clean and wide but subject to severe erosion. Corrective measures to date have failed to stop this erosion. Tides flowing through Absecon Inlet cause the beach to be unsafe for bathing. If erosion is controlled the area will undoubtedly be developed by the Borough of Brigantine.



Corson Inlet



Ludlan Beach

## Corson Inlet Beaches

North and south of Corson Inlet are two undeveloped beach areas. The north beach is about 3,000 feet long and the south beach about 1,000 feet. Together the beaches comprise approximately 100 acres of land, portions of which are subject to tidal inundation. There is little vegetation on the areas. Because of currents through the inlet, the possibility of undertow and riptides exists, placing a questionable value on the usefulness of the areas for bathing purposes.

## Ludlam Beach

A mile-long beach lying between Sea Isle City and Townsend Inlet which possesses some vegetation and generally stable dunes. The beach is from 200 to 300 feet wide, but dips somewhat steeply into the water. The beach is being constricted by the expanding growth of the two cities and, it can be assumed, will be absorbed by them.

#### Hereford Inlet Beach

The southern end of the barrier reef that extends from Townsend Inlet to Hereford Inlet is undeveloped. The 1 mile of beach contains an excellent example of the original plant-animal community typical of the New Jersey coast. In addition, a bird sanctuary, which has been set aside by the community of Stone Harbor, is a portion of this area. The sanctuary and as much buffer area as possible should be preserved in public ownership. The lower portion of the beach is low, marshy and subject to erosion. It could serve as a community public beach area.



Two Mile Beach, Stone Harbor



South Cape May

## Two Mile Beach

There are two miles of undeveloped beach at the southern end of the barrier reef that lies between Hereford Inlet and Cape May Inlet. The beach is wide, flat and clean. Sand dunes are numerous, low and stable. The entire area has a good cover of grass and shrubs and on the southern portion there is a long, narrow grove of good sized trees. It is reported the area is being held by a development company and it is presumed that the community of Wild-Crest will expand in the direction of the beach area.

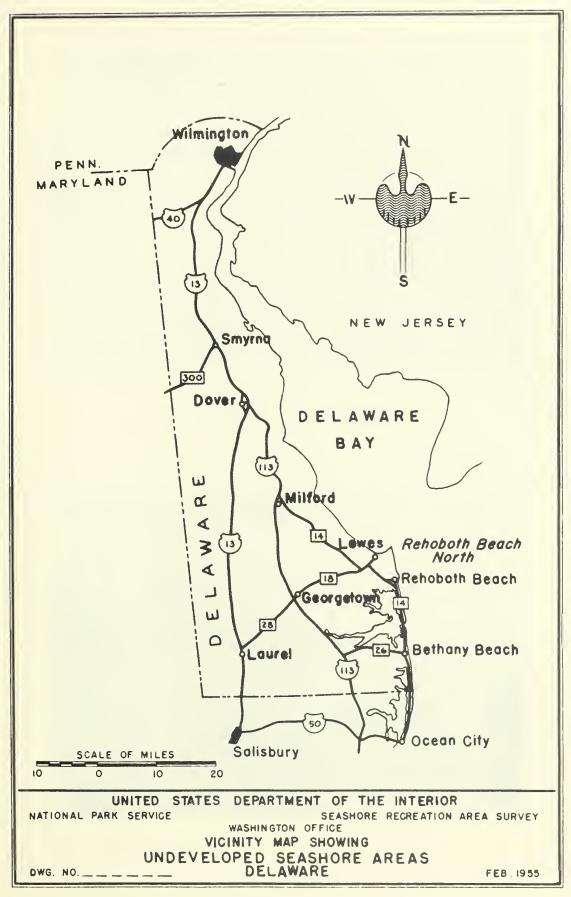
# South Cape May

This area is a portion of the coastal headland of Cape May that lies between Cape May Point and the community of Cape May. There are about 7,000 feet of shore line along the Atlantic Coast. The beach is narrow, dark-stained and littered. The dunes are low and unstable.

# West Cape May

The area is located near the southermost tip of New Jersey on the western, or Delaware Bay, side. It is roughly square in shape, about a mile long on each of its four sides. The beach is narrow and the sand dark but clean. The dunes are more like ridges and appear to be stable. A larger portion of the area is gently rolling, partly forested and partly farmed. The remaining portion is low and swampy, providing a favorable wildlife habitat.







Rehoboth Beach North



### Rehoboth Beach North

#### Delaware

Location:

North of Rehoboth Beach to Cape Henlopen.

Accessibility:

By beach buggy, jeep and boat.

Description of Area:

Near Cape Henlopen is an extensive formation of sand dunes reaching 70 feet in height. South of the dunes is a low and partly marshy area of about 1,500 acres (Gordon Pond) with 2 miles of excellent beach, and tree and shrub cover that progresses from sparse to medium density inward from the beach. Continuing southward, a strip averaging about 800 to 1,000 feet in width along the shore is characterized by medium-sized dunes and clean, gently sloping beach. Inland from the beach and intermittently along the bay side, there are good stands of trees and shrubs.

Present Use:

At Cape Henlopen is Fort Miles, an Army installation, whose development occupies all of the cape and some of the larger dunes to the south. Most of the area south of Fort Miles property to just north of Rehoboth Beach is owned by the State of

Delaware.

Analysis:

The area, if retained in public ownership, would serve well as a seashore recreation area when the demand warrants its use.



Bethany Beach



Fenwick Island

#### Delaware

### Bethany Beach North

Two and one-half miles of good beach, directly north of Bethany Beach and adjacent to State-owned property below Indian River Inlet, would be a desirable addition to the State lands, thereby providing a continuous stretch of public beach from just south of Dewey Beach to Bethany Beach, a distance of over 10 miles. However, these lands are in private ownership and portions are being subdivided and sold.



#### Delaware

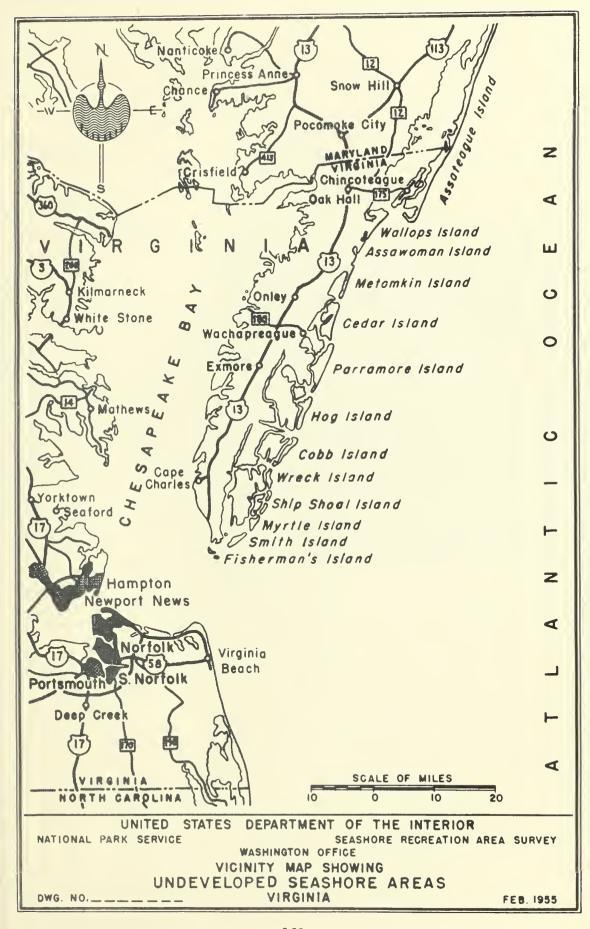
### Dewey Beach South

This area is a small segment of undeveloped beach lying between Dewey Beach and the State-owned land to the south, and is similar in character to that already possessed by the State. If the present holdings of the State of Delaware are expanded, it should be considered.

### Fenwick Island South

This area is another small segment of undeveloped beach land between the Maryland State line and the State holdings immediately to the north. Here again this would, if acquired, extend the present holdings of the State of Delaware for public recreational purposes.







### Assateague Island

### Maryland

Location: Off the mainland, south of Ocean City

to Virginia State line.

Accessibility: By boat only.

Description of Area: A 20-mile strand of excellent beach with

medium low dunes bound and restricted by beach grasses of varying density. Toward the bay the dunes fall away into heavily grass-covered marshes where, on the firmer and higher ground, patches of woodland rise. There are intermittent stretches of flat barren sands across the entire width of the

island where blowouts have occurred.

Present Use: The area is the site of one of the largest seashore developments along the Atlantic

seashore developments along the Atlantic coast. A hard-surfaced road has been constructed the length of the island and lateral streets have been graded and marked out. Several cottages have been constructed

and several thousand lots have been sold.

Analysis: The advanced stages of real estate develop-

ment appear to preclude the possibility of this

area being set aside for public recreational

use.



### Assateague Island

### Virginia

Location: Off mainland, from Maryland State line

southeast to Chincoteague, Virginia.

Accessibility: By boat only.

Description of Area:

A continuation of Assateague Island,
Maryland, with about 12 miles of excellent beach and a luxuriant growth of

vegetation in a relatively unspoiled state. The beaches are wide and clean, the foreshore gently sloping. This portion of the island is wider, has higher

dunes and is less subject to blowouts; it is an excellent example of typical Atlantic

seacoast.

Present Use: The southern third of the island, lying

between Chincoteague and the sea, is a national wildlife refuge. The island is

undeveloped.

Analysis: Compatible use of this area might be

considered so that the excellent quality of its recreational resources could be utilized to the greatest advantage.



Ocean Beach



Gull Rookery, Parramore Island

### Parramore Island

### Virginia

Location:

5 miles off Wachapreague, Virginia.

Accessibility:

By boat only.

Description of Area:

It is the longest in the chain of coastal islands lying off the Virginia Eastern Shore. The island is undeveloped and relatively unspoiled, and its beach offers excellent opportunities for bathing, surf casting and other forms of seashore recreation. Within the forested area on the island are several fresh-water ponds and marshes which attract migratory waterfowl; along the west side of the island is an interesting salt marsh zone. The island is  $7\frac{1}{2}$  miles long, averages three-fourths of a mile in width and contains approximately 6.255 acres of land.

Present Use:

Privately owned and used by Mrs. Jean Maxwell Saunders and Dr. Carl J. Schmidlapp. It is understood, however, that the Navy has recently requested funds to obtain the island for a target range.

Analysis:

It is one of the best remaining undeveloped area along this section of the Atlantic coast, with important scenic and wildlife values, and would make an excellent public seashore recreation area.



Hog Island



### Hog Island

### Virginia

Location:

5 miles off the Eastern Shore of Virginia,

just south of Parramore Island.

Accessibility:

By boat only.

Description of Area:

This island is almost a barren strip of sand, 6 miles long by less than 1 mile wide. Since 1900, the entire village of Broad Water--a town of several hundred people with a church, school and post office--has been washed into the sea. The lower half of the beach is filled with stumps of trees and bordered with piles of dead tree trunks and bushes. Vegetation is sparse; there are some scrub trees and bushes

well back from the beach.

Present Use:

The island has no residents. There is limited grazing, and the island is visited occasionally

by fishing parties.

Analysis:

The considerable washing away of sections of the island and its isolated position are obstacles to its consideration as a public seashore recreation area. If the dunes and shoreline were stabilized, it would make an attractive

area.



Cobb Island

### Cobb Island

Directly south of Hog Island and about 8 miles from the mainland lies Cobb Island. It is less than 6 miles in length and almost devoid of vegetation. The beach is wide and fairly clean but the foreshore dips rather sharply into the sea. It is understood that this island also once supported a community which has been washed away by the sea. The processes of erosion and its isolation deter its consideration as a public seashore recreation area.

### Wreck Island

An island off the Eastern Shore of Virginia directly east of Cape Charles and south of Cobb Island, which supports only a marshy type of vegetation. The dunes are low and unstable, with indications that this island has been washed over many times. There is no high, firm ground on the island. Its low elevation, isolation, and erosion difficulties make it undesirable for consideration as a public seashore recreation area.

# Ship Shoal Island

This island lies directly south of Wreck Island. It is similar in character and does not warrant consideration as a public recreation area.



# Wallops Island

An island off the Eastern Shore of Virginia, south of Chincoteague and east of Mappsville, which possesses some sizable portions of forested land, narrow beaches, a few dunes, and evidences of erosion. It contains an anti-aircraft military installation which is the only development on the island. The area is not as desirable for seashore recreation purposes as some of its neighbors, such as Assateague or Parramore Islands.

### Assawoman Island

Just to the south of Wallops Island lies Assawoman, similar in character but with less cover. This is a target area under military jurisdiction. The island is undeveloped.

### Metomkin Island

A slender, finger-like island, south of Assawoman Island and east of Accomac, possessing very little vegetative cover, narrow littered beaches, and unstable dunes. The island is undeveloped. The island does not possess the resources desirable for a public seashore recreation area.



### Cedar Island

An island lying northeast of Wachapreague and southeast of Accomac which contains some good tree and shrub cover, and is wider than the island immediately to the north. The beaches are broader and less littered. The island has been subdivided and lots are being sold in anticipation of the construction of a causeway or bridge from the mainland. The island is not as desirable for seashore recreation purposes as Parramore Island, directly to the south, and would, no doubt, be excessive in cost.

### Myrtle Island

One of the chain of small washed-over islands lying off the Eastern Shore of Virginia east and south of Cape Charles, it is barren of vegetation. It is not considered desirable as a potential seashore recreation area.



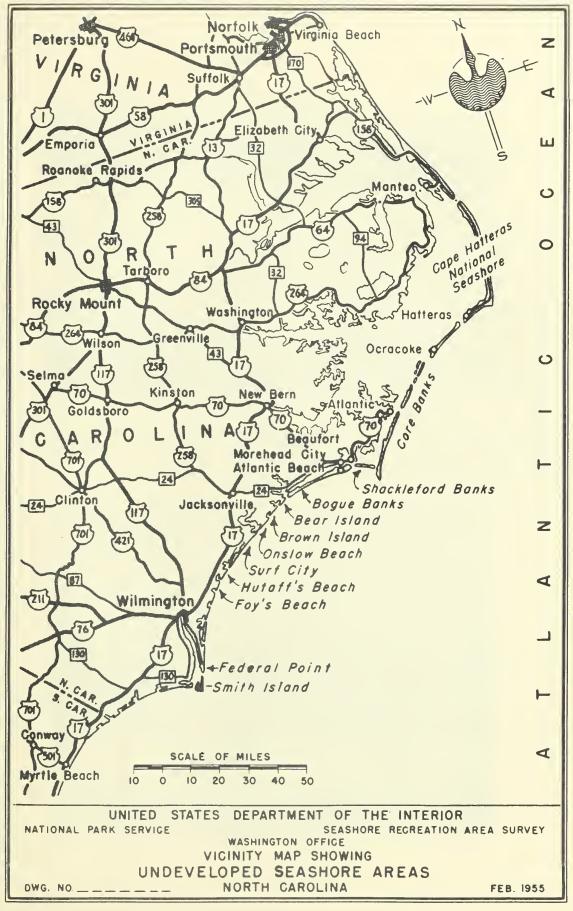
# Smith Island

Near the southern tip of the Eastern Shore of Virginia lies Smith Island. This area, like the others in the immediate vicinity, lacks the necessary natural resources to qualify it as a potential public seashore recreation area.

## Fisherman's Island

The smallest of the islands lying off the Eastern Shore of Virginia is directly south of Cape Charles. It is similar in character to Smith Island and is not considered desirable as a potential public seashore recreation area.







Core Banks



#### Core Banks

### North Carolina

Location:

Barrier reef running from Ocracoke Inlet

to Cape Lookout.

Accessibility:

By boat and plane only.

Description of Area:

Core Banks, 33 miles in length, along with Portsmouth Island, 9 miles long, are low, marshy barrier beaches almost devoid of tree or shrub vegetation. The scattered dunes are low and unstable; the beaches are wide, clean and gently sloping. Inaccessibility and the low, barren nature of these

islands have prevented development.

Present Use:

A fishing village exists on Portsmouth Island and about 30 to 40 fishing cottages

have been built on Core Banks.

Analysis:

If the Core Banks could be restored by an adequate sand fixation program, they would possess first-rate potentialities as public

beaches.



Shackleford Banks

#### Shackleford Banks

### North Carolina

Location: Barrier reef running between Barden

Inlet and Beaufort Inlet.

Accessibility: By boat only.

Description of Area: The island contains well-elevated land

and expands to widths of one-half to three-quarters of a mile. Dunes rise to a height of 20 to 25 feet. The 8-mile ocean beach is clean and attractive but not as wide as that of Core Banks. The biotic communities of the western portion, if allowed to develop naturally for a period of years, could become of consider-

able scientific importance.

Present Use: About 10 fishing cottages are located on

the island.

Analysis: This is a potentially valuable public beach

of a type that might well render greatest service if acquired for that purpose and

kept in natural condition.



Bogue Banks

# Bogue Banks

### North Carolina

Location:

West of Salter Path, 3 1/2 miles.

Accessibility:

By road.

Description of Area:

A typical barrier reef some 9 miles in length with an average width of 1/2 mile. Its beach is smooth, uniform and gentle in slope. Roughly two-thirds of the island is covered with dense, windswept woodland, dominated by live oak in association with hornbeam, holly, red mulberry, laurel oak and devil's-walking-stick. The dunes are up to 25 feet in height and generally stabilized. The area contains approximately 2,800 acres of land.

Present Use:

Eight persons have combined to develop, promote and sell lots in a subdivision called Emerald Isle by the Sea.

Analysis:

The area is easily accessible and adaptable for public recreational use. It possesses the features necessary for this purpose. Acquisition of this area may be difficult and expensive.



#### Onslow Beach

## North Carolina

Location: A segment of seashore lying between Browns

and New River Inlets, southwest of Swanboro,

North Carolina.

Accessibility: By road.

Description of Area: There are about 7 miles of good beach with

numerous stabilized dunes (not as spectacular as those immediately to the north of Onslow Beach) and a generous cover of tree and shrub

vegetation that is comparatively natural.

Present Use: Used by U. S. Marine Corps for training in

amphibious landings and other related

activities.

Analysis: This area possesses excellent seashore values

and should be retained in public ownership for recreation and conservation of natural values, when it becomes surplus to military require-

ments.



### Federal Point

### North Carolina

Location:

South of Kure Beach and north of Corncake

Inlet.

Accessibility:

By road.

Description of Area:

A triangular point bordered by the Atlantic Ocean and Cape Fear River, which contains a fair stand of trees and shrubs. The beach shows severe signs of erosion and is low and marshy at intervals. The dunes are insignificant. Most of the site of old Fort Fisher is now under water. The area is easily accessible and contains approximately 1,000 acres of beach property suitable for recreation.

Present Use:

Used as a fishing base, and is advertised

for residential resort development.

Analysis:

Could be considered for public recreation use if other more desirable areas, such as Smith Island, are not acquired for this purpose. The Civil War history of Fort Fisher should be more fully interpreted.



Smith Island

### Smith Island

### North Carolina

Location:

Northwest of Southport about 2 1/2 miles.

Accessibility:

By boat.

Description of Area:

Considered to be among the five most outstanding undeveloped areas for recreation purposes along the Atlantic coast, the island has excellent vegetative cover and outstanding biological values. About 6 miles long with an average width of 2 1/4 miles, it contains about 11,900 acres of land, marsh, and fresh-water lakes. The two beaches, about 5 miles long, are wide, with clean white sand. The dunes are stable. Because of the well-developed forest and salt marsh, birds are more plentiful than on many Atlantic coast sea islands. It has outstanding historical values.

Present Use:

Privately owned and used by Mr. Frank O. Sherrill of Charlotte, North Carolina.

Analysis:

This is an outstanding area with excellent qualifications for public seashore recreation purposes. It does not appear that it would be difficult to acquire or

unusually expensive.



#### North Carolina

#### Bear Island

An island, off the mainland between Bogue and Bear Inlets, south of Swansboro, North Carolina, which is about 3 miles in length. It possesses dunes that approach the spectacular and contains a fair cover of trees and shrubs. The beach is wide and clean. The island is inaccessible by road but is sufficiently tied to the mainland by marshes so that road connections should not be prohibitively expensive. It possesses the natural resources desired for a public seashore recreation area and should be considered in planning for the future needs of the public. The superiority of both Smith Island and Bogue Banks precludes its consideration at this time.

#### Brown Island

This island lies directly south of Bear Island, and is similar in character, desirability and length but with more vegetative cover and dunes a little less impressive in height. The island is inaccessible by road at the present time. Its consideration, like Bear Island, is secondary to that of Smith Island and Bogue Banks at this time.



#### North Carolina

# Surf City (Northern part)

The undeveloped portion of this barrier reef, north of Surf City, has excellent dunes, a wide, firm, clean beach and a gently sloping foreshore. The vegetation is fair and the reef very narrow. The road extends some 14 miles north of the city but almost half of this area is now occupied by summer cottages. Although it possesses the resources necessary for a public seashore recreation area, it is secondary in importance to Bogue Banks and Smith Island.

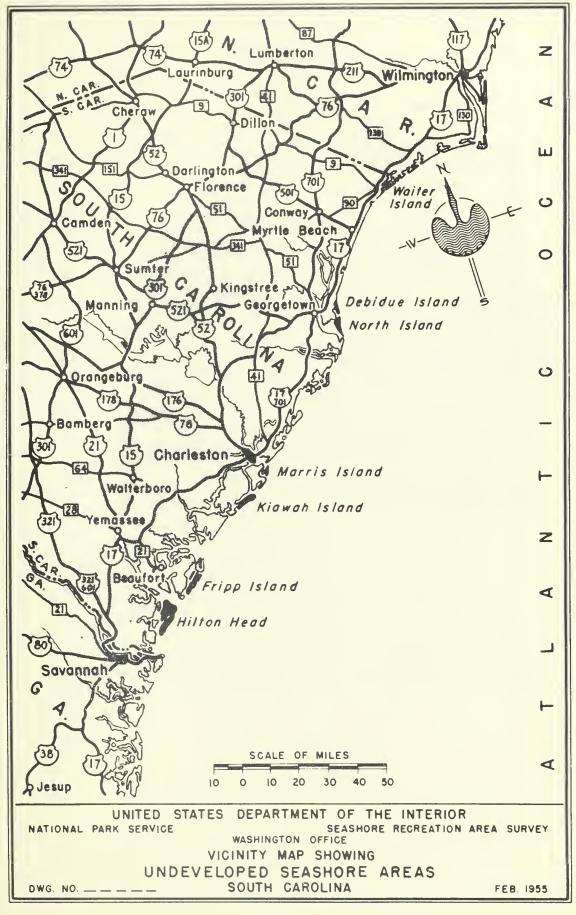
### Hutaff's Beach

Between New Topsail Inlet and Rich Inlet is a 1-mile segment of barrier beach called Hutaff's Beach. It is not accessible by road. The character of the area is similar to that found at Surf City and it is desirable for public recreation purposes. It is secondary in importance, however, to Bogue Banks and Smith Island.

### Foy's Beach

South of Hutaff's Beach lies Foy's Beach, a 2-mile stretch of barrier reef with interesting tree cover, sizable dunes, and a wide firm, clean beach. It is inaccessible by road. Although superior to the islands immediately to the north it does not equal the quality of Bogue Banks and Smith Island.







#### Waiter Island

#### South Carolina

Location: At Little River Inlet, just below the

North Carolina State line, offshore from

mainland.

Accessibility: By boat only.

Description of Area: The island possesses a luxuriant natural

growth on the back lands next to the marsh. In transition from the back lands to the ocean are medium dune formations held in a variety of patterns, sizes and forms by windswept trees and shrubs. Next to the beach the 6 to 8 feet high dunes are generally stabilized by grassy plants. The 3-mile beach is wide, gently sloping,

and comparatively clean.

Present Use: The island appears to be completely unde-

veloped and unused except for occasional

fishing parties.

Analysis: The area merits consideration as a possi-

ble seashore reserve to meet future needs.



Debidue Island

#### Debidue Island

#### South Carolina

Location:

Southeast of Myrtle Beach about 25 miles.

Accessibility:

By road.

Description of Area:

The island has a wide and appealing beach, a large variety of both plants and animals in the hinterland, and marshes which attract many waterfowl during the migratory season, and is easily accessible from a main tourist highway. It is about 5 miles in length with an average width of 3 miles and contains about 8,400 acres of land and marsh.

Present Use:

All but 104 acres (owned by Bernard Baruch) is privately owned and used by Mrs. Anne Preston Emerson and her two grandsons, George W. Vanderbilt and Alfred Gwynne Vanderbilt.

Analysis:

It offers one of the few remaining opportunities in South Carolina for a public seashore recreation area with an excellent beach and interesting biological features.



Kiawah Island



#### Kiawah Island

### South Carolina

Location:

Southeast of Charleston about 25 miles.

Accessibility:

By road.

Description of Area:

A 9-mile-long island with an average width of  $l\frac{1}{2}$  miles and containing about 7,300 acres of land and marsh; it has an excellent beach and good vegetative cover. More than half of the island is covered with a mixed forest of live oak, loblolly pine, southern magnolia, and cabbage palmetto. The dunes rise to a height of 20 feet and are stable. The beach slopes gradually to the surf with varying widths of from 50 to 150 feet between high and low tides. It is easily accessible by road from Charleston, South Carolina.

Present Use:

Title to the island is in the names of Eugenia M. Royal and A. C. Wingo, Trustees. The Kiawah Development Company (C. C. Royal, president, and wife, Eugenia M. Royal, secretary) purchased 110 acres on the island for development purposes, of which 70 acres have been subdivided.

Analysis:

The area is being logged and developed for residential purposes. It would require quick action to save sufficient acreage for public recreation purposes. Five years ago it was unspoiled and very desirable but now the feasibility of its acquisition is questionable.



### South Carolina

#### North Island

An island off the mainland, southeast of Georgetown and directly south of Debidue Island, which contains a 7-mile strand of good beach in front of dunes that reach heights of about 25 feet. It has a fine, deep tree cover near the beach composed of pine, oak, palm, magnolia and wax myrtle. It possesses the resources necessary for a public seashore recreation area to a greater degree than Debidue Island but is inaccessible and the building of a causeway or bridge to the island would be excessively costly. Debidue Island would be preferable to North Island as a public use area because it is more easily accessible.

### Morris Island

Lying about 7 miles southeast of Charleston across the mouth of the harbor from Moultrieville, this area has a beach of  $3\frac{1}{2}$  miles in extent. It is low and marshy with scattered clumps of trees in back of medium-sized dunes. The island is undeveloped but lacks road access. The advantage of this island is its proximity to a large population center. Because of its location and present value this island should be given consideration as a possible public seashore recreation area.



Hilton Head Island



#### South Carolina

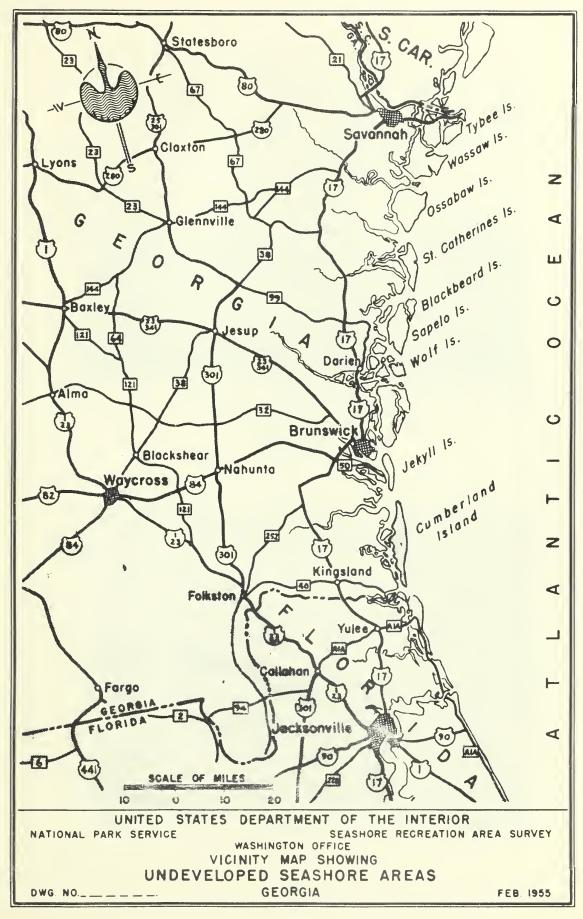
### Fripp Island

This island is about 16 miles southeast of Beaufort, off the mainland, and adjacent to Hunting Island State Park. It has a little over 3 miles of firm, sandy beach. The forest area consists of pine, oak, and palmetto. The dunes are of medium height and stabilized. The area would serve in an excellent capacity as an overflow for the existing State park to the north as the demand increases. The island is inaccessible at the present but could be bridged from Hunting Island State Park.

#### Hilton Head

The largest of the islands off the coast of South Carolina is located east of Fluffton, in the mouth of the Broad River. It contains some cottage developments and portions of its inland areas have been cultivated. Signs of active logging and development are apparent on the island. At present, it has dense cover, a good, firm beach of about 11 miles extent, and a gently sloping foreshore. The island is accessible by ferry. It possesses good resources for public seashore recreation but the major portion of the island has been acquired for subdivision. Acquisition of the area for public use seems out of the question.







Ossabaw Island



#### Ossabaw Island

### Georgia

Location: Off the mainland, about 20 miles directly

south of Savannah, Georgia.

Accessibility: By boat only.

Description of Area: One of the larger islands in the Georgia

chain with about 8 miles of beach, and distinguished by large pines, magnolia and bay. The beach is subject to erosion and patches of dead trees and stumps are

scattered along the shoreline.

Present Use: Appears to be entirely undeveloped.

Analysis: The island should be considered as a

potential public use area for the time when the demand exceeds the facilities

available.



St. Catherines Island

#### St. Catherines Island

### Georgia

Location: Off mainland, directly south of Ossabaw

Island and Savannah, Georgia.

Accessibility: By boat only.

Description of Area: The island contains about 10 miles of

ocean beach which is variable in quality. It is eroding at its south end, and, to the north, low and marshy lands alternate with dune lands. There is a variety of trees such as pine, oak, juniper and palmetto. None of the vegetation, however, is in a natural condition. The area is historically important, being the first of a chain of outposts established by the

Spanish in 1566.

Present Use: As a winter home for its present owner.

Analysis: The island has the necessary resources to

qualify as a public recreation area and should be so considered when the public need is sufficient to warrant its use in

this manner.



### Sapelo Island

#### Georgia

Location:

Off mainland directly south of St. Catherines Island and Savannah,

Georgia.

Accessibility:

By boat only.

Description of Area:

Similar in character and length to St. Catherines Island. The vegetation is variable, ranging from sparse to heavy and from low to high cover interspersed with open savannas. There are signs of erosion and timber cutting. The beach is variable in quality but superior to many on the Atlantic coast.

Present Use:

It is privately owned and used by

Mr. R. J. Reynolds.

Analysis:

Like the rest of the Golden Isles of Georgia the island possesses the resources desirable for a seashore recreational area. It is important that it be considered in meeting the needs of the public for areas

of this type.



Cumberland Island



Plum Orchard, Cumberland Island

#### Cumberland Island

# Georgia

Location: Off coast of Georgia. Southern tip

reaches Georgia-Florida State line.

Accessibility: By boat and plane.

Description of Area: An area believed to be of national sig-

nificance and one of the two most outstanding undeveloped seashore areas remaining along the Atlantic and Gulf coasts. The island is about 22 miles long and from 1/2 to 3 1/2 miles wide. It contains approximately 22,000 acres, 18,000 of which are upland and 4,000 marsh lands. It has 22 miles of wide, firm, gently sloping beach. The forests contain

live oak, cabbage palmetto, longleaf pine, southern magnolia, red cedar, holly and red bay. The dunes reach a height of 30 feet and are stabilized. The area has taken a prominent

part in the history of several nations.

Present Use: Privately owned and used by heirs of the

Carnegie estate.

Analysis: An area of outstanding importance and one

that should be acquired and preserved for

appropriate public use.



Wassaw Island



## Georgia

# Tybee Island

The island is directly south of Savannah Beach; off the mainland and inacessible by car, it has about 7 miles of fair beach. It is low, marshy and unadorned with trees in any sizable stands. The area is inferior in quality to most of the Georgia islands and receives a low priority for future consideration as a public seashore recreation area.

#### Wassaw Island

Southeast of Savannah and immediately south of Tybee Island lies Wassaw. This island is well-wooded and has about 4 miles of very good beach. Large dunes appear near the north end of the island. It is inaccessible by car and undeveloped. There are some signs of erosion. There is practically no shrub zone on the island but there are indications of an old forest, burned and cut over, and a relatively young loblolly pine forest. It does not rate a high priority in excellence but should be catalogued for future consideration.



#### Georgia

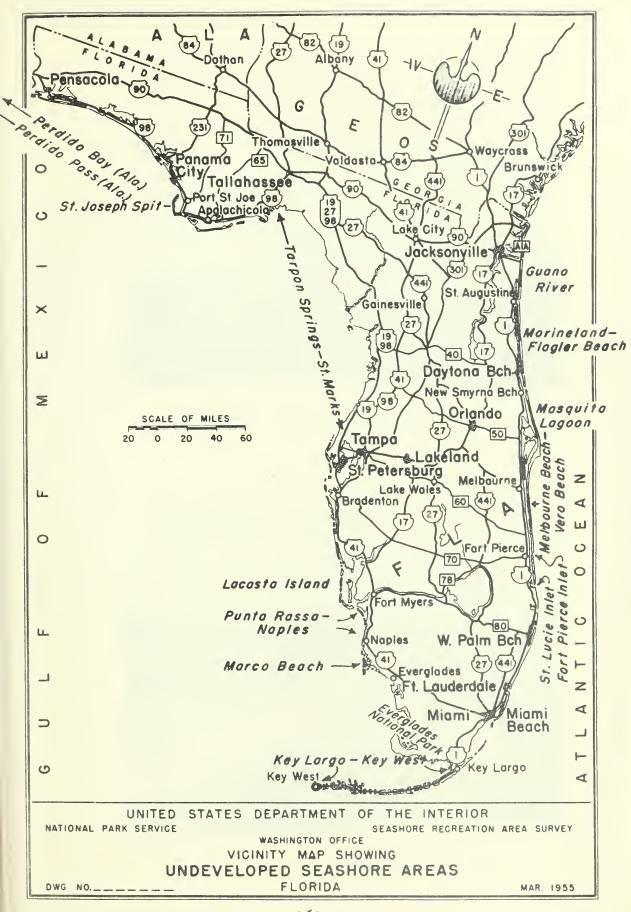
#### Wolf Island

This island lies immediately to the south of Sapelo Island and just north of Little St. Simons Island. It is about 2 miles long, and inaccessible. The island, topographically, is a low tree-barren marsh. The area does not require further study at this time.

### Jekyll Island

The area was acquired by the State in 1947 and is now accessible by passenger car. It is being developed for public seashore recreation use and residential sites. The latter are being leased by private individuals along the seashore in some of the most desirable sections of the area. The residences of former owners and the hotel are being renovated and placed in shape for vacation resort use.







Developer's Signboard, Guano River Area



Guano River Area

### Guano River

A strip of coastline between Jacksonville and St. Augustine extending some 14 miles and containing about 10,000 acres of land. The sand beach has good quality, an average width of about 200 feet and a moderate slope. The dunes reach a height of about 50 feet and are generally stable. Highway AlA traverses the dunes, about 400 to 500 feet back from the beach, the full length of the area. This portion of the seashore possesses the characteristics that are desired of a seashore recreation area but it is in many individual ownerships and the development of the ocean-front highway will open the entire area for development. It may be feasible for the State to purchase land between the highway and the ocean front for right-of-way, thereby preserving a portion of the area for recreation purposes.



North of Fort Pierce Inlet

# Marineland-Flagler Beach

This area is a portion of the mainland, and lies immediately south of the community of Marineland and a few miles north of Flagler Beach. It extends for about 7 miles, has an average width of three-quarters of a mile and contains approximately 3,000 acres. The beach is of medium quality with a stony foreshore and some marine growth. The vegetation is sparse. Highway AlA is being reconstructed on a new location which will traverse and despoil this undeveloped section.

# Fort Pierce Inlet (North)

This area is located near the southern end of a long, barrier reef which begins at Sebastian Inlet and extends southwardly to Fort Pierce Inlet. It is about 4 miles in length with a width of not more than 1 mile and contains approximately 2,000 acres of land. The beach is about 200 feet wide, clean, white, gently sloping, but with a steep foreshore. The dunes are low and stabilized. The marshes are dense with a low cover of mangrove. Highway AlA traverses the area from north to south. It may be well to consider this area for acquisition as highway right-of-way which would permit public recreation.



Mosquito River Lagoon

### Mosquito Lagoon

### Florida

Location: On Florida east coast south of New Smyrna

Beach.

By road from New Smyrna Beach and Titus-Accessibility:

ville.

Description of Area: A narrow reef, 24 1/2 miles in length and

> averaging about one-fourth mile in width which contains about 9,700 acres in its maze of small islands, mangrove and salt marshes. The beaches on the seaward side are less than medium width and steep, with a steep foreshore. The sand is hard, clean and white but coarse. The dunes are low and stabilized. The vegetation is dense and approaches the natural and primeval.

It is an excellent wildlife refuge.

Present Use: The reef contains a few cottages, some

small fishing villages, and an ocean drive.

Analysis: An exceptionally long stretch of beach.

possessing excellent natural and historical values, and in an undeveloped condition, is most unusual in Florida. The area is highly

desirable for public recreation use.



Near Sebastian Inlet

### Melbourne Beach-Vero Beach

#### Florida

Location:

South of Melbourne Beach to 2 miles east

of Vero Beach.

Accessibility:

By car from either end.

Description of Area:

This area is a good example of a Florida east-coast barrier reef. It has a length of about 24 miles, averages one-fourth mile in width and covers about 7,000 acres of land. The beaches are good throughout the length of the area, although somewhat narrow and steep. The sand is white and clean. Grasses occur on the seaward elevation of the dunes. Trees and shrubs of good size and number grow on the flat of the dunes back to the river marshes. Most of the trees are palms, oaks and pine. South of Sebastian Inlet there are many citrus groves.

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Present Use:

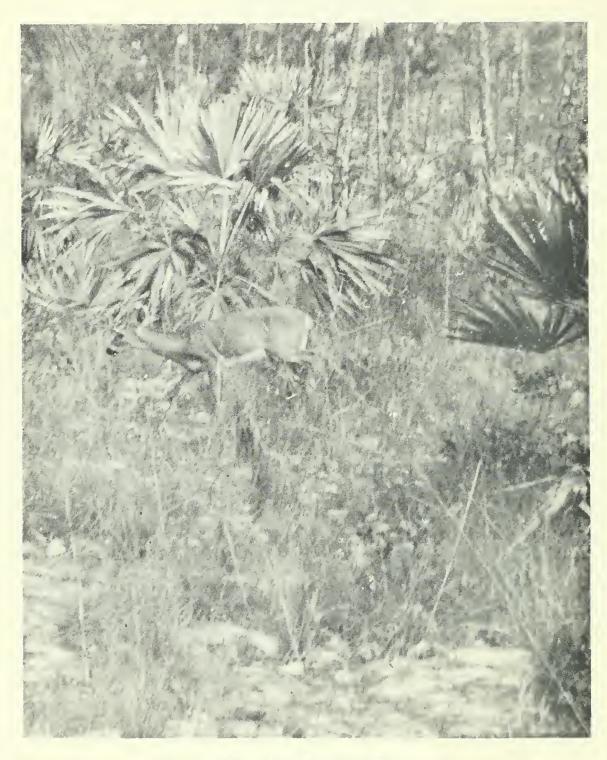
Melbourne Beach, south to Sebastian Inlet, contains scattered single-family dwellings and a trailer camp. Route AlA traverses the length of the reef. South of the inlet the citrus groves occur and the reef is owned almost in its entirety by corporations. Route AlA runs from Wabasso to Fort

Pierce Inlet.

Analysis:

The presence of Route AlA, real estate development activity and citrus fruit groves indicate that this area already has passed beyond the stage where it could be considered as available for purposes of

public recreation.



Key Deer, Big Pine Key

# Keys-Florida

Location:

Off the eastern coast, south of Miami to the Marquesas Keys in the Gulf of Mexico.

Accessibility:

Many served by Overseas Highway (U. S. Highway 1) and spur roads.

Description of Area:

The famed keys of Florida extend southwestwardly from Miami in a great sweeping crescent for about 160 miles. They are hundreds in number and vary in size, with Key Largo being the largest, 30 miles long and 3 miles wide. The lower-lying keys are composed mostly of mangrove swamps, and the keys with greater elevations contain palms and oaks, and some pine. The key deer inhabit nine of the keys, four of which (Big Pine, Summerland, Cudjoe and Ramrod) are accessible by car. Big Pine is the most important of these keys. No-Name, Big Torch and Middle Torch Keys are important biologically, but are not accessible by car. The undeveloped keys possessing potentialities for public recreation, other than bathing, are Key Largo, Long Key, Big Pine, Cudjoe, and Sugarloaf. There are no good sand beaches. The fishing is excellent.

Present Use:

The keys are an outstanding tourist attraction and are being developed for that purpose. Spur roads are being built to keys off the Overseas Highway.

Analysis:

The protection of the key deer, particularly at Big Pine Key, is important, as is the preservation of the unique and important vegetation found in the keys area.



Marco Beach

#### Marco Beach

### Florida

Location:

Just north of Cape Romano.

Accessibility:

By car on paved road.

Description of Area:

The area occupies the western half of the island and is about 1 mile in width and 4 miles in length. It is a rolling area of about 2,800 acres, triangular in shape. It has an extremely clean, dazzling white sand beach with a tropical background of coconut palms. The area is well-known to shell collectors for the variety and quality of shells found there in abundance. The subtropical vegetation is in a nearly natural condition and of varied character. There is almost no dune area behind the The island is one of the most productive archeological sites on the Florida west coast. Indian shell mounds are plentiful and each of the three villages was built

on ancient Indian townsites.

Present Use:

Little development of any kind.

Analysis:

One of the outstanding seashore areas on the western Florida peninsula, it is scenically attractive and most suitable for

public recreation use.



North of Naples



Indian River Area

### St. Lucie Inlet

An area of 7,000 acres consisting of two segments on either side of St. Lucie Inlet, the one to the north running for 20 miles and the one to the south about 4 miles. The vegetative cover is excellent, ranging from grasses and low shrubs on the dunes, to generous, forestlike expanses of palms, oaks and pines. The dunes are low and generally stable. The beaches, however, are narrow, steep and terraced, as is the foreshore. Dead stumps of trees on the beach indicate the amount of erosion that has taken place. Because of this badly eroding condition, the area is not considered feasible for acquisition and development as a public recreation area.

### Punta Rassa-Naples

The coastal area south from Punta Rassa to Naples on the Gulf coast consists of a number of offshore islands, mangrove reefs and marshes. This stretch embraces about 12,000 acres of land and 38 miles of shoreline with a good cross section of all the seashore characteristics that are typical of the Florida west coast. The choice areas have been depleted, however, and the ones remaining are of inferior quality and size for public recreation purposes.



Homosassa Swamp, West of Mouth of St. Martins River

### Lacosta Island

Two barrier-reef islands off the mainland—Lacosta Island and an unnamed island to the south—which lie directly west of Fort Myers and south of Boca Grande, have a total length of 12 miles and an average width of one-half mile. Both islands are accessible only by boat or plane, and are completely undeveloped. In the center portion of both islands the beaches are wide and gently sloping. At the north and south ends of the islands erosion is taking place. The dunes, where stable, are covered with vines and grass and on the sound side by low-growing shrubs. There are a few stands of palms and pines, and stretches of mangrove. The islands are too inaccessible and unstable at the present time to be given consideration as public seashore recreation areas.

# Tarpon Springs to St. Marks

This portion of the west coast of Florida extends for a distance of about 200 miles. It has very little value for purposes of public recreation, but does have high value as a wildlife refuge and a forest preserve. The general character of the area is that of a gradual merging of shallow, muddy foreshores, mangrove islands, salt marshes and swamp forests. Here and there will be found a few sand beaches, low, coastal ridges, and dry, pine flats. But for the most part the area is just one long, forbidding swamp.



St. Joseph Spit

### St. Joseph Spit

#### Florida

Location:

10 miles south of Port St. Joe.

Accessibility:

By car from either end.

Description of Area:

An L-shaped spit some 20 miles in length, one-half mile in width, similar in character and shape, on a smaller scale, to Cape Cod. It has an attractive, medium width, white sand beach, gradual in slope, and clear, shallow water well offshore. There are high rolling dunes, as large as any in Florida, both vegetated and partially bare, and a forested area that extends from the dunes to the bay. The primitive and isolated character of the 5,050-acre spit, along with good vegetative cover, has made it a haven for wild animals. Birdlife is varied but not unusual.

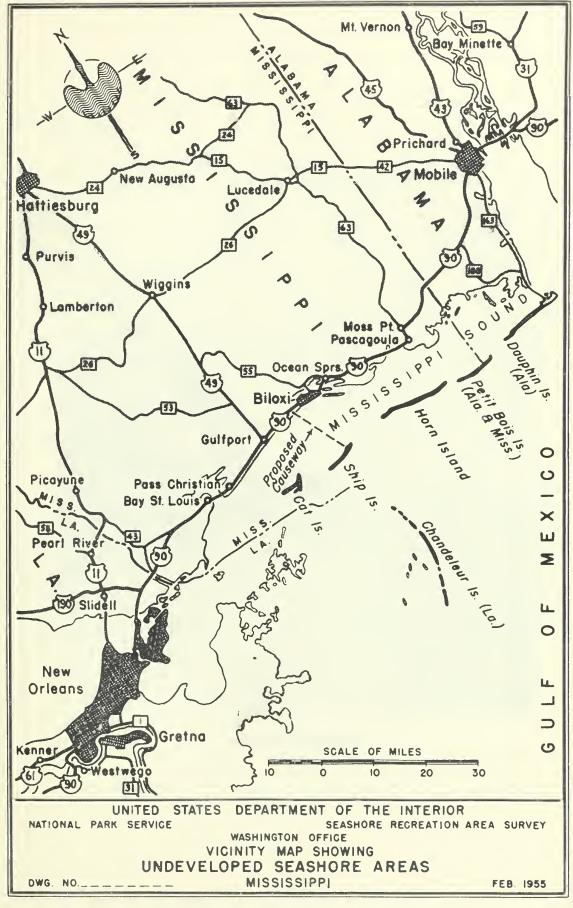
Present Use:

Air Force and Coast Guard installations.

Analysis:

The scenic quality, biological, archeological, historical and recreation values of the area make it most desirable for public use.







Perdido Bay Area

# Perdido Bay

An irregularly shaped bay, forming part of the boundary between Alabama and Florida, 13 miles west of Pensacola Bay entrance and 26 miles east of Mobile Bay entrance, containing several small beaches. The water is shallow, dark in color, but with no surf or tide. The beaches are 20 to 30 feet wide, about 1/2 mile long, and light brown in color, and the sand is fine. There are no dunes or marshes but interesting cliffs of some 40 feet in height. Dense forest cover extends from near the shore and back to the uplands. The timber is composed mostly of pine, black oak, live oak, magnolia, red bay, maple and myrtle. A strip of shoreland about 1/2 mile in depth and containing approximately 2,000 acres would provide recreation opportunities for picnicking, camping and swimming. This possibility should be given consideration in a region where there is a paucity of such opportunities.

### Perdido Pass

The barrier reefs on both sides of Perdido Pass, a water passage that connects Perdido Bay with the Gulf of Mexico, known as Alabama Point and Florida Point, possess beaches of good quality. The slope of the foreshore and beaches is gentle and the sand is fine, white and clean. Sand dunes are numerous and rise to a height of 15 to 20 feet. Vegetative cover is principally grass and low shrubs. The beach area at Alabama Point is 1 mile in extent and at Florida Point, 2 miles. The State of Alabama plans to build groins on both sides of the pass, bridge the 1/4 mile pass from Alabama Point to Florida Point and develop the 2-mile section of Florida Point as a State beach area.



Dauphin Island



Fort Gaines

### Dauphin Island

This barrier-reef island, 15 miles long and from one-half to one mile in width, lies off the coast of Alabama, between Petit Bois and the main seaward passage to Mobile Bay. There are scattered pine on the eastern portion, salt marsh in the center, and dunes and beach on the western portion. The dunes are numerous and low; the beaches are wide and clean but somewhat steep. There are indications of erosion at both ends of the island. Fort Gaines is located at the eastern end of the island. A causeway has been recently completed connecting the island to the mainland. Development companies are rapidly absorbing the island. The westernmost end of the island (3 miles) is undeveloped and is worthy of consideration for public seashore recreation purposes.



Horn Island



### Horn Island

### Mississippi

Location:

Off the mainland, between Ship Island and Petit Bois Island, southeast of Biloxi, Mississippi.

Accessibility:

By boat only.

Description of Area:

The best of the undeveloped islands off the Mississippi coast is about 15 miles long with an average width of one-half mile. It contains about 4,500 acres of land. The beach is wide, gently sloping, with a fairly steep foreshore, and with scattered areas of erosion along the seaward side. The sand is clean, fine and white and the water is clear and clean. Dunes on the Gulf side are moderately high and stable. There are dense stands of slash pine and live oaks in elevated areas of the inner island, along with some fresh-water ponds and considerable marsh grass.

Present Use:

An abandoned military reservation occupies the west end of the island; the remainder of the island is undeveloped and uninhabited.

Analysis:

The area possesses very good qualifications for public seashore recreation purposes. It is understood that the State of Mississippi has expressed interest in its acquisition and will endeavor to acquire certain portions of it.



Ship Island



Fort Massachusetts

### Ship Island

# Mississippi

Location:

Off mainland, between Cat Island and Horn Island, 11 miles south of Biloxi, Mississippi.

Accessibility:

By boat only.

Description of Area:

The best known of Mississippi offshore islands and often proposed for inclusion in the National Park System, the area is 8 to 9 miles long and from 500 to 4,000 feet wide, and contains about 1,350 acres of land. The eastern portion contains the island's only forest cover, 300 to 400 acres of slash pine and live oak. The beach varies in width and is gently sloping, with a fairly steep foreshore and shallow offshore. The sand is white, fine and clean; the dunes vary in height and stability. While the western portion of land is low and unstable and possesses little cover, there is considerable migratory birdlife on the island. Mosquitoes are often prevalent. Fort Massachusetts is an outstanding historic site on the island.

Present Use:

The fort and most of the island are owned by the Joe Morgan American Legion Post of Gulfport.

Analysis:

Certain portions of the island should be retained for public recreation purposes. There is considerable interest in public acquisition of the island and in linking it with others off the Mississippi and Alabama coasts by causeway from the mainland. If sufficient interest is manifested by the States of Mississippi and Alabama, the island should be given every consideration as a public recreation area.



### Mississippi

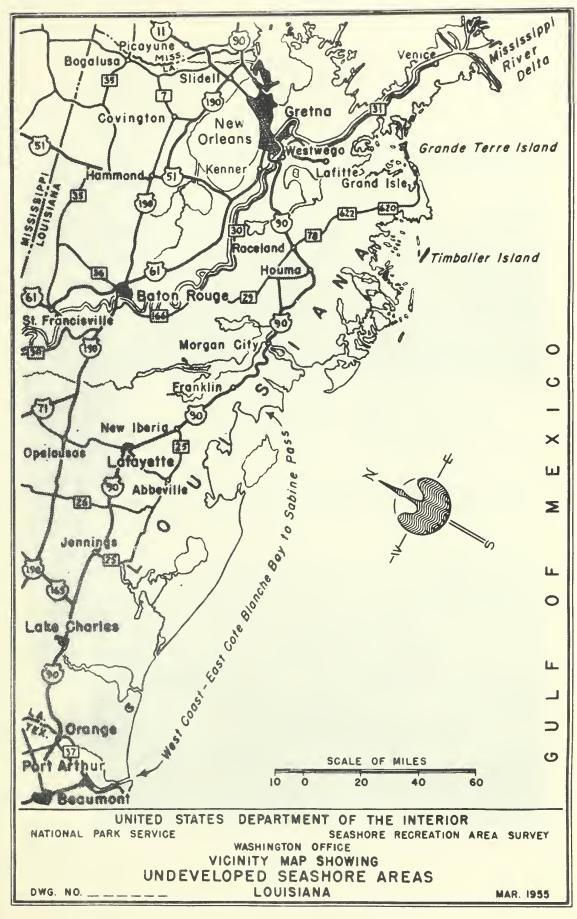
#### Petit Bois Island

The island is 10 miles south-southeast of Pascagoula, Mississippi, and is the easternmost island of the four off the Mississippi coast. It is 9 miles long and averages slightly less than 1/2 mile in width. In general, it is an area of beach, dunes, salt and fresh-water marshes, a few small fresh-water ponds, and some palmetto and pine cover. The sand beach is wide, flat and clean. The dunes are fairly high and stable. The timber has been cut over and only a few scattered groups of tall pine remain. The island is undeveloped and accessible only by boat. The eastern half of the island is a wildlife refuge. If the island becomes accessible, through the linking together of these offshore islands as proposed, it will be more valuable as a potential seashore recreation area.

#### Cat Island

This T-shaped sand island lying 8 miles off the mainland, south of Gulfport and Pass Christian, is wooded for most of its length and has very little vegetative cover across the "top" of the T. This latter portion has wide, clean beaches, low, drifting dunes, and an irregular and deeply-pocketed offshore. The southern tip of the island is awash at high tide and there are evidences of erosion at the northern end. The island is undeveloped except for a pier and a few small buildings. It is reputed to be owned by a few wealthy sportsmen, and is accessible only by boat. The island is not as desirable as Horn or Ship Islands and does not possess their potentialities for seashore recreation.







Grande Terre Island



Fort Livingston

### Grande Terre Island

### Louisiana

Location:

Off coast of Louisiana, 1 mile northeast of Grand Isle, 50 miles due south of New Orleans.

Accessibility:

By boat only.

Description of Area:

The island is about 6 1/2 miles in length and a mile at its greatest width, and contains approximately 1,800 acres of land. The beach is about 200 feet in width, tan in color, and scattered with shells and debris. The dunes are low and unstable. There is very little forest cover. There are a few small fresh-water ponds, and considerable low, salt-grass marsh. The water is discolored and unattractive. Fort Livingston, a brick fort on the eastern end of the island, has been partially washed away.

Present Use:

The island is undeveloped and unused except for grazing of livestock. There is an abandoned Coast Guard station near the fort.

Analysis:

Because of the scarcity of seashore land along the Louisians coast, and the historical interest attached to this area, the State has expressed interest in the acquisition of this property.



Chandeleur Islands

#### Louisiana

### Chandeleur Islands

These islands are located in the Gulf of Mexico approximately 75 miles southeast of New Orleans. There are a hundred or more of them and at low tide they have a total land area of about 5,000 acres. Many of them are awash at high tide, and all of them are separated and surrounded by water which is shoal. On the Gulf side of the islands very good beaches have been formed—clean, fairly wide and gentle of slope. On the sound side, the land areas are low, grass-covered salt marshes. There are occasional expanses of mangroves on the islands where the dunes are stable. The islands are a Federal wildlife refuge, are undeveloped and are accessible only by boat or plane. The best use of the islands is undoubtedly for wildlife purposes.

# Mississippi River Delta

The delta of the Mississippi River is, generally, a vast expanse of salt marshes, mud flats, and shallow ponds and waterways. It begins approximately 50 miles southeast of New Orleans and continues southeastwardly for another 40 miles and then ends, fanshaped, in the Gulf of Mexico. There are no land or foreshore areas that may be developed for recreation purposes. In the few places where beaches occur they are heavily silted, narrow and littered with shells, seaweed, driftwood and other debris. Trapping of fur-bearing animals, fishing, mining for sulphur and drilling for oil are the principal industries of the region. The Delta National Wildlife Refuge, occupying about 100 square miles, has been established near the mouth of the river.



Holly Beach, Louisiana West Coast



Timbalier Island

#### Louisiana

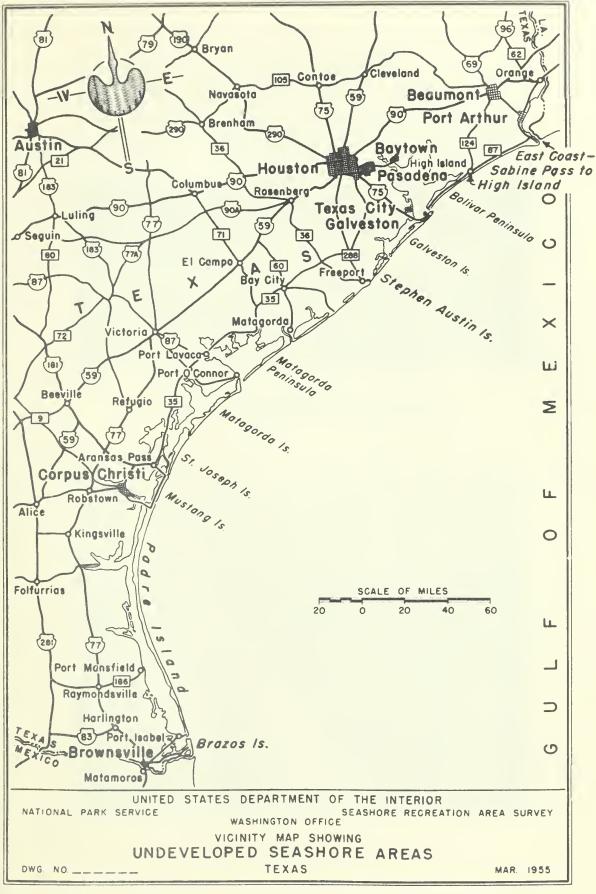
### Timbalier Island

The island lies 30 miles due west of Grand Isle. It is 8 miles long and 1 1/4 miles wide, and contains about 2,500 acres of land. The beach is narrow and heavily littered, and its somewhat steep slope continues offshore. Vegetation consists primarily of salt-marsh and dune grass. The island is undeveloped and accessible only by boat. Its seashore factors (beach, dunes, vegetation, etc.) are of poor quality and the island is vulnerable to erosion.

### West Coast-East Cote Blanche Bay to Sabine Pass

From Atchafalaya Bay westward to Sabine Pass, a distance of 125 miles, the coast of Louisiana is primarily one vast area of salt-marshes, mud flats and shallow waterways. There are no sand beaches, no dunes, and very little vegetation other than the plants of the salt-marshes. The region is relatively unused, inaccessible and undeveloped. Oil and gas have been found and are still being searched for in this area. The Sabine National Wildlife Refuge and four other game refuges are located within this span. The Louisiana west coast has very little value as a possible public recreation area.







Cattle Round-up Along Coastal Highway



Coastal Highway & Beach

## East Coast-Sabine Pass to High Island

### Texas

Location: From Sabine Pass to High Island, Texas.

Accessibility: By paved road.

Description of Area: A 37-mile stretch of low, slightly roll-

ing coastline, this area contains generally stable sand dunes and little vegetation. The beach varies in width from 100 to 200 feet, and in character from much silt, shells and debris to a clearer, cleaner span for bathing. There are also indications of erosion at various points along the coast. The slope of the beach and foreshore varies from moderate to gentle.

Present Use: Ranching and the drilling for gas and oil

are the principal industries. State

Highway 87 parallels the coast.

Analysis: The eastern sector of this area is the

least desirable because of silting conditions and the immense amount of shells and debris on the beach. The western sector is worthy of consideration as a

potential public seashore area.



Galveston Island

### Galveston Island

## Texas

Location:

Off mainland, southwest of Galveston,

Texas.

Accessibility:

By U. S. Highway 75, Gulf Coast and Santa Fe rail lines and by ferry.

Description of Area:

This island is 12 miles in length and from 1 to 2 miles wide. The beach is flat, from 200 to 300 feet wide; the sand is fine hard and light-colored. The dunes are low, irregular, and generally unstable. Vegetative cover consists of grasses, sedges, croton, rushes and juniper. The area is of considerable

historical interest.

Present Use:

Much of the island serves as pasture land for ranching; a great number of small tracts of land are held in individual ownerships.

Analysis:

Expansion of municipal beach facilities will apparently be westward on the island. An express highway from Houston places this rapidly growing city within easy travel distance of the beach. The area will probably serve best as a metropolitan

or a regional recreational site.



Stephen Austin Island

## Stephen Austin Island

### Texas

Location:

The peninsula lies northeast of Brazos River and the city of Freeport, and southwest of Galveston Island.

Accessibility:

By car over hard-packed sand from mainland bridge.

Description of Area:

This portion of a 15-mile long peninsula is typical of the region but not outstanding. The beach, 9 miles long, is wide and the slope gentle. Portions of it are littered with shells and debris. In general, the sand is fine, clean and hardpacked. The land elevation is low, and the dunes are less than 6 feet in height and unstable. The plant life is limited to grasses and sedges with some scattered herbs and a few clumps of juniper shrubs.

Present Use:

The first 5 miles of the peninsula are developed as a resort center. The San Luis Beach Island Development Company is subdividing and developing the remaining 9 miles of the peninsula for private occupancy.

Analysis:

Certain portions of the peninsula now being subdivided would make excellent public seashore recreation areas. The State of Texas is negotiating with Mr. F. B. Cassidy, of the San Luis Beach Island Development Company, for the use of some of these properties for this purpose.



Matagorda Peninsula



# Matagorda Peninsula

## Texas

Location:

Offshore, southeast of Matagorda, about midway between Galveston and Corpus

Christi, Texas.

Accessibility:

By County Highway 2301.

Description of Area:

A 21-mile-long, narrow, offshore sand barrier, low in elevation. The beach is narrow and steep; the sand is coarse, light and loose-packed. Considerable litter and great drifts of seashells are found above high-tide level, and the low sand dunes are unstable and irregular. Grass is the primary vegetative cover

with no native trees or shrubs.

Present Use:

There are scattered ranch developments and herds of cattle. The State is now negotiating for some land east of the Colorado River for park purposes.

Analysis:

This is one of the least attractive of the undeveloped Texas coastal areas because of the poor quality of its beaches, dunes, vegetative cover and offshore waters.

The State is negotiating for a portion of the peninsula for State park purposes. It is believed unnecessary to give further

study to the area at this time.



Cameron County Park, Padre Island



Oil Rig, Padre Island

### Padre Island

### Texas

Location:

Between Corpus Christi and Port Isabel.

Accessibility:

Causeways at Corpus Christi and Port Isabel.

Description of Area:

An offshore bar or barrier-reef island, 117 miles in length, of which only 98 miles are here considered. It varies in width from less than one-eighth mile to not more than 3 miles. The foreshore area varies from 10 to 200 feet in width and from steep to gradual in slope. The offshore area is consistently gentle in slope and varies in width from 200 to 2,000 feet. The sand is fine in texture, light-colored, and fairly clean. The dunes vary from small mounds to 40 feet in height and are not entirely stabilized. Sea oats, croton and morning-glory are the three dominant types of vegetative cover to be found. Birdlife values are outstanding and historical values important.

Present Use:

The chief use of the island is for grazing, with some oil-drilling activity. There are developments and a county park at each

causeway.

Analysis:

Its great size and remote character, endless sweep of broad beach, grass-topped dunes and windswept sand formations have great appeal. Its natural resources, historical and biological values should be preserved in public ownership.



Brazos Island, Mear Mouth of Rio Grande

### Brazos Island

#### Texas

Location:

Mouth of Rio Grande.

Accessibility:

By car over State Highway 4.

Description of Area:

The area is actually a peninsula 8 miles in length and averaging about three-quarters of a mile in width. The beach is wide, flat and clean along the northern portion. The sand is fine in texture and light in color. The water is clear and the shores moderately sloping. The dunes are 20 to 30 feet high and generally stable. The vegetative life consists primarily of sea cats, croton and morning-glory. Some portions of the southern 3 miles have been eroded by river and littoral

currents.

Present Use:

A few scattered cottages and an oil well are the only developments. The island is popular

with fishermen.

Analysis:

Because of its excellent beach, interesting dunes, ease of accessibility, and relatively undeveloped status, this area should be considered for public ownership. Its location at the mouth of the Rio Grande links the area with many outstanding events in the

history of that great river.



Matagorda Island

### Bolivar Peninsula

The peninsula is a western extension of the east coast of Texas running from High Island southwestwardly 28 miles to the Bolivar Roads waterway. It varies in width from 1/2 mile to more than 3 1/2 miles. In general, the peninsula is a low, slightly rolling, sandy plain. The vegetative cover is almost entirely grass, with few trees and shrubs. There is a long row of frontal dunes not more than 10 to 15 feet high and generally The beach is wide (up to 200 feet), gently sloping and fairly clean. The foreshore and offshore areas also are gently sloping and quite clean. Ranching and drilling for oil are the principal industries. There are communities along the peninsula and the resort-vacation type of development is expanding. State Highway 87 traverses the peninsula and most of the usable land off this road is being developed by private interests. are better locations along the Texas coast for the development of public seashore recreation areas.

## Matagorda Island

The island lies between Cavallo Pass and Cedar Bayou, south of Port O'Connor on the mainland, and is accessible only by boat and plane. It is about 35 miles long and from 1 1/2 to 4 1/2 miles wide. The island possesses a wide, flat, clean beach and dunes that are quite high, extensive and generally stable. Vegetation consists of grassy plains and salt marshes. The Matagorda Air Force Base occupies the northern 14 miles of the island while the remainder is owned by Mr. Clint Murchison and is used generally for the grazing of cattle. Mr. Murchison maintains a residence on the island and has other ranch buildings. The island is not as desirable for public recreation purposes as some others along the Texas coast.



Mustang Island



### Texas

## St. Joseph Island

This island presently connects with Matagorda Island at Cedar Bayou and runs 21 miles southwestwardly to Aransas Pass. It varies in width from less than a mile to nearly 5 miles. The island is very similar in character to Matagorda Island, with a wide, flat, clean beach, interesting dunes, and little vegetation. Mr. S. W. Richardson is purported to be the owner of the island and has built a large home in the southwestern portion. An airstrip and landing docks have been provided, and scattered throughout the island are ranch developments. Certain areas under consideration by the State have a higher value and better quality than St. Joseph Island, insofar as seashore recreation factors are concerned.

## Mustang Island

From its northward end at Aransas Pass, Mustang Island extends southwardly to Corpus Christi Pass where it joins with Padre Island. It is 16 1/2 miles long and has an average width of 2 miles. The beach is wide, flat, and quite clean of debris and shells. The slope of the foreshore and offshore areas is gentle and regular for a great distance. The dunes are imposing, quite regular in size, and stable. The principal and predominant plants on the island are grasses. A few vines and low-growing shrubs are the only other native plants found growing on the island. A paved road extends the full length of the island and is accessible from the mainland at each end. Considerable development has taken place at both ends of the island and it is presumed that expansion will be toward the central undeveloped portion.



### THE HISTORY OF THE SEACOAST

A noted American historian, writing his famous treatise on the remarkable influence of the frontier on the life of the American Nation, suggested that an observer, standing at Cumberland Gap, could have witnessed civilization marching westward, in single file: first came the buffalo following the worn trail to the salt spring, then the Indian, followed at intervals by the fur trader and hunter, the pioneer farmer and the cattle raiser—and the frontier had passed by.

In the same dramatic manner, the earlier pageant of the discovery, exploration and colonization of America could have been observed from vantage points along the Atlantic and Gulf coasts. For while this shoreline today represents the eastern boundary of the United States, to Europe of Columbus' day it was the western rim of the Atlantic Ocean whose sandy shores, capes and rocky headlands represented the first frontier to be encountered in the New World.

The conquering of this first great American frontier was an arduous adventure. Europe was at a high stage of civilization; the New World was a barbarous wilderness. Only the strong could gain a foothold on the formidable shore and survive. After the discovery, nearly a century elapsed before permanent colonies were established on the Atlantic coast. This long interval was one of unceasing activity by powerful European nations seeking to exploit the resources of the new land. The era was one of vast consequence to the future

course of American history and one in which the Atlantic and Gulf coasts were witness to magnificently impressive episodes.

Consider the blazing hot Gulf coast in the summer of 1542, when the wretched survivors of De Soto's once mighty expedition of armorclad conquistadores drifted just offshore. After three years of agonizing hardship exploring the southern United States, a fleet of rude boats had been constructed without tools, on which the party floated down the Mississippi and headed for Mexico.

Somewhere along the Texas coast, this desperate band landed and, heartened by favorable winds, "very devoutly formed a procession for the return of thanks", proceeded along the beach, and supplicated the Almighty for deliverance. Taking to their boats again, they reached Mexico safely.

Or, consider the desolate beaches of North Carolina's Outer Banks in 1586, where half-starved members of the first English colony in America, established by Sir Walter Raleigh, patrolled the beach, hoping to signal a chance vessel. A ship appeared, and then to their unbelieving eyes more sails followed until a mighty fleet of 23 vessels hove to—an armada commanded by the legendary Elizabethan sea dog Sir Francis Drake, whose vessels, well laden with booty, where homeward bound after singeing the Spanish beard in the Caribbean. Gathering up the discouraged colonists, Drake set sail for England.

Unfortunately for the historian and archeologist, little evidence remains in the shifting beach sands of most such scenes.

The temporary and continually changing character of the shoreline may be partially responsible for the inability of scholars thus far to solve one of history's most baffling and intriguing puzzles. What is the location of Vinland—reached by Leif Ericson and his successors during the Norse voyages of exploration about the year 1,000 A.D.? Despite claims for numerous relics and rune stones, positive identification has not yet been possible. Most historians now accept the Icelandic sagas which describe the voyages to Vinland, but geographical references are so vague that serious claims have been made for locations from Labrador to Florida. Somewhere along the coast, the key may yet be uncovered.

But whether the Norsemen (who probably reached the coast of North America), or Columbus (who did not), are given credit for the "discovery" of America, there were an estimated 125,000 Indians living along the Atlantic seaboard in 1500, whose ancestors had "discovered" the land in the dim past. One can imagine that previous to Columbus, as the European mariner stood upon a pier, gazing westward across the uncharted sea, puzzling over the rumors of islands beyond, the silent savage was seated upon a dune, staring impassively eastward, wondering too what lay beyond the horizon. Upon the beaches of the Atlantic and Gulf coasts the old and the new civilizations were to meet.

The Indians thousands of years ago were lovers of the seashore, which they visited frequently chiefly because it was an excellent source of many varieties of seafood. Remains of aboriginal shore dinners—which featured oysters on the half shell—are frequently encountered today, scattered along the coastline from Maine to Mexico. These shell middens, some many acres in size, are refuse heaps which also contain invaluable artifacts, discarded tools and weapons and broken pottery, which aid the archeologist in recreating the prehistoric life of the Indian.

Some of the earliest and most sustained associations between Indians and Europeans along the coast accompanied the establishment of the fishing industry. Immediately after 1492, and some say before, English, French and Portugese fishing vessels appeared off the Newfoundland and New England coasts. A half century before the Mayflower sailed there were 350 fishing vessels crossing the Atlantic each year and carrying back apparently inexhaustible supplies of fish to feed Catholic Europe. On the sandy beaches and offshore islands of New England fishermen landed to trade with the natives for furs, to obtain fresh water, and to dry and salt their catch, and an Indian dumfounded the Plymouth settlers by greeting them in English, which he had learned from the fishermen.

Of all the varied company of mariners who explored the coast and beaches of the New World, probably none gave it more careful scrutiny than that venturesome group of navigators who, for more than 300 years, sought the elusive Northwest Passage. Begun by Columbus, the quest for a water route through North America was pressed on despite cruel disappointments. Not until 1800 did the search become purely one for geographical knowledge.

Some of the great names of American history were pioneers in the age of exploration—Drake and Hawkins, Champlain and Ponce de Leon, Hudson and the Cabots. Seeking fishing grounds and colony sites, gold and the Northwest Passage to the fabulous wealth of the spice islands, they sailed tiny vessels along the vast coastline and laid claim to new lands for their sovereigns.

After the explorers, in the procession of civilization coming out of European ports, were the colonists. Long before the success at Jamestown, settlements, recorded and unrecorded, were attempted at many places along the Atlantic coast—the French in South Carolina and Florida, the English in Maine and North Carolina, the Spanish in Florida and Georgia, among others. Reaching the forbidding headlands of New England or the more hospitable southern strands was an arduous voyage in tiny ships, but the real problem was to stay and prosper. Half the Pilgrims perished the first winter, not an unusual toll.

Men, women and children, farmers, artisans, gentry, these first emigrants came to find or escape many things, as millions have done since that time. The first settlements were on the coast, clustering around a sheltered harbor, for the sea was the vital lifeline. The early colonists came to the beach for food, as had the Indians, and perhaps for pleasure. But colonies were inevitably dependent upon agriculture and the tide of civilization soon swept inland, leaving behind only those who chose to make their living from the sea.

A later breed of pioneers, whose knavery somehow gained for

them a surprisingly high place among American folk heroes, were the pirates. In truth, legions of pirates—Blackbeard, Dixie Bull, Captain Kidd and Jean Laffitte among them—operating from hideaways along the coast plundered thousands of ships. The U.S. Navy was created in part to protect American vessels from their attacks. But the tales of pirate gold hidden among the sand dunes (Parchment maps are occasionally available direct from the hand of a dying Spaniard.) are recorded more frequently by Chamber of Commerce guide books than by historical publications.

After the country was settled and the Nation created, much of the coastline's history dealt with keeping unwanted visitors away. Great brick forts were constructed along the South Atlantic and Gulf coasts to protect the country from enemy attack by sea. Most of these forts saw their only action during the Civil War, when many were bombarded and captured. Although numerous brick and concrete fortifications have since been built to protect important harbors and ports along the coast, all are now outdated by new weapons and most are crumbling relics, covered by drifting sand, of an epoch which has passed. Guided missile bases and radar towers are the modern bastions of the coastline.

Undoubtedly the most enduring phase of seashore history has been its role in maritime operations. Dangerous promontories and outlying shoals are strewn with the wreckage of countless ships. The toll of sailing vessels, helpless before the pounding of Atlantic

gales, was almost unbelievable. During a six-year period one ship a week went aground on the North Carolina coast with as many as 14 foundering in one day. The Cape Hatteras area alone accounted for several hundred victims.

Shipwrecks long ago provided a living for the colorful "mooncussers" who salvaged wreckage and cargo from doomed vessels. The true beach dwellers and beachcombers of today are the men who man the Coast Guard stations and lighthouses on isolated beaches and remote islands. Introduction of steam, and of radio and radar, has almost eliminated marine disasters and few of the present coast guardsmen have brought a surfboat loaded with survivors through the raging breakers or made fast a breeches buoy to a ship stranded on the offshore bar.

But up and down the coast, storms continue to uncover broken sections of vessels long buried in the sand. These gaunt skeletons mutely symbolize the history of the coast, for on such ships men came from the Old World to the New and explored a great continent and made it their home. The men and their ships, who fulfilled a great destiny, are gone. And yet, the memory-provoking sight of such wreckage on a lonely beach, with the surf rolling endlessly upon the sand, helps recapture for the musing spectator the half-forgotten procession of figures and episodes of history which the coastline has witnessed.



#### THE NATIVE LIFE

OF

#### THE SEASHORE

Up to the end of the fifteenty century, A. D., the plant and animal life along the Atlantic and Gulf coasts was essentially unmodified by any activities of man. The Indians used whatever they needed for food and the other necessities of their way of living but they did not use enough of any kind of either plant or animal to change materially the appearance or composition of any of the plantanimal, or biotic, communities. The more advanced Indians carried on certain agricultural practices on limited areas inland from the coast but practically everywhere along the coast all of the plants and all of the animals, as well as the Indians, were native to the communities in which they lived. There were no exotics.

What were the biotic communities along the coast like at that time? The most abundant plants in the waters adjacent to the seashore were brown and red algae, commonly called seaweeds. The largest of the seaweeds are brown algae, but the most intricately branched and the most beautiful are red algae. Along the entire coast there are probably more than 50 different kinds of brown algae and more than 200 different kinds of red algae that are large enough to be called seaweeds. Most of these algae grow attached to rocks or to other

objects, sometimes to other algae. Therefore, they are not seen along sandy beaches except when they are broken loose and cast up on the beach by waves, but they are abundant along rocky coasts.

Aside from the algae, one of the most abundant plants from North Carolina northward was eelgrass, a member of the pondweed family. This was also one of the most important of the marine plants because it served as food and shelter for numerous animals including many migratory waterfowl.

The waters were also teeming with animal life. There were several kinds of whales, dolphins and porpoises that were common along the coast and there were harbor seals from North Carolina northward. There were probably more than 200 different kinds of fishes and at least forty of them were known to be edible. Most of these fishes had a rather wide range of distribution but few of them were found all the way from Canada to Mexico. The herring, for example, is a northern species which is seldom seen south of Delaware Bay while Spanish mackerel and snook are southern species which are seldom seen north of Cape Cod. There were also lobsters from Chesapeake Bay north, blue crabs from Long Island south, and myriads of shellfishes everywhere.

As one left the open water and proceeded toward the land he might, in the fifteenth century as now, have encountered one of the two types of biotic communities that occur where the salt water is very shallow at low tide but deeper at high tide. These are the saltmarsh community and the mangrove swamp community. The mangrove swamp community is limited to the coasts of the southern peninsula of Florida but the saltmarsh community occurs at various places from Maine to Texas. Saltmarshes are most extensive from western Florida to Texas and from New Jersey to Georgia. Louisiana has more than any other State. Along the entire coast from Maine to Texas there are between 5 1/2 and 6 million acres of saltmarsh and more than half of this is in Louisiana. The dominant plants in the saltmarsh community are cordgrass and black rush together with saltgrass, bulrush, and several showy flowering plants such as saltmarsh aster and seaside goldenrod. The community is inhabited by such birds as redwing blackbird, herons, marsh wren, and various shorebirds, and is visited regularly, in season, by large numbers of migratory waterfowl. It is inhabited also by mussels, snails and fiddler crabs and is visited by several fishes. Meadow mice and muskrats sometimes inhabit the saltmarsh the year round and occasional visitors include such mammals as otter, mink, raccoon and opossum.

Mangrove swamps occur along the coasts of Florida southward from St. Augustine on the Atlantic coast and from Cedar Keys on the Gulf coast. They occur where the water is a few inches to two feet deep at average high tide. They increase in area southward and reach their greatest development on the southwest coast in the Ten Thousand Islands region. The most characteristic plants in them are the red

mangrove which is recognized by its numerous prop-roots extending downward from the lower branches like stilts; the black mangrove which produces an abundance of odd, pencil-like roots sticking upright out of the mud; and the white mangrove which produces fewer and smaller upright roots than the black mangrove and is more readily recognized by its fleshy, elliptical leaves and small ribbed fruits.

In the fifteenth century one would have found the beaches looking about as they do now so far as native life is concerned. There is no biotic community on the beach proper and the only living things seen, aside from plants or animals that may have been washed up by waves, are likely to be a few scampering sand crabs and several kinds of shore birds. Back of the beach, however, there is a very characteristic biotic community, called the sand-dune community. It sometimes occupies only the first row of dunes but often it covers several rows.

From North Carolina southward and also on the Gulf coast the sea oat is the dominant plant and it is often accompanied by beach croton and beach morning-glory, while from Virginia northward the sea oat is replaced by beachgrass and often large areas of low dunes are blanketed by beach heath. There are, of course, various other plants that occur in this community but those mentioned are the ones that are most commonly seen. Animal life is not abundant in this community. It is limited largely to such species as sand crabs, dune fiddler crabs, saltmarsh cicadas, and beach tiger bettles, but there

are usually also a few small rodents and a few nesting birds.

The nearness to the ocean that plants are able to grow depends upon the amount of salt spray that they can endure. Some can endure much more than others. Those that can endure the greatest amount of salt spray are found growing in the sand dune biotic community. Those that cannot endure so much must stay a little farther away from the ocean.

In most places along the coast a visitor in the fifteenth century would have found three distinct zones of vegetation, that is, three distinct biotic communities. There were the sand-dune community, the shrub community, and the forest community. The shrub community formed a zone between the other two and might be entirely on old dunes. From Virginia northward it was composed largely of bayberry with the addition of beach plum and bear oak from Delaware northward. From North Carolina southward to northern Florida and along the northern coast of the Gulf of Mexico it was composed largely of wax myrtle, yaupon, and red cedar. And on both the eastern and western coasts of peninsular Florida it was composed largely of sea-grape, saw palmetto, and yucca.

The plants of the shrub community, and sometimes those of the forest community, looked as though they had been artifically trimmed to produce a smooth, upward slant away from the ocean. This was due to the repeated killing of the terminal buds on the side

toward the ocean by the salt spray and the continued growth of the buds on the more protected, landward sides of the plants.

In the fifteenth century there were well-developed forests nearly everywhere along the coast. Toward the north, the coastal forests did not differ very much from those farther inland. In Maine the trees were largely evergreen—spruce, fir, white pine and hemlock. Farther south the evergreen trees were replaced by several kinds of oaks and a few other trees. On Cape Cod and the neighboring islands, for example, the forest consisted largely of oak and beech.

From North Carolina southward to northern Florida and from western Florida to Texas the typical coastal forest was dominated by live oak and accompanied by such trees as red bay, hop-hornbeam, holly, red mulberry, laurel oak and, in many places, cabbage palmetto and southern magnolia. Along the eastern and western coasts of Florida the near-coastal forest varied from place to place and did not differ greatly from forests farther inland.

In both the shrub and the forest communities there was an abundance of animal life. Deer, foxes, raccoons, squirrels, and rabbits were nearly everywhere. There were also many kinds of nesting birds and such animals as frogs, toads, snakes, and myriads of insects.

In all of the biotic or plant-animal communities there were hundreds of kinds of living things in addition to the few that have been mentioned. There were many kinds of flowering plants, and there

were molds, mushrooms, spiders, earthworms, and bacteria. Each kind of organism had its part to play in the drama of life that was carried on in each community. Birds fed upon insects; insects helped pollinate flowers; plants furnished food for mammals and birds; bacteria brought about the decay of the dead bodies of plants and animals.

The total result of the numerous activities of all the organisms in the community resulted in a harmonious, cooperative balance among the plants and animals that is often spoken of as the balance of nature. It is by the study of such harmonious, well-balanced, natural communities that the biologists learn better ways to grow cultivated plants and domestic animals, and better ways for man to live a happy, healthy and useful life.

What has happened to these nearly perfect biotic communities since the fifteenth century? When Europeans arrived they immediately began to exploit the natural resources. It was the natural thing for them to do and no one should blame them for doing it. The forests and the animal life seemed inexhaustible and there was no apparent reason why they should not be used. Forest trees were cut down to obtain lumber for building houses and boats. Wild animals were shot to obtain meat. Whales were killed to obtain blubber.

At first very little impression was made on the total amount of the natural resources. But as the numbers of men increased, the time eventually came when certain species of plants and animals were

used up faster than they were being produced. In the waters adjacent to the coast, the greatest change brought about by man has been a very marked decrease in the numbers of whales and in a very few species of fish such as shad and Atlantic salmon.

An important change that was not due to man's activities occurred in 1931 and 1932 when nearly all the eelgrass disappeared from our coastal waters. This was due, apparently, to a rather mysterious plant disease. It brought about a great decrease in the numbers of brant and other waterfowls which depended upon eelgrass for food. Eelgrass is slowly returning at some places along the coast and it may be that at some future time it will be as abundant as it formerly was.

There was not much that man wanted in either the sand dune community or in the shrub community and these communities were not much disturbed except when man built houses or other buildings in places that were occupied by these biotic communities. In such cases, however, the native life invariably is completely destroyed and so many places along our coast have been developed for human use that the areas where the sand dune and shrub communities are relatively undisturbed are exceedingly limited.

The original forests have been cut down almost everywhere along the coast. In many places there is no forest left at all. In other places the primitive forest has been replaced by a different type of forest. On Cape Cod, for example, the original oak-beech

forest has been replaced by a pitch pine forest and in various places farther south the original live oak forest has been replaced by loblolly and longleaf pine.

In only a few limited areas are there remnants of forests which, although more or less modified, can still be recognized as parts of the primitive, native forests. Examples of these can be found on parts of Roque Island, Maine, in the Sunken Forest on Fire Island, New York, in the Bird Refuge at Stone Harbor, New Jersey, on Smith Island, North Carolina, and Cumberland Island, Georgia, and on some of the Florida keys.

The animal life of the shrub and forest communities has suffered along with the plant life. In some cases this has resulted from too many animals being killed by man. More often, however, it has resulted from the destruction of the plant life. Animals cannot live without plants. Therefore, when a forest or a shrub community is destroyed the animals that normally inhabit those communities have no place to live and they must either move to another locality or die.

In addition to the destruction of native plants and animals by man another factor that has contaminated many of the native communities has been the introduction of exotic plants and animals. Some of these introductions have been intentional while others have been entirely unintentional. Many of the exotic species have become naturalized and are mingled with the native species to such an extent that the biotic communities can no longer be said to be in a wholly natural condition.

One of the most unfortunate introductions was that of the Japanese honeysuckle which has been extensively planted and encouraged by people who do not realize the value of uncontaminated native vegetation. This exotic honeysuckle is now common in forest borders all the way from Massachusetts to Texas. It is very difficult to eradicate and, since it rapidly overwhelms and strangles many kinds of native plants, it seriously changes the character of the forest border.

Many different kinds of weeds have been introduced unintentionally and some exotic animals have gained entrance in the same manner. The most troublesome exotic animals along the coast, however, have been domestic animals such as goats and hogs which have "gone wild". They often do a great deal of damage to the native vegetation.

The few remaining examples of natural, or even seminatural, biotic communities along the seacoast should be zealously preserved and protected from further modification. Biologists should have an opportunity to study these particular types of biotic communities that occur nowhere except along the seashore, for no one is able to say that, at some time in the future, such studies might not result in discoveries of great benefit to the human race.

Entirely aside from the opportunities for scientific research, it is exceedingly important to the future of education to have examples of all of the different types of biotic communities available for nature study classes, conservation groups, and anyone else who may wish

to study, photograph, or otherwise enjoy the activities of native plants and animals in their natural homes.

The esthetic values of the native biotic communities also should not be overlooked. Much of the beauty of the coastal areas is due to the plants that grow upon them and since the plants that grow naturally in the native biotic communities are better adapted than any others for the rather difficult growing conditions in our seaside habitats, the plant life is well worthy of protection and preservation for its esthetic values alone.

What can be done at this late hour to save some of our native plant and animal life along the seacoast? The most important thing to remember in this connection is that nature is a very efficient conservationist. If a biotic community can be protected from human vandalism and from domestic animals, and if no plants or animals are taken out or put into it, nature will take good care of it, as a general rule. If it is already in a natural condition, nature will keep it that way if given a chance. If it is only seminatural it still is unnecessary to do anything except protect it and leave it alone. Nature will gradually bring it back to a natural condition. It may take a long time to do it, the length of time depending upon how much it had been disturbed, but it will continually become more valuable as the years go by.

However, in order that nature may take care of a biotic community, it is necessary that permanent protection of the area be

guaranteed. Usually a private owner cannot give such a guarantee. It is important, therefore, that the best of our remaining natural or seminatural biotic communities be owned by the State, the Federal Government, or some other agency that can guarantee permanent protection. As soon as an area containing natural or seminatural biotic communities is obtained by such an agency, a trained biologist should be asked to advise which parts are best suited for permanent protection. Steps should then be taken to guarantee that the selected parts will be protected for all time. The remaining parts of the area can then be used for recreation or any other worthy purpose.

# EXISTING FEDERAL AND STATE SEASHORE RECREATION AREAS

### OF THE

## ATLANTIC AND GULF COASTS

Area	Length of	Shoreline
Maine		
Acadia National Park	12	miles
Reid State Park	1.5	miles
New Hampshire		
Hampton Beach State Park	1000	feet
Rye Harbor State Park	100	feet
Wallis Sands State Park	300	feet
Massachusetts		
Marthas Vineyard State Reservation	2	miles
Monomoy Island (Fish and Wildlife Service)	10	miles
Plum Island (Fish and Wildlife Service)	6	miles
Provincelands State Reservation	9	miles
Salisbury State Beach Reservation	ļţ	miles

	Area	Length of	Shoreline
Rhode Island			
	Block Island State Beach	1	mile
	Sand Hill Cove State Beach	2200	feet
	Scarborough State Beach	2200	feet
Connecticut			
Connecticat	Harkness Estate State Park		25 mile
	Hammonasset Beach State Park	2	miles
	Rocky Neck State Park		5
	Sherwood Island State Park	1	mile
New York			
	Captree State Park	2	miles
	Fire Island State Park	5	miles
	Gilgo State Park	4	miles
	Hither Hills State Park	1.9	miles
	Jones Beach State Park	6	miles
	Montauk Point State Park	٠	mile
New Jersey			
	Island Beach State Park	9	miles
Delaware			
	A number of unconnected areas	12	miles

# Maryland

None

Virginia			
	Assateague Island (Fish and Wildlife Service)	15	miles
	Seashore State Park	1	mile
North Carolina			
	Cape Hatteras National Seashore Recreation Area (including Pea Island		
	National Wildlife Refuge)	70	miles
	Fort Macon State Park	1	mile
South Carolina			
	Edisto Beach State Park	3	miles
	Hunting Island State Park	4.5	miles
	Myrtle Beach State Park	1	mile
Georgia			
	Jekyll Island State Park	10	miles
Florida			
	Anastasia Island State Park	8	miles
	De Soto Beach State Park	1	mile
	Everglades National Park	46	miles

### Florida

Fort Clinch State Park	1	mile
Hugh Taylor Birch State Park	.5	mile
Little Talbot Island State Park	5	miles
St. Andrews State Park	1	mile

### Alabama

Gulf State Park and Fort Morgan
State Park 5 miles

### Mississippi

None

### Louisiana

None

#### Texas

None

To summarize, approximately 265 miles of seashore (excluding bays, coves and harbors) are in Federal and State ownership. There are 2 national parks, 1 national seashore recreation area, 4 national wildlife refuges (counting only those refuges which contain ocean beaches), and 36 State parks—a total of 43 areas in 14 States.

The 54 areas selected, out of the 126 studied, have a combined total of approximately 640 miles of shoreline. If placed in public ownership, they would increase the amount of publicly owned seashore to nearly 25% of the Atlantic and Gulf coastline.

# National Wildlife Refuges

### Atlantic and Gulf Coasts

1.	Chincoteague National Wildlife Refuge	-	Maryland - Virginia
2.	Monomoy National Wildlife Refuge	•	Massachusetts
3.	Parker River National Wildlife Refuge	-	Massachusetts
4.	Brigantine National Wildlife Refuge	-	New Jersey
5.	Back Bay National Wildlife Refuge	-	Virginia
6.	Pea Island National Wildlife Refuge	-	North Carolina
7.	Cape Romain National Wildlife Refuge	-	South Carolina
8.	Blackbeard Island National Wildlife Refuge	-	Georgia
9.	Wolf Island National Wildlife Refuge	-	Georgia
10.	Anclote National Wildlife Refuge	-	Florida
11.	Cedar Keys National Wildlife Refuge	-	Florida
12.	Great White Heron National Wildlife Refuge	-	Florida
13.	St. Marks National Wildlife Refuge	-	Florida
14.	Sanibel National Wildlife Refuge	-	Florida
15.	Key West National Wildlife Refuge	-	Florida
16.	Petit Bois National Wildlife Refuge	-	Alabama - Mississippi
17.	Breton National Wildlife Refuge	-	Louisiana
18.	Delta National Wildlife Refuge	-	Louisiana









