

THE PROPOSED EVERGLADES NATIONAL PARK

REPORT OF A SPECIAL COMMITTEE OF THE
NATIONAL PARKS ASSOCIATION APPOINTED
TO STUDY ALL THE FEATURES IN CONNEC-
TION WITH THE PROPOSED EVERGLADES
NATIONAL PARK IN THE STATE OF FLORIDA



PRESENTED BY MR. FLETCHER

JANUARY 22, 1932.—Ordered to be printed

UNITED STATES
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Under a resolution of the National Parks Association of October 9, 1931, a committee on new national park projects was appointed to study areas pending and to be proposed thereafter, and report thereon to the board of trustees.

At a special meeting of the trustees held at the Cosmos Club in Washington on January 18, 1932, the subcommittee of the above committee which had been appointed to investigate the proposed Everglades National Park in the State of Florida, consisting of Mr. Frederick Law Olmsted and Mr. William P. Wharton, both of Massachusetts, after 10 days' examination of the area, reported approval of the project.

Whereupon the trustees adopted with enthusiasm the accompanying report and voted unanimously to support the bill in Congress and aid in effectuating the park.

OFFICE OF THE SUPERVISOR OF THE STATE OF CALIFORNIA
DIVISION OF LAND AND NATURAL RESOURCES

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REPORT TO THE NATIONAL PARKS ASSOCIATION OF ITS COMMITTEE
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STATE OF FLORIDA

The subcommittee on the Everglades National Park project reports as follows:

With a background of some previous personal acquaintance with the region, extending back in the case of Mr. Wharton for over 20 years, and of some study of previous reports, descriptions, and discussions, the committee spent 10 days in field exploration beginning January 4.

Within the limits of the region outlined in the report of the Secretary of the Interior we traversed (a) by automobile, in the northerly portion on and near the Tamiami Trail about 75 miles, in the east central portion about 12 miles near the Royal Palms State Park, in the southeast portion on and near Key Largo about 20 miles; (b) by motor cruiser, a 7-days' circumnavigation of the entire coast from the ocean northeast of Key Largo to the town of Everglades, with excursions up the Shark River and connecting channels, into Whitewater Bay, up the Turner River and through the northwest archipelago; (c) by small boat, excursions in the south of about 13 miles into Alligator Lake and Whitewater Lake, and in the west of about as much in the upper reaches of the Shark River to the rookeries and in the lower reaches of the Rogers River; (d) on foot, several miles in the Cape Sable region, in the district north of the trail, and at other scattered points; (e) by blimp, some 40 or 50 miles over the northern portion; (f) by airplane, about 150 miles over the southern and west central portions.

We are deeply grateful for the courtesy and effectiveness and generosity with which arrangements were made for our expedition by and through the Tropic Everglades National Park Association and its chairman, Mr. Ernest F. Coe, for the hospitalities extended to us by many friends of the project, especially by Mr. Charles T. Edgar, whose guests we were on his cruiser, and by the Goodyear Zeppelin Co. who placed a blimp at our disposal without charge; and for the illuminating information given us on many phases of the subject by many people, from Mr. Coe and Mr. Frampton, the biologist, to captains, guides, fishermen, hunters, and trappers long familiar with the region and its wild life.

I. MAIN CONCLUSIONS

Our main conclusions directly pertinent to legislation now pending (S. 475 and H. R. 5063) are these:

1. It is highly desirable, from a strictly national standpoint and with scrupulous regard to standards proper for the national park system, that a national park should be established in the region contemplated in the pending bills.

This conclusion implies, and is based upon, our conviction that an area in this region adequate in size to constitute a national park is characterized by essentially primitive natural conditions of nationally outstanding distinction for their scenic, inspirational, educational, and scientific qualities. Wherein these qualities are chiefly important from a national park standpoint will be discussed under the heading "Certain Outstanding Qualities of the Area."

2. It is important that there should be no reasonably avoidable delay in preceeding, as the present bills would permit if enacted, with a carefully studied determination by the National Park Service of suitable boundaries, with the acquisition of land therein, and with the establishment of effective protection for the area by the National Park Service.

In the absence of such protection—

(a) The wild life of the region, which is of extraordinary interest, will remain subject to serious depredations, even though conditions are now far less critical as to some species than they were when the wholesale slaughter of plume birds was checked a few years ago.

(b) Every dry season brings a serious fire menace. We observed several going fires and several recent burnings, fortunately of limited acreage, believed to have been set by hunters; and several beautiful tropical hammocks have been ravished by such fires in recent years.

(c) There is an ever-present danger, at an ebb in periods of business depression and at its height in periods of prosperity, of further infiltration into the primitive area of injurious attempts at private exploitation, notwithstanding the economic failure of previous attempts and the inherently adverse conditions which have thus far largely protected the primitiveness of the area.

3. The scope of and limitations on the discretion of the Secretary of the Interior in fixing the boundaries within which all land must be acquired and beyond which no land is to be acquired for the proposed park, as those limitations are determined by the bills, seem to us on the whole not unreasonable; and we do not recommend the association to urge any amendment thereof which might jeopardize the early passage of the bills.

Within the maximum possible limits indicated in the bills there are included some lands which in our opinion clearly ought not to be included in a national park, and certain other lands the proper status of which in relation to such a park seems to us highly questionable; while in one direction certain marginal lands which we believe desirable for inclusion in the park might possibly be excluded from consideration under a strict interpretation of the bills as drawn. We submit our comments on these points below, under the heading "Boundary questions," not with a view to the association's urging any changes in the bills now before Congress but with a view to its urging these considerations upon the Park Service and the Secretary in the event of the passage of the bills, so as to assist them in reaching a wise decision in exercise of the Secretary's discretionary power.

II. CERTAIN OUTSTANDING QUALITIES OF THE AREA

It is needless to recapitulate at length and in detail the widely discussed reasons which make it important, especially from the scientific and the educational points of view, to bring a large area in this region under public control for conservation of its notable biological features

and of the environment on which they depend; but something ought to be said if only by way of parenthesis on three aspects of this subject.

1. We believe, although we are not geologists, that there has been insufficient emphasis from the scientific and the educational points of view upon the importance of certain geological or physiographic features.

2. The plant life of the region is peculiarly interesting because it includes, along with many species found farther north, what is found within the continental United States only in south Florida, namely, an essentially tropical flora, containing an astoundingly large number of species of tropical genera, as notably among broad-leaved evergreen trees and shrubs and among palms. Enumeration, even of examples, is impossible in this connection, but a few are referred to below in discussing scenery.

3. The area is especially noteworthy for the abundance of many species of wild bird life not commonly seen in other parts of the United States. In Florida the roseate spoonbill is making its last stand in continental United States, and the Everglade country offers the most favorable conditions for the restoration of these birds to their former abundance. No one who has seen these remarkable birds flying in line against the blue sky can fail to be impressed by their great beauty and interest. The sandhill crane is said still to be present in moderate numbers, although the committee did not visit its favorite haunts and saw none. It could probably be restored to something of its original abundance by the complete protection it could be afforded within a national park. Even the flamingo, though possibly never a breeder in Florida, might be expected to return as a winter visitor in something of the numbers which formerly frequented southern Florida. Of the other large waders, the two white egrets, the great white and great blue herons, the Louisiana, little blue, black-crowned night and green herons, and the white and wood ibises are now common or abundantly locally, perhaps largely as a result of the protection afforded by wardens of the National Association of Audubon Societies in recent years, and partly, in the case of the egrets, of the subsidence of commercial demand for their plumage. Since these species regularly nest within the area, they could be preserved indefinitely there, and would probably multiply to something like their former extraordinary numbers, barring unforeseen disasters. The wild turkey, too, is still common, though hunted with constantly increasing intensity, and could probably be returned to abundance by complete protection from persecution at the hand of man. The Florida black duck is also a common permanent resident.

Both alligators and crocodiles, formerly abundant in certain localities of the area, are now scarce and very secretive and none were seen by us. Among the mammals, the panther is still to be found, and wildcats and deer are said to be common, while raccoons are abundant despite the great numbers trapped. Other mammals not infrequently found include the black bear, the otter, and the manatee. In extending protection to these and other animals, especially to the raccoon, upon which the natives depend to a large extent for their livelihood, it is to be hoped that a sympathetic attitude will be adopted by the State of Florida and the park service. A friendly attitude toward the park on the part of the few people who live at

one time or another within its boundaries, and now live largely by hunting and fishing, is essential to the success of the undertaking. A sudden cutting off of their normal activities without any attempt to make provision for substitute occupations would necessarily arouse resentment. While the committee has no definite plan to offer, it does bespeak consideration for these people who through no fault of their own will ultimately be cut off from the source of part of their hazardous living.

In addition to the year-round animal residents mentioned above, many migratory birds winter in the proposed park. We saw the so-called shore birds, or Limicolae, in considerable numbers in favorable localities, especially killdeer, black-breasted plover, turnstones, and many of the smaller species. Ducks are said to be not as common as formerly, and the region as a whole is not particularly suited to maintain large numbers of this order of birds. Admission of salt water through a canal into Whitewater and other lakes near East Cape has probably killed much of the feed which formerly grew there. It is likely that this could be restored by blocking the canal. As showing that ducks still resort to this general section, it should be noted that we saw small flocks of shovellers, blue-winged teal, baldpates, and pintails in suitable areas, and that bluebills were not uncommon in the deeper and saltier waters near the coast line.

The high point of the committee's bird experience was a visit to a well-known night roost of white ibises and the small herons near the headwaters of the Shark River. On our arrival shortly before sunset we found several hundred birds already in the mangroves. As we approached these took wing and flew short distances, but almost immediately began to return, and with them and following them until after dusk flock after flock came in from their feeding grounds to the south and southeast, and settled in the thickets close at hand. It was an unforgettable sight, as the glow of the setting sun suffused their white plumage with delicate rose tints. At the same time to the west flew a continuous stream of the "long whites," or American egrets, heading toward their own roost somewhat nearer the coast. Such sights, and similar ones to be seen later in the season near the nesting rookeries of these birds, rank high among the natural spectacles of America, and can be perpetuated most effectively by the creation of a national park in this region.

What we were chiefly concerned to study was the validity or invalidity of doubts, which have perplexed many, as to whether the area is really characterized by qualities properly typical of our national park from the standpoint of scenery—qualities which take and hold the attention of all visitors, impressing and inspiring them with a sense of power and vastness and beauty in nature.

We are compelled to admit that in a good deal of the Everglades region, especially in those parts now readily accessible by road, the quality of the scenery is to the casual observer under most conditions somewhat confused and monotonous. Its beauty in the large is akin to that of other great plains—perhaps rather subtle for the average observer in search of the spectacular; though sometimes very grand, especially when seen in solitude and at rest instead of from a hurrying automobile. But most of it, because of the intricacy in the distribution of small masses of trees and bushes, is less impressive pictorially than the simpler and bolder landscapes of some other notable plains in various parts of the country.

Also it must be admitted that certain types of intimate or detailed scenery, characteristically tropical and subtropical, very interesting to northerners, and to be found in the continental United States only in Florida—especially certain types of tropical sylvan scenery notable for their wealth of species of broad-leaved evergreens, palms, orchids, and other epiphytes—generally occur in this region in masses of less impressive extent and maturity of height than cases even yet do, in certain specially favorable localities outside of this region. Most of the latter, however, have unfortunately been more or less completely butchered by exploitation or else are so isolated among exploited areas that they can not be considered for inclusion in the national park system. A notable exception is that of the Royal Palms, the tallest and noblest species of this remarkable genus of the American Tropics.

But even granting the above limitations as to the scenery of parts of the region, there are extensive areas where even the most casual observer can hardly fail to be gripped and inspired by a sense of beauty linked with a sense of power and vastness in nature, essentially akin to the feelings inspired by great scenes in our existing national parks yet arising out of elements so different from these—indeed so wholly unfamiliar to the experience of most visitors to the national parks—as to have the special force of novelty.

Of specific elements in the scenery of this region, two are outstanding in this respect.

One is the mangrove forest. What may be called the climax type of mangrove forest, accessible only by water, centers along the southwest coast and the ramifying tidal channels within a few miles of that coast, from below the Little Shark River on the south for a distance of about 10 miles to the northward; gradually merging southward, northward, and inland into types of mangrove forest other than the climax. Certain aspects of the climax mangrove forest are immensely impressive.

One of these is the long frontal cliff of columnar trunks and dark foliage rising abruptly out of the Gulf of Mexico and bearing the brunt of storm waves that sweep across a thousand miles of water. The impression of power—power of wave attack, power of the cliff's age-long resistance to that attack even where slowly and stubbornly yielding ground to the waves—is deeply impressive, as in the case of ocean cliffs of rock; but the impression is heightened by one's realization that here is no mere inanimate strength of passive resistance but the strength of a living organism fighting for its life, thrusting down new-root buttresses to grip the underlying marl as storms break its earlier supports. This living cliff of course has no stupendous height, seldom if ever more than 40 to 60 feet; but a sense of vastness is given by its length, by the evident greatness of the forest behind it, into the gloom of which the eye can penetrate somewhat deeply only to lose itself in a maze of trunks, and by the opposing great sweep of the gulf rounding down over the western horizon toward Mexico. Back from the gulf the forest is traversed by anastomosing tidal channels, prevalently about three or four hundred feet wide, many of them narrower, some wider. Along and near these channels the mangroves reach their best development, many trees rising to heights between 60 and 80 feet and some to a 100 feet. Inland and northward and southward, away from the channels of major tidal flow the trees

gradually decrease in height, but in some respects increase in picturesque-ness. It is a monotonous forest, in the sense that the coniferous forests of the north are monotonous; dominantly of red mangrove with its rhododendron-like foliage, reddish trunks and strange arching roots, accompanied by its customary associates, black and white mangrove and "buttonwood"; but the scenic compositions are endlessly varied and beautiful as one reach of water opens on into another between the forest masses and as trees and clouds are reflected upward from the sheltered mirror. And the sense of remoteness! It is a forest not only uninhabited and unmodified by man, but literally trackless and uninhabitable.

The actual extent of this climax mangrove forest, which according to the testimony of tropical explorers appears to be unique in the world for height and impressiveness, appears to be limited to a comparatively few square miles, but it is traversed by so many intercommunicating waterways that it appears more extensive than it really is; and the amount of interesting and beautiful but less extraordinary mangrove forest along additional waterways is very great.

Inland, the ramifications of the mangrove waterways interlock with prairie and hammock lands presenting definitely fresh-water vegetation and landscapes and expand into the spacious inland archipelago of Whitewater Bay, some 10 by 16 miles in extent. All this is picturesque and strange and full of stimulus to observation and thought, though its scenery is much less forcibly arresting to the attention than that of the climax region. It spreads through a district running into the hundreds of square miles. One may travel through it by boat for hours, or days, or weeks.

Ten thousand people so traveling through the mangrove channels would leave no track upon the forest floor to mar its pristine wilderness. A tangle of mangrove roots and giant ferns, over soft, deep mud, offers no inducement for park visitors to leave their comfortable boats or to molest the vegetation or animal life of the region by venturing into areas from which careful study may show that they ought to be kept out for conservation of the scenic or biological features. Reasonable regulations as to the types of boats admissible into various parts of the area and as to the general conduct of those who use them will of course be necessary.

The coastal regions within the mangrove forest zone but north of the climax forest and south of it to and including Florida Bay embrace much scenery that is strikingly picturesque even to a superficial observer, as is the case with intricate marine archipelagos anywhere; and they offer something else. Shoals are visibly forming and shifting; oyster bars starting and growing; shells being torn from them and from other sources by the waves and piled in frontal beaches where and as the tidal and wind currents and waves inevitably dictate; mangrove seedlings are visibly forming precarious colonies on hazardous shoals and accelerating their upbuilding into islands; marine organisms are forming corallike reefs of nascent limestone over the marl margins of established mangrove islands; and storms are breaking and tossing great fragments of these "reefs," along with shells and mud, to form what might become the fossiliferous conglomerates of some future geologist. The waters, the earth, the air are seething with animal and vegetable life and with progressive change.

The interest which such phenomena aroused in us, as laymen with but a smattering of geology, may seem naive to real geologists, who tell us that no largely significant earth-shaping movements are taking place in what they call a geologically dormant area. Be that as it may, the processes of change, however limited, are so obviously active before one's very eyes and occur in so unfamiliar a setting that they do seem to arrest the layman's attention and help him to realize that the world about him is not a static result of dimly comprehended geologic processes in the past but is a shifting scene in a continuous, eternal drama.

The other greatly outstanding element of the scenery of the region is one that most people will have difficulty in conceiving as a major element in scenery at all—so incidental is it in any scenery with which they are familiar. We refer to the bird life of the region in its relation to the scenic and inspirational qualities of the area, considered as a national park. No one who has been fortunate enough, as we were during our visit, to see the thousands upon thousands of ibis and herons of various species flocking in at sunset from their distant feeding grounds in the opener parts of the Everglades toward a secluded rookery in the narrow wooded upper reaches of the Shark River tributaries, or who has seen the more widely scattered birds on their feeding grounds at a favorable time, such as often occurs along the Tamiami Trail when water conditions are right, can fail to have received an impression of sheer beauty, and of the multitudinous vastness of nature as exhibited in these great flocks of birds, no less arresting, no less memorable, than the impressions derived from the great mountain and canyon parks of the West.

It is essential that the rookeries be protected from intrusion, be made inviolate sanctuaries for the birds: but experience along the trail has demonstrated that with prevention of shooting and with entirely practicable regulation of public behavior, a great number of people can be given opportunity to enjoy the sight of amazing throngs of birds at some of their great feeding grounds, and we believe it will be safely practicable to admit large numbers of people to observation places so related to the rookeries that the still more amazing concentrated flights of homing birds at sunset will pass over them as they return from the feeding grounds.

Where these observation places can best be located and how arranged, how people can best approach them, in what cases by automobile and in what cases by boat, and in general how it can be made possible for large numbers of park visitors to get these and other enjoyments offered by this region, and peculiar to it, without serious defacement of the landscape by artificial elements and also (what is here even more important) without upsetting the extraordinary intricate and unstable ecological adjustments upon which the whole character of the region depends, is a problem that requires prolonged and intensive study from many points of view by the most competent people—botanists, zoologists, and geologists, as well as engineers and landscape architects. We are satisfied that it can be solved, and well solved; but we can not too strongly urge caution, thorough study, and patience in the formulating of comprehensive and far-seeing plans before any physical changes, however innocent in seeming, are undertaken. This applies even to changes intended to repair the few disturbances already worked by man. It is no place for snap-judgment

decisions about the type or location of "improvements," even those most urgently needed for protection and for the convenience of visitors.

For these reasons we hazard no comments at present about roads, or channel dredging, or accommodations for visitors and administrative staff, except to emphasize that there should be no hasty decisions about them and to express the opinion that the primitive character of the region should be protected to the utmost.

III. BOUNDARY QUESTIONS

No discussion is needed of the reasons for embracing in the proposed park the mangrove coastal zone (including a considerable hinterland area and also the outlying shoals and island other than those of the main chain of keys occupied by the railroad) between the northwesterly limits referred to in the bills, which were determined by the existence just beyond them of important settlements and agricultural land, and the place where the railroad crosses from the mainland to Key Largo.

A very large extent of the hinterland of glades should be included, whether in itself interesting to most visitors or not, because it is an essential part of the biological and geographic unit with which we are concerned, containing the most important feeding grounds for the birds and breeding grounds for fish, and serving as a catchment place for rainwater that largely controls conditions throughout the region. Clearly the park should extend to the east and north at least as far as the first permanent and important artificial disturbances of the natural conditions.

The first of these to the east in the southern part of the area is the railroad. The first to the north in the western part of the area is the Tamiami Trail. Between these to the northeast is a less well-defined limit beyond which drainage canals or roads or other elements of artificial exploitation are serious enough to call a halt, roughly as indicated in the report of the Secretary of the Interior.

Even within these limits some ditches or canals have been dug and roads built, a very few buildings erected, and a few small areas of cultivation attempted; but these are neither of great economic importance nor such as to involve very serious or very permanent interference with natural conditions. The canals and ditches have rather seriously affected water levels and salinity in a considerable area, but as they are quite independent of the drainage districts beyond the limits above indicated they could be closed or otherwise controlled to obviate these effects if included in their entirety within the park.

Obviously neither the Tamiami Trail nor the railroad can be parts of the park, and there are strong arguments against extending the park beyond them and leaving them as permanently alien lands devoted to general transportation purposes within the outer boundaries of a national park. But there are also strong arguments for public control, in connection with the park, over certain lands beyond the limits thus far discussed.

Important questions about boundaries, more or less debatable, are as follows:

1. On the southeast, Florida Bay with its scattered islands and its shoals (which tend to become islands as the years go by and mangroves spread to new footholds) should clearly be included in the

park, but the main line of keys inclosing the bay on the southeast, is, broadly speaking, not proper territory for inclusion. It is already so far exploited for other uses as to have lost much of its primitive character and to have made the land values subject to indeterminate speculative advancement. Its narrow width is divided by the railroad and highway and it is in general most valuable, potentially, for these uses to which close access to railroad and highway are advantageous, chiefly private uses.

For a national park, also, suitable means of connection with the highway and railway systems of the country are, of course, essential, and they should be as agreeable and dignified and satisfactory as possible for park visitors; but they need be very few in number. We are inclined to believe that for these purposes two frontages of land in the keys would be sufficient: One to the northeast on Key Largo near the Jewfish Creek crossing of the railroad and one to the southwest on Lower Matecumbe; both ample enough to provide, in a thoroughly pleasant setting, for all the conveniences desirable for users of the park at a point of transfer between rail or road transportation and boat transportation.

It has been suggested that much more extensive park acquisitions might be desirable along the bay shore of this part of the keys to protect the shore frame of the Florida Bay unit of the proposed park. But the bay is so wide and the channels used by most boats are in general so far from the shore that even rather intensive private developments along these shores would not greatly affect the scenery of the bay.

Our impression, therefore, is that no park land acquisitions other than transfer places, as above mentioned, are needed or would be justified on the main keys southwest of the railroad at Jewfish Creek, except that where the main channel from Jewfish Creek to the bay runs very close beside mangrove thickets tenuously attached to Key Largo, those thickets might well be controlled to avoid possible unsightly exploitation close to the main waterway.

2. East of the railroad crossing at Jewfish Creek and within the outer limits for the park boundaries, as indicated in the bills, several types of conditions on Key Largo should be noted:

First, there is a bay-shore area of mangrove swamps several square miles in extent. It is a good example of the interesting type of scenery but by no means comparable in quality with the great examples of the same type in the main body of the park, and it is considerably altered by road construction and otherwise.

Second, there is a strip of coral-rock upland some 12 miles in length and generally from a quarter to half a mile in width, traversed for its entire length by a highway. This ridge originally bore throughout a dense and beautiful growth of tropical hammock vegetation. Much of this has been cut off, the land planted with lime trees or otherwise cultivated, and in part again abandoned to the return of a considerably modified young hammock growth. Northeast of the highway bridge from the mainland, for 3 miles or so in length, the growth is largely intact except for the cutting out of some of the larger trees, presumably for lumber, and except for a few smallish clearings and some areas of large second-growth not readily distinguishable from the original hammock. This is probably the best remaining example, and for its size the least altered by man, of the extraordi-

narily interesting and beautiful tropical hammocks which once covered most of the rock upland of the whole chain of keys.

Third, there is a strip of mangrove swamp along the ocean side.

Fourth, there is at the northeast end of the key a district about 2½ miles long which includes, within the hammock on the bay shore, the Key Largo Anglers' Club, and one or two other active-going concerns, and beyond them one or more large but now rather desolate-looking and almost uninhabited subdivisions. Bay frontage in this vicinity is potentially advantageous for clubs, residences, etc., because of its proximity to the Angelfish Creek pass, south of which there is no outlet to the ocean and the ocean fishing grounds for a great many miles.

Three or four miles out to sea from Angelfish Creek are the reefs, said to present a very interesting submarine garden, with excellent fishing in the vicinity. The water was too rough at the time of our visit for us to examine these. The passage through Angelfish Creek or connecting channels near it, all lined with mangroves, is very picturesque, and it would be a pity to have these "passes" spoiled by unintelligent or overconcentrated real-estate developments and other exploitations; but generally speaking, the most appropriate use of the northern end of Key Largo and the small keys north of it appears to be in the main that toward which it is heading, viz, for clubs, hotels, residences, etc.

Any such uses at this northern end will require the permanent maintenance of a public highway to them.

In spite of the great attractiveness of the one remaining piece of typical key hammock land and of the importance of Angelfish Creek Pass and of the interest of the oceanic reefs and some other features, this whole Key Largo district northeast of the railroad seems to us so much entangled with artificial developments and so tenuously connected with the main body of land west of the railroad that we can not see justification for making the district as a whole, or isolated fragments of it, a part of the proposed national park.

3. On the mainland east of the railroad to the State highway, and again east of the highway to Card Sound are large bodies of land within the possible outer limits for the park boundaries indicated in the bills, but detached from the main body of the park by those permanent transportation routes. The land is much like that to the west of the railroad. In the main it is flat, grassy land, with a rather uniform sprinkling of stunted mangrove thickets and low stunted hammock growths. Along the shore on points and semidetached small keys are some larger and scenically more interesting growths of mangrove and of hammock.

These bodies of land seem to us to present no features of special interest that would justify extending the park beyond the railroad merely for the sake of including them.

It is to be noted, however, that at least one and possibly more than one important approach to the main body of the park by automobile from the State highway must be provided for between Card Sound and Homestead, and it is important that the chief approach or approaches to the park by automobile from the east, for those coming by the highway south from the direction of Miami or north from the direction of Key West should be as dignified and agreeable as possible. The present road leading in to the Royal Palms State Park takes off

from that highway in Florida City, in a small nexus of stores and gas stations, and traverses the residential part of that settlement and its outlying subdivisions for several miles. It may well be that a careful study of the very difficult problem of automobile roads into the park will show the desirability of acquiring one or more considerable bodies of land extending from the main park west of the railroad to, or in the direction of, the State highway so as to provide more dignified and satisfactory means of approach.

4. North of the Tamiami Trail is a wilderness area generally similar to that south of it. In part, especially to the west, it appears to include better examples of several types of vegetation and scenery characteristic of the region that occur south of the trail, including Cypress sloughs, outliers of the "Big Cypress" region in the northwest which has been largely altered by drainage, fires, and lumbering, and also including several types of hammock growth.

Especially notable is the largest and finest stand of the native Royal Palm known to exist anywhere, to which we have already referred as perhaps the only really great group of these noble trees remaining in their natural environment. It is said to have contained 2,000 trees, of which between 200 and 300 have been dug up and moved away within the past few months. Its destruction would be a great calamity.

The wilderness immediately north of the trail, apart from what it contains of special interest, has an importance in relation to the park in three ways: (a) Its exploitation by drainage eastward would permanently cut off an important part of the seriously curtailed natural water supply to the glades south of the trail, a part which could readily be restored to that area if the land to the north remains primitive; (b) unless, for a considerable distance north of the trail, the land remains primitive and is rigidly protected against shooting, the wonderful spectacle of bird life on the feeding grounds immediately adjacent to the trail is likely to disappear or deteriorate; (c) it seems highly desirable to provide north of the trail a wilderness reservation for the Seminole Indians in lieu of the reservation formerly assigned to them by the State in the heart of the park area south of the trail. It has been suggested that the park as such might extend to the trail and the area north of it be set apart as a reservation for the use of the Seminoles, but subject, as to the portion within a mile or so of the trail, to prohibition of hunting and to control and regulation by the Park Service.

The plain fact, however, is that certain portions of the land north of the trail, especially the notable Royal Palm area, if that can possibly be acquired and saved before it is wrecked, are desirable for precisely the same kind of national park purposes as the lands south of the trail, and that the trail was put where it is years before the park and can not be moved; just as certain essential public highways on the Island of Mount Desert were in existence for years before the Government acquired the Acadia National Park. In that case the Government was confronted with the necessity of either accepting important pieces of park land detached from the main body by these roads, or of refusing to accept these detached lands in face of the fact that their private exploitation would be very detrimental to the value of the park as a whole. The acceptance of these permanently detached pieces of land was admittedly a precedent with dangerous implica-

tions, however sharply it can be distinguished from the case of any proposal to bisect a preexisting national park by the intrusion of a new public highway or railroad; and this precedent should not be repeated lightly or without the most careful weighing of alternatives and their consequences. But important objectives of conservation should not be sacrificed through timidity about technicalities of precedent.

5. A rigid interpretation of the bills and of the Secretary's report referred to in them might possibly limit the park in the northwestern coastal area to a line drawn arbitrarily across the very interesting archipelago of mangrove keys that lies southwest of Chokoloskee Island and incloses the bay upon which the town of Everglades is situated. This archipelago is not only very interesting in its scenery, and from biological, geological, and archaeological standpoints, but is of a type not represented further south, and it appears to have no considerable economic value. It would seem very desirable to include practically all of it in the park. Its northwesterly end is about four miles from the Tamiami Trail at a point about opposite the great stand of Royal Palms north of the trail. The mainland intervening between the archipelago and the trail appears from the new aerial photographic map by the Coast Survey to be a wilderness of mangroves and low wet prairies traversed by a network of small channels and ponds; and the question arises as to whether an area of the park traversable by canoes and small boats might not well be extended here to and across the trail to the Royal Palm area. Congressional action supplementary to the present bills might possibly be required to authorize this if upon further study by the Park Service it should prove desirable.

FREDERICK LAW OLNSTED,

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