

10

ROYAL PALM HAMMOCK

---

JOHN K. SMALL

---

Reprinted, without change of paging, from the JOURNAL OF THE NEW YORK BOTANICAL GARDEN  
17: 165-172. October, 1916.



Everglades in foreground. A portion of Royal Palm Hammock, about the middle of the key, in background. Royal-palms, some estimated to be one hundred and twenty-five feet tall, tower above the largest live-oak trees. Large clusters of immature fruits may be seen hanging from the sides of the palm-trunks a short distance below the crown of leaves. The royal-palm here flowers in mid-winter and matures its fruits in mid-summer.

## ROYAL PALM HAMMOCK

(WITH PLATES CLXXIX-CLXXXII)

The two natural divisions of the Everglade Keys in extreme southeastern peninsular Florida, the Biscayne pineland and the Long Key pineland, are separated from each other by the headwaters of the Taylor River, a stream which has not yet been mapped. Among the forks and sloughs of this river are many keys or islands clothed with hammock vegetation. Most of these islands are small; but one of them is larger than many of the others put together, and it stands out so prominently in the landscape that it may be seen across the prairie for a distance of more than ten miles. It lies a little south of the main axis of the Everglade Keys,\* and is called Royal Palm Hammock.† It is also known as Paradise Key.‡ The island received the former mentioned name from the most conspicuous element of the vegetation, this consisting of scores of royal palms, many of which tower above the other trees.

\* It is located within sections 15 and 22, township 58 south, range 37 east.

† A hammock,—the word probably of Indian origin,—is a dense growth of mostly broad-leaved shrubs and trees, thus giving shade, in a pine forest or on a prairie. The use of the word is confined mostly to Florida and adjacent states. For more extensive definitions, see R. M. Harper in *Science* II. 22: 400-402, 1905; Third Annual Report of the Florida Geological Survey 217. 1911; and Geological Survey of Alabama, Monograph 8: 83. 1913.

‡ The word key (cayo) primarily applied to islands near the coast in and near Spanish speaking countries, largely replaces the use of the word island in southern Florida, and by the inhabitants is applied to islands in the Everglades as well as to the islands of the coasts and reef of Florida.

For nearly twenty years public and popular interest in this hammock has been growing. This interest gained momentum, and under wise guidance recently culminated in the setting aside of the tract as a public reservation for the benefit and pleasure of all the people. This fortunate result did not happen, however, without opposition, and an account of the many narrow escapes of this unique work of nature from mutilation or destruction would fill many pages.\*

When settlers entered southern Florida the Seminole Indians told them of an island far away in the Everglades with large palms growing on it. This locality may have been encountered by the white man during or about the time of the Seminole War, for at that time Indian hunters penetrated to many remote portions of the Everglades; but there appears to be no definite record to this effect preserved.

In response to inquiries I have received accounts of two independent discoveries of this island in the latter part of the last century, the one made by starting from the western side of the peninsula, the other from the eastern side. Mr. Kirk Munroe, author, and student of the Seminoles, says in a letter recently received:

"As regards Royal Palm Hammock—In the winter of 1881-82 I spent four months cruising in a sailing canoe on the west coast of Florida from Cedar Keys to Key West. In February, 1882, I spent some time on Shark river, making headquarters at a camp of charcoal burners. I had a medicine kit from which I had relieved the sufferings of one of the negroes who must have communicated the good news to some Seminoles who occasionally visited the camp, for one day two of them arrived in haste to see if the white medicine man would visit their camp in the Glades where a child was in danger of dying.

"Of course I went and was taken almost due east from the upper waters of Shark river some 25 or 30 miles to an Indian camp on the edge of a low hammock island, or Everglade key, on which grew a number of Royal Palms which I recognized from having seen them at Panama.

\* An interesting account of the hammock itself and a history of the campaign carried on to save it, recently appeared in the *Tropic Magazine*, 4: 5-16. 1916.



A bed of wood-fern in the jungle of Royal Palm Hammock. More than a dozen kinds of ferns grow on the key. Four kinds are wholly or partly epiphytic (growing on trees); the others are terrestrial. Large beds of the leather-fern, the royal-fern, the Boston-fern, the sword-fern, and the brake may be met with in the dense forest. The ferns grow so luxuriantly that walking through the beds is accomplished only with much difficulty.

"Unfortunately the child had died before my arrival. Perhaps I should say 'fortunately' for me as I probably could not have saved it.

"I remained with my Indian friends over night, but was invited to depart on my return trip to Shark river at daybreak, and so made no exploration of what, I am convinced, is the Royal Palm Hammock, in which we are now so greatly interested, as I never have seen those trees elsewhere in the Everglades, though I have made several subsequent trips into them, from Okeechobee southward. On one of these trips, made in 1900, from Miami southward to the great 'rock-barrier' [Long Key?] I sighted the hammock again and recognized it, or thought I did, for the one previously visited."

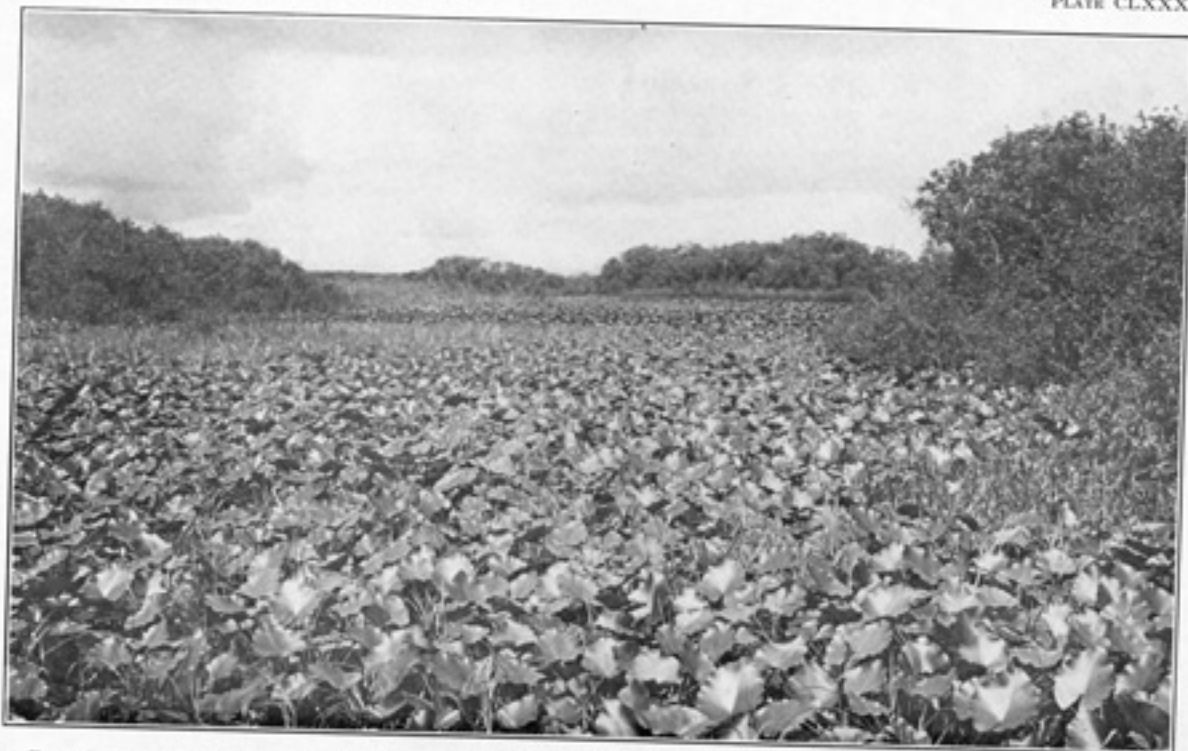
In 1893 Messrs. John and Marion Soar visited the island on foot. Indians in camp near Little River told them of a large island, with many tall palms growing on it, toward the southwest in the Everglades. The Soar brothers took their sail-boat to Black Point Creek about five miles south of Cutler and went up the creek to the edge of the pineland, that is to the line where the eastern side of the pinelands meets the everglade prairie. Leaving their boat at this point they proceeded on foot down the prairie along the pineland for a distance of eighteen or twenty miles until tall palms came into view about six miles to the west; then they waded over to the hammock. They did not return by the route they had gone, but followed up the western edge of the pineland until they thought that they had proceeded far enough, and then by chance turned into the intersecting Black Point prairie. Going down the prairie for the distance of about ten miles they found their sail-boat where it had been left.

In this connection it may be well to call attention to the existence of several hammocks with royal palms on the western side of peninsular Florida. Early visits to these should not be confused with the visits to the locality under consideration.

As the population of southern Florida increased the island was occasionally sighted and reported by hunters who penetrated the Everglades in search of the furs and skins of various native

animals, but as late as 1903 nothing definite about the plant-life of Royal Palm Hammock was known, except the fact that it was a large and very luxuriant hammock with numerous trees of the royal palm. In the fall of 1903 the systematic botanical exploration of southern Florida by the writer was begun, and the attention from a botanical standpoint subsequently devoted to Royal Palm Hammock was as follows:

In December of 1903, after the writer had left the field, and when the waters of the Everglades had subsided sufficiently, Mr. A. A. Eaton, together with Messrs. C. T. Simpson and John Soar spent a day on the island, having reached it by wading a distance of about three miles from Camp Jackson. They made some interesting discoveries. In March of 1904, Professor P. H. Rolfs and Dr. N. L. Britton, following an exceptionally dry season, visited the island for a day dry-shod, and in May of the same year Mr. Percy Wilson and the writer crossed the Everglades to Long Key, passing within less than a mile of the hammock, but were prevented from going to it by the rapidly rising waters of the Everglades. After this period, as far as botanical activity was concerned, Royal Palm Hammock had a rest of four years. In May, 1908, Dr. Ernst A. Bessey and Mr. G. L. Fawcett made the crossing and did not find water in the deepest sloughs. In January, 1909, the hammock was visited by Mr. J. J. Carter and the writer while they were encamped for two weeks just across the prairie slough on the edge of Long Key. At that time it was necessary to wade through from one to four feet of water and mud in order to reach it. At this time the waters were subsiding and in March Dr. Roland M. Harper crossed over from Camp Jackson dry-shod. For a second time four years of botanical non-activity elapsed. During this early period of exploration a visit of a day on Royal Palm Hammock was a question of nearly a week's travel from Miami and back by wagon and on foot, and only after the railroad was extended from Miami to Homestead was the time necessary to make the trip reduced to three or four days. The conditions and the experiences of the three miles, between Camp Jackson and Royal Palm Hammock, except in dry seasons and consequent



Deep slough in the Everglades east of Royal Palm Hammock. One of several sloughs that have preserved the hammock from the prairie fires of the Everglades. This channel is seldom perfectly dry. It supports a dense growth of yellow water-lily, pickerel-weed, and maiden-cane. It, like similar places in the vicinity, is a rendezvous for the native Americans in the dry season. Its edges are fringed with saw-grass, common-reed, and small hammocks of low trees and shrubs.



low waters in the Everglades, can only be appreciated by those who have actually participated in the trips.

About the beginning of 1915 a scarified road was extended from Homestead southwestward. This was a slight improvement on the old surveyors' trail. Temporary bridges were placed over the sloughs between Camp Jackson and the hammock, so that now the return trip from Miami can be made by automobile in a few hours! Since the beginning of 1915 the writer has made ten collecting trips to the hammock.

Beginning with the period of our early visits to this island, talk of setting it aside as a public reservation was started, chiefly on account of its unique characteristics. This agitation was continued sporadically. It finally bore fruit, and the tract is now in the hands of the Florida Federation of Women's Clubs for protection and preservation. This solution of the problem is fortunate, for the vandal, the prospector, and the squatter had not been idle. I now recall that while returning from there in 1909, we met a group of six or eight men on their way to the hammock with the idea of securing it in order to clear it and plant out a citrus grove. I suppose, judging from like circumstances, the only obstacle which prevented them from accomplishing their purpose was their inability to get title to the tract, as definite ownership has only recently been determined.

On June 5, 1915, the hammock together with the remaining one and a half sections of Everglade land which surrounds it, was turned over by the state of Florida to the care of the Florida Federation of Women's Clubs, under the name "Royal Palm State Park." The Federation is now raising funds for the protection and preservation of the hammock, and aside from funds which are accumulating, Mrs. Henry M. Flagler has contributed one and a half sections of neighboring Everglade land as an endowment. This land is to yield funds either through rentals or through sales. A warden has now been stationed there.

The road to Royal Palm Hammock already referred to is a portion of the Ingraham Highway which is to connect Miami with Cape Sable. This road will be about one hundred miles long. It is completed at least as far as Homestead, and it may

be traveled as far as Royal Palm Hammock. It now traverses a portion of tropical Florida which the writer has been exploring by occasional visits since 1903 with most interesting results. The proposed route from Royal Palm Hammock to Cape Sable will open up a section of our country which is botanically unknown. Work on the latter portion of the road has already been started.

So much for the history of Royal Palm Hammock. As to its flora: In our phytogeography it is not duplicated. It is different from the high pineland hammocks, a score of which are or were hidden in pine forests of the Everglade keys before the deforestation of those islands was started, nor is it like the low pineland hammocks which are situated at many places along the edge of the pineland and the prairies or "glades." It is really a very large Everglade hammock, and thus like the hammock islands which are scattered in myriads over the southern portion of the Everglades. However, it differs from these in that it is larger and higher, and consequently more rocky and with a more extensive flora. Furthermore, it has been always surrounded by water or damp sloughs and thus protected from fires from without, and heretofore there has been little chance of fires starting within. Thus its vegetation has had nearly uninterrupted growth for ages. This condition perhaps accounts for the occurrence of the royal palms there. The decaying fallen leaves, the large spathes, the spadices, also the myriads of sepals and petals of the flowers, and the fruits, each and all, on account of the unbranched habit of growth, falling at the very base of the trunk, form mounds of humus larger and higher than do any of the hardwood trees. Upon such a gradually increasing mound a palm is, from year to year, raised higher and higher on humus formed from its own tissues. Now these mounds of humus would furnish ideal fuel and the palm, although able to resist fire above the roots, could not exist or even stand up if the humus was burned away between the base of the trunk and the rock. As it is, it seems nothing short of a miracle that the slender trunks over one hundred feet tall with the heavy crown of leaves and spadices can withstand the winds of severe storms,



Everglades with the charred bases of saw-grass plants in foreground. Small hammock west of the southern end of Royal Palm Hammock in background. This hammock is neither as high nor as rocky as its larger neighbor; but its jungle consists of many of the same kinds of trees, shrubs, and vines. It has not yet been thoroughly explored, having been visited only once by botanists. It was then the home of the bear, the deer, the panther, the wild-cat, and the otter, as well as that of many smaller kinds of mammals and of reptiles

not to mention frequent hurricanes. This protection from fire would also account for the occurrence of a few royal-palms in neighboring hammocks. Although the royal palm has been protected from fire, it has evidently an enemy in the rodents which inhabit the island. Fruits are produced by the millions every year, but new palms are apparently springing up in numbers only about sufficient to replace those that die. It would be interesting to see what would happen if the animals that eat the seeds were eliminated from the hammock.

Botanical exploration up to 1916 has revealed two hundred and forty-one kinds of plants, from the mushrooms upward, growing naturally on the key. Sixty-one of these are flowerless plants, viz.: mushrooms 18, lichens 6, liverworts 13, mosses 11, and ferns 13. The remaining one hundred and eighty kinds are flowering plants. Of these one hundred and sixty-two are native species, while eighteen have been recently introduced.\*

It is to be hoped that the hammock will be duly respected and that its future will be carefully considered. Its natural features have already, though unavoidably, been seriously interfered with, and suggestions for the future treatment of the reservation, ranging from the maintenance of it in its natural condition to clearing it of its growth of shrubs and trees "to make it a cornfield" have been advanced. The only rational plan suggested is to keep the key intact. Royal Palm Hammock is unique; therefore, for the sake of science and the sake of art, do not change it, except to restore parts already devastated. Too much to favor its natural destruction in the future has already been accomplished. A small clearing, or even a fallen tree that makes an opening in the hammock roof, may furnish a starting point for a hurricane to wreck acres of beautiful forest, whereas an even and normal growth of the forest would save it. This was clearly shown in the high pineland hammocks on the neighboring Everglade Keys during recent hurricanes. The more the natural growth of a hammock had been changed by man the more it suffered during the storms. Consequently the first concern on the part of the custodians should be to replace

\* Journal of the New York Botanical Garden 17: 41. 1916.

the forest, even to the extent of individual trees, wherever man and nature have lately destroyed it. Nature should be assisted in eliminating debris that might be detrimental to the forest and also helped to restore the natural growth as fast as possible, and then to maintain it. Among the many suggestions for the development of Royal Palm State Park is the introduction and cultivation of exotic plants. This, however, should be vetoed as far as Royal Palm Hammock itself is concerned. If my copy of the map of the region is correct, there is a comparatively small but beautiful hammock island within the bounds of the park area. It lies about a quarter of a mile west of the southern end of Royal Palm Hammock on the line between the two sections in which the park is located. It has several royal palms in its jungle, one of which towers above the tops of the other trees so that it may be seen for many miles across the Everglades. If it is considered advisable to introduce horticulture and other foreign features into the scheme of Royal Palm State Park, let them be confined to this neighbor of Royal Palm Hammock.

JOHN K. SMALL