

JOHN W. KING
MEM. A. S. E. C.
CIVIL & MECHANICAL ENGINEER
MIAMI, FLORIDA

REPORT

OF

EXPLORATION, EXAMINATION AND RECONNOISSANCE

OF THE EASTERN PORTION OF

THE PROPERTY OF

A. V. HOPKINS

IN

MONROE AND DADE COUNTIES, FLA.

BY

March 23rd, A.D. 1917 - - -MIAMI, Fla.

This report is made in
Multiple and this is

Copy # 2 —

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March 23, 1917.

Capt. James F. Jaudon,
Real Estate Bldg.,
Miami, Fla.

Dear Sir: -

In accordance with your request for a report upon the Eastern portion of the A. W. Hopkins' property, situated in Monroe and Dade Counties, Florida, and consisting of: -

Township	Range	Township	Range
54	31	55	31
54	32	55	32
54	33	55	33
54	34	55	34

Also, Sections 1-2-3-4-5 and 6, Township 56, R. 31

" 1-2-3-4-5 and 6, " 56, R. 32

" 1-2-3-4-5 and 6, " 56, R. 33

" 1-2-3-4-5 and 6, " 56, R. 34

situated in Monroe County.

Also, Sections 6-7-18-19-30 and 31, Township 54, R 35.

" 6-7-18-19-30 and 31, " 55, R 35.

situated in Dade County.

I proceeded with party over-land from Miami and along the line of the Tamiami Trail and entered the said property from the East, -- proceeding in a generally

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- 493 -

at first, Southerly and afterward in a Southeast-
erly direction -- passing through and across the said
property, making general as well as detail examinations,
observations and reconnoissance of this territory.
This report of my observations and examinations is
given in conjunction with my report of the Western
portion of this same property, dated January 17th,
1917.

After making general observations, I made
detailed examinations and explorations of this territory,
first by determining our exact locations, then by trian-
gulation, determining the angular direction of prominent
positions, making expeditions into the county to the same
points of prominent positions.

This exploration and examination relates to
the Eastern portion of Ranges 33 East, Township 54 South,
all of Range 34 East, Township 54 South, located in Mon-
roe County, Sections 6, 7, 18, 19, 30 and 31, Range 35
East, Township 54 South, located in Dade County, also the
Eastern portion of Range 35 East, Township 55 South,
all of Range 34 East, Township 55 South, located in Monroe
County, also Sections 6, 7, 18, 19, 30 and 31 - Range 35
East, Township 55 South, located in Dade County, and Sec-
tions 1, 2, 3, 4, 5 and 6, Range 34 East, Township 56 South,
located in Monroe County; all from the Meridian of Talla-

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- 403 -

hance, State of Florida.

The result of such examinations I beg to
submit as follows, viz: - -

NO. 1, Photographic View of approach to
coastal hammock at Northern edge of Hopkins Tract: - -



X-1562-21

NO. 2, Photographic view of disintegration
of sloughs and out crop of Lossmans River limestone --
location Section #1, Range 35 East, Township 55 South:

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-104-



X-1562-22

No. 3, Photographic View of breaking up of
sloughs in Central Eastern border of Hopkins Tract: - -



X-1562-23

No. 4, Photographic view of breaking up of sloughs
in Central Eastern border of Hopkins tract showing drying
condition of Everglades and the coastal hammock in the

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- 405 -

distance: - -



X-1562-24

No. 5 - Photographic view of Central Eastern portion of Hopkins Tract looking in a Southwesterly direction showing construction of Myrtle Ridges: - -



X-1562-25

No. 6 - Photographic view of the Southeastern portion of Hopkins Tract, showing break in coastal hammock



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- 406 -

through which is the Losemans River: - -



X-1562-26

No. 7 - - Photographic view of the Southern
portion of Hopkins tract showing dry prairies and hammock
clumps: - -



X-1562-27

D
SWIFT

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- 407 -

GENERAL DESCRIPTION OF THE PROPERTY

The property known as the A. W. Hopkins tract lies in a single rectangular block thirteen miles wide and twenty-five miles long.

The North boundary of this property lies coincident with the Northern boundary of Monroe County and the Southern boundary parallels the Northern boundary, at a distance of 13 miles. The Eastern boundary extends one mile east of the Dade County line, and the Western boundary is coincident with the Eastern boundary of Range 31, for a distance of approximately 10 miles; thence in a Southeasterly course along the borders of the Gulf of Mexico, for a distance of approximately $4\frac{1}{2}$ miles, to the intersection with the Southern boundary, containing in all some 207,000 acres. At a distance of about $3\frac{1}{2}$ miles North of the Northeastly corner of this property lies the Tamiami Trail, the new road from Miami to the West Coast of Florida, about 40 miles from the city of Miami.

The object of this reconnaissance was to determine the condition existing within the Eastern portion of the said tract, comprising the territory lying within the Eastern portion of Range 33 East, Township 54 South, all of Range 34 East, Township 54 South, all in Monroe County; and Sections 6, 7, 18, 19, 30 and 31 in Range 33 East, Township 54 South, located in Dade County, also the Eastern portion of Range 33 East, Township 55 South,

DETAIL DESCRIPTION OF PROPERTY

The territory contained within the Eastern portion of the A. W. Hopkins tract may be divided according to its five characteristic conditions, viz: Cypress lands, Pine lands, Coastal Hammock, Prairie and Everglade, as follows: - -

CYPRESS LANDS: Entering from the Northern boundary ^{is} created saw tooth projections trending in South-erly direction of increasing depth project the South-ermost extremity of the various "strands" from the "Big Cypress Swamp", - - interspaced with sloughs and other natural drainage ducts of greater or lesser extent, which act as receivers, collectors and transporters of the over-flowing waters that accumulate within this vast area of country, which in turn empty into or form the streams or rivulets that traverse the A. W. Hopkins tract, emptying into the bays of the coastal basin, notably into such streams as the Lossmans River, - branches from the 5th or Dr. Tiger's lake, Sweet Water River, Chevelier and Hus-ton Bays, etc. etc.

The entering points of cypress strands is generally high, though wet lands dyked in with ^{the} natural rim of the Lossmans River limestone, covered with a growth of cypress, deciduous or bald cypress - *Taxodium distichum* - of

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- 408 -

all of Range 34 East, Township 55 South, lying within Monroe County, and Sections 6, 7, 18, 19, 30 and 31 in Range 35 East, Township 55 South, lying within Dade County, and Sections 1, 2, 3, 4, 5 and 6, Range 33 East Township 56 South, as well as Sections 1, 2, 3, 4, 5 and 6, Range 34 East, Township 56 south, also lying within the County of Monroe, all from the Meridian of Tallahassee, within the State of Florida, United States of America.

This exploration, examination and reconnoissance was undertaken as a continuation and a part of, and should be considered in conjunction with my former exploration, examination and reconnoissance, beginning December 13, 1916 and ending January 7, 1917, the results of which accompanied my report dated January 17, 1917.

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-413-

in height. Of Orchids, the *Tillandsia Fasciculata* and Resurrection Fern are the most prominent.

The soil of the Coastal Hammock consists of a rich black vegetable loam, overlaid with an accumulation of partly decomposed vegetable matter, with a surface of dried leaves, twigs, etc., of several inches in thickness.

The soil of Coastal Hammock is the accumulation of ages, elevated a foot or more above the surrounding country, and is more than 2' 0" in depth.

At the Southern extremity of the Hopkins' property the Coastal Hammock disintegrates into a series of long, narrow ridges lying in a West - Southwesterly direction, making an opening through which the overflow of the Everglade water might drain.

Lying Westerly from the Southern portion of the Coastal Hammock and extending from there to nearly the Coast, and projecting Northwardly between the pointed ends of the Southwardly extending Cypress strands, lay the areas of OPEN PRAIRIE, dotted here and there with palm hammock of greater or less extent.

This prairie is covered with a long leaf grass and sometimes saw grass. Its soil is a finely disintegrated veg-

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- 411 -

The soil in the marginal and Island Hammock consists of a deep rich black vegetable loam, largely constructed leaves and twigs, in a more or less decomposed state, holding considerable moisture, though dry, upon the surface - these hammocks contain soil to a depth of more than 3' 0".

The soil in the cypress usually consists of much more decomposed vegetable matter, mixed with a finely disintegrated vegetable loam over laid with a film of water of varying depth.

PINE ISLANDS: Of the Pine Islands, at or near the Big Cypress, and in particular the "Lossmans Pine Island", in the prairie which extends over a territory of several thousand acres, situated wholly within Range 33 East, Township 55 South, in an oblong form lying in a Southeast-erly - Northwest-erly direction, consists of a slightly elevated area over which in places is a heavy growth of Cuban pine (*Pinus Caribaea*), bordered about with a thin fringe of Hammock.

The soil is of sand, light grey in color, and is very thinly spread over the rock which projects up and through the surface of the ground; the rock is of the same Lossmans River Limestone noted throughout our exploration, and extends under this whole tract.

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- 410 -

larger diameter and taller structure, and more dense *growth*, as you proceed eastwardly toward the clearly defined coastal Hammock. Within this area, as well as contiguous to the cypress, are well formed Hammocks, "Islands," Pine Island", etc., of greater or lesser extent, pertinent "islands" of several hundred acres, and upon these "Islands" are to be found the habitation of the few remaining Seminole Indians.

The Cypress within the two Eastern most strands, lying adjacent to the Coastal Hammock present timber of excellent growth and fair dimension, also in sufficient quantity to mill.

In the marginal and "Island" Hammock are to be found Cabbage Palm, Ficus Aurea, some Oak, Sweet Bay, Pidgeon Plum, Magnolia, Myrtle Dog Wood, Button wood, and at rare intervals Gum Elimi; in these hammocks, ascending to the very top of neighboring trees are to be found grape vines, Jungle vine, Virginia creeper, Moon Vines, etc. The undergrowth, comprised mostly of Fern, principally of the "Boston Fern", and a variety of enlarged fern of the Boston variety besides Sword Fern, - of orchids the Tillandsia, Fasciculata and Resurrection Fern, were prominent and in rare instances, only, the Vanilla Orchid.

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- 412 -

Some of this pine is large and straight and could be converted into merchantable lumber.

THE COASTAL HAMMOCK: ~~Entering~~ On the Eastern border of the A. B. Hopkins property at or near its Northernmost end, enters a formation of continuous, unbroken hammock that extends and traverses the entire width of the property, entering in a Southerly direction and gradually deflecting to a nearly Southwesterly direction, at the southern boundary of the property, in a solid continuous mass.

This Coastal Hammock presents a sharply defined dividing line between the Everglades proper and the prairie country lying Westerly to the Gulf of Mexico. This Hammock presents an almost impenetrable front and varies from one half mile to one and one half miles in width. In the Coastal Hammock is to be found the Cabbage Palm, (Sabal palmetto), Rubber Fig. (Ficus Aurca), Oak, (Quercus Virginiana) Pidgeon Plum, Cocos Plum (Chrysobalanus Icacca), Magnolia (Magnolia glauca), Button Wood, Sweet Bay, Dogwood (Placidipula), at rare intervals Gumbo Limbo (Cran Elimi), all confined within a fringe of Myrtle (Myrtaceae), all contained in a tangled growth of vine and fern, of which grape vine, Virginia Grape, ~~Jungle~~ Vine, Moon Vine, etc. etc. are prominent, and various varieties of the Boston Fern (Nephrolepis exaltata), Sward Fern and presents morass often more ^{than} six feet

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-413-

in height. Of Orchids, the Tillandsa Fasciculata and Resurrection Fern are the most prominent.

The soil of the Coastal Hammock consists of a rich black vegetable loam, overlaid with an accumulation of partly decomposed vegetable matter, with a surface of dried leaves, twigs, etc., of several inches in thickness.

The soil of Coastal Hammock is the accumulation of ages, elevated a foot or more above the surrounding country, and is more than 2' 0" in depth.

At the Southern extremity of the Hopkins' property the Coastal Hammock disintegrates into a series of long, narrow ridges lying in a West - Southwesterly direction, making an opening through which the overflow of the Everglade water might drain.

Lying Westerly from the Southern portion of the Coastal Hammock and extending from there to nearly the Coast, and projecting Northwardly between the pointed ends of the Southwardly extending Cypress strands, lay the areas of OPEN PRAIRIE, dotted here and there with palm hammock of greater or less extent.

This prairie is covered with a long leaf grass and sometimes saw grass. Its soil is a finely disintegrated veg-

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- 414 -

stable loam to a depth of more than 3' 0". This prairie area was more or less dry though containing occasional pools of fresh water.

The Southeasterly corner of the Hopkins Tract projecting Easterly of the Coastal Hammock enters into the Everglades proper. This area of Everglades is similar in character to other sections of the Everglades and covered with a growth of sawgrass and a round water grass, separated and divided by a number of Myrtle Hammock, very narrow and such elongated, following in parallel lines with the main Coastal Hammock and ranging approximately 300 yards apart. From the ends of these long projecting Myrtle Ridges extends rocky reefs connecting with the preceding hammock. These rocky reefs project upwardly in sharply pointed finger-like masses, level with or above the surface of the ground. The sloughs that in periods of highwater spread over this ground, were at this time mostly dry, owing to the effect, among other causes, of a long period of drought, gather at irregular intervals into rivulets which usually lead to sink holes at the ends of some Myrtle Ridge and disappear beneath the surface of the ground.

The soil of this Everglade portion of the A. W. Hopkins tract consists of a rich loamy vegetable muck of irregular thickness, slightly more decomposed than in other places within the Everglades, and much drier.

Underlying the entire area of this A. W.

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- 415 -

Hopkins tract is a bed of ~~soft~~^{hard} blue limestone known as the Loessans River Limestone, lying very near the surface, and in instances projecting through in the form of an outcrop; in the Southeastern or Everglades portion of this property this bed of rock slopes gradually to the West at a greater angle than the surface soil, which when reaching tide water lies from 4' 0" to 8' 0" below the surface.

This Limestone in its natural formation, is a carbonate of calcium and is of a hard, blue, homogenous structure, much "water worn" on the surface. It is unquestionably of considerable porosity and cavernous, as indicated by the number and extent of the sink holes found within this area. On the surface fragments of this rock show a high state of silicisation, wherein the more soluble Calcium Carbonates have been replaced by a precipitation of soluble silices, creating an extremely hard, flinty structure.

It is evident that a system of subterranean drainage exists throughout this entire area, from the dryness of the soil, the formation of streams, and the disappearance of same in sink holes of large or smaller extent.

TOPOGRAPHICALLY, - the Eastern portion of the A. W. Hopkins tract is apparently higher than accredited in my former report, from the dryness of the land, the sharply defined stream construction, rapidity of flow of water, etc.

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- 416 -

is indicative of sharper slopes of the surface soils, and better natural drainage than was supposed. With the running of a series of accurate and precise levels, elevation of 10' 0" - 12' 0" or even 15' 0" may be found on the Eastern border. Therefore the clearing and clearing out of the natural water passages will do much towards the ultimate and permanent drying of the soil, but could be facilitated by an adequate system of canals and laterals.

The detail results of my exploration, observations and examinations, I beg to submit as follows: - - -

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- 417 -

POSITION	CYPRESS	PINE ISLANDS	COASTAL HAMMOCK
LOCATION	NORTHERN BORDER	LOSSMAN'S PRAIRIE ISLAND	Central
DATE	2/23/17	2/23/17	2/23/17
CHARACTER OF LAND	Cypress Swamp	Rocky	Hamock
SURFACE	Level	Rising	Rising
CONDITION	Overflowed	Dry	Dry
SOIL	Dark Veg. Loam	Rocky and sand	Dark Veg. Loam
DEPTH OF SOIL	2' 0"	0' 6"	2' 0"
SOIL REMARKS	Soil sam. sub.	Soil sam. sub.	Soil Sam. Sub.
VERDURE - TREES	Cypress	Pine	Rubber Fig Coco Palm Pidgeon Plum Cabbage Palm Sweet My Magnolia Oak Button Wood Dog Wood Gumbo Nibbe
UNDERGROWTH		Palmetto	Grape Vine Jungle Vine Moon Vine Virginia Creeper Boston Fern Sword Fern Specie Button
GRASSES			
GAME		Deer Bear Wild Cat Wild Turkey Smaller Animal Life Birds of Prey	Deer Bear Wild Cat Wild Turkey Smaller Animal Birds of Prey

- 417 -

PINE ISLANDS	HAMMOCK
LOSSMAN'S PRAIRIE ISLAND	
2/23/17	
Rocky	
Rising	
Dry	
Rocky and sand	Loam
6' 6"	
Soil sand. sub.	Sub.
Pine	Fig Oakum Pine Plum Palm Bay Lima Wood Limo
Palmetto	Vine Vine Creeper Fern Fern Rattan
Deer	
Bear	
Wild Cat	
Wild Turkey	
Smaller Animal	Animal Life
Life	Prey
Birds of Prey	

- 418 -

PRAIRIES	EVERGLADES
Southeast	EXTREME SOUTHEAST
2/23/17	2/23/24/25/'17.
Open	Open
Level	Level
Dry	Dry
Dark Veg. Loam	Muck
2'0"	0'6" to 1'6"
Soil Sand. Sub.	Soil Sand. Sub.
None	None
	Myrtle
	Sweet Bay
	Magnolia
	Dogwood
	Willow
	Grape Vine
	Specie Rattan
	Moan
largely Saw Grass	Saw Grass
	Round Water Grass
	Flag Blue
	Yellow Dock
	White Water Lillies
	Alligators
	Frogs
	Snakes
	Crawfish
	Shrimp
	Game Birds
	But little animal life.
	Herrons
	Curlew
	Birds of Prey.

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-419 -

Trusting the above information may be
found useful to you, I remain,

Yours very respectfully,

JK/W