

Tequesta:

The Ingraham Everglades Exploring Expedition, 1892

Edited, with notes, by WATT P. MARCHMAN

It was due, in all probability, to the insistence of Henry Bradley Plant, whose name is synonymous with the modern development of Florida's west coast, that James Edmundson Ingraham,¹ president of the South Florida Railroad Company of the Plant System, with twenty-one companions, left in March 1892 on a journey of exploration by foot through the Everglades south of Lake Okeechobee. Mr. Plant, whose transportation interests, including the South Florida Railroad, then extended to Tampa and beyond, had in mind, it has been suggested, a railroad across that region if conditions were not impossible,² or merely the possibility of opening up new lands if drainage was feasible.³

Mr. Ingraham's report of the exploring expedition from Fort Myers on the West Coast to the Miami River on the East Coast did not encourage Mr. Plant to further his intention, if such had been his intention, for a railroad across the lower peninsula, or for dredging operations.⁴ Mr. Ingraham's report did, however, prove valuable in another quarter; the possibilities of the lower East Coast persuaded Henry Morrison Flagler, whose railroads at that time reached at least as far south as Daytona Beach and Ormond Beach, to continue his lines down the coast. He was prompt in securing the services of Mr. Ingraham as general agent, and after 1892 Mr. Ingraham handled for Mr. Flagler much of the development operations south of Daytona Beach. He became in 1897 land commissioner and a vice president of the Florida East Coast Railway Company and president of many of the auxiliary organizations of the Flagler System.⁵

*The editor is deeply indebted to Mrs. Alberta Johnson of the Florida Historical Society Library for a transcription of the Journal of the Everglades Exploring Expedition; to the Florida East Coast Railway Co. for courteous permission to edit and publish the Journal; and to Joshua C. Chase, Winter Park, Fla.; Alonzo Church, New Orleans, La.; and Sydney O. Chase, Jr., Sanford, Fla., for their wholehearted assistance in numerous ways.

In planning an expedition by foot through the Everglades, Mr. Ingraham did not minimize the hardships to be encountered. The journey was expected to be rigorous. According to one who accompanied him, "The plan was to have enough men to carry everything we should need, in packs. . . . This plan necessitated a rigid economy in baggage . . . Provisions estimated to last our party 12 days had been selected and carefully packed away in sacks, each sack not to weigh more than 40 lbs. Our party was armed with two shotguns, two Winchester rifles, and numerous pistols besides which we had to carry two portable canvas boats, three tents, axes, cooking utensils, etc. . . ." ⁶

Hardships notwithstanding, the thought of exploring the Everglades region appealed to the imagination of the younger men, and others also felt the challenge of such a trip. Alonzo Church,⁷ as one of the young members of the party, then 22 years of age, ". . . eagerly embraced the opportunity of joining [the expedition as compassman] despite the advice of friends who had been upon the border of the country."⁸ Except for Sydney O. Chase⁹ of Sanford, Florida, a personal friend of Mr. Ingraham who wanted to go on the trip and who acted as photographer, the exploring party consisted of specially selected employees of the South Florida Railway Company.¹⁰

Wallace R. Moses of Sanford, Florida, was appointed secretary of the expedition by Mr. Ingraham, and he prepared from personal observation and from notes and diaries furnished him, the expedition's official journal. Mr. Ingraham kept a personal diary of the trip, and others did also. Alonzo Church preserved notes which he later enlarged into an interesting personal narrative of the journey's hardships, entitled: "A Dash Through the Everglades."¹¹ The photographs taken by Sydney O. Chase, for some unexplained reason, were disappointingly indistinct when developed.¹²

The Ingraham Everglades Exploring Expedition's journal, as written by Wallace R. Moses, follows with as few notes as possible.

THE JOURNAL

of the

EVERGLADES EXPLORING EXPEDITION

March 14—April 16, 1892

By WALLACE R. MOSES, *Secretary*

Camp No. 1,¹³ [Fort] Myers,¹⁴ Fla., March 14, 1892.

The Everglades Exploring Expedition left Sanford, Fla., on Saturday, March 12th, in 2 detachments, Mr. [John W.] Newman, the engineer, with such men as he had engaged[,] by train No. 73, while Messrs. [James E.]

Ingraham, [Wallace R.] Moses and [Sydney O.] Chase followed on train No. 27, all uniting at Port Tampa and going by Plant Steamer "Tarpon" to Fort Myers, where other men previously engaged joined the expedition.

Our two canvas boats arrived at Sanford on train No. 71 by express (a pretty close connection) and were taken forward on train No. 27.

We arrived at Fort Myers on Monday, March 14th, and immediately went into camp on the outskirts of the town about one mile southeast of the post office.

The following orders were read aloud to the members of the expedition:—

I

March 14th, 1892.

EVERGLADES EXPEDITION

Captain John W. Newman is hereby placed in charge of this expedition. His orders must be obeyed by all connected therewith. He will appoint heads of the various departments.

Mr. W. R. Moses is hereby appointed Secretary of the expedition and will preserve for future use the records and all data accumulated during the trip, and officers and men will report daily to him all items of interest or importance connected with the trip. Information is desired regarding the soil, the growth thereon, particularly anything unusual, and the adaptability of the soil to the growth of sugar cane, rice, tobacco and sisal hemp; also the tropical fruits.

(Signed): J. E. INGRAHAM,

President, S[outh] F[lorida] R[ail] R[oad].

II

Mr. D. M. Baker is appointed Levelman of the Everglades Exploring Expedition to Miami. It shall be his duty to assist the expedition by performing the work of levelman, having in immediate charge the men in Mess No. 2, consisting of the white men, G. E. Matthieux, T. N. Sutton, A. W. Clark, W. E. Gradick, J. T. Anderson, L. M. Anderson, S. L. Caruthers, Phil. N. Handley, J. E. Minchin, T. C. Shepard[;] and two colored men—Reese Livingstone and Jeff Bookman. These, with Mr. Baker, shall be one mess and Mr. Baker will be held responsible for the care of provisions, boats, tools and all implements entrusted to these men for use during this expedition. All suggestions, complaints and advice made by men in this mess must be made through Mr. Baker.

No man shall be required to do more work than may naturally be expected in an expedition of this kind.

T E Q U E S T A

Excessive use of profane language is forbidden; so are obscene jests and unkind, vicious and quarrelsome men will be reported to me.

All men in this mess are required to use respectful, pleasant language in their intercourse with all other members of the expedition.

The use of liquor as a beverage will not be permitted.

Mr. Baker is forbidden to use other than kind words in requiring the performance of duties. And all members of this mess and all members of the expedition are assured of the hearty support and good will of the commander in charge. (Signed): J. W. NEWMAN.

III

Mr. Alonzo Church is appointed Compassman of the Everglade Exploring Expedition. It shall be his duty to assist the expedition by performing the duty of a compassman, having in charge the immediate comfort of Mess No. 1, consisting of

President J. E. Ingraham,

Secretary W. R. Moses,

Mr. S. O. Chase and

Mr. J. W. Newman,

as well as of all other men that may be appointed to join this mess.

Mr. Church will be held responsible for his own and all the instruments and boxes belonging to members of this mess.

All complaints may be made directly by members of this mess to Mr. Newman.

All suggestions and advice will be gratefully received by Mr. Newman and by his direction and with the assistance of the members of the expedition, will be cheerfully performed except in cases that are obviously to the impediment or detriment of the expedition.

The members of this mess are respectfully requested by Mr. Newman to preserve a uniform mildness of demeanor and cheerfulness of manner, encouraging the men to know that each one is an essential factor in this undertaking and entitled to a cordial and fraternal regard.

Respectfully,

(Signed): J. W. NEWMAN.

IV

The members of the expedition consist of the following named white persons:

J. E. Ingraham, Sanford, Florida.

J. W. Newman, Sanford, Florida

W. R. Moses, Sanford, Florida

S. O. Chase, Sanford, Florida
 D. M. Baker, Orange Home, Florida
 A. Church, Sanford, Florida
 A. W. Clark, Sanford, Florida
 G. E. Matthie[u]x, Geneva, Florida
 W. E. Gradick, Geneva, Florida
 T. N. Sutton, Hawkinsville, Georgia
 J. T. Anderson, Hawkinsville, Georgia
 L. M. Anderson, Hawkinsville, Georgia
 S. L. Caruthers, Hawkinsville, Georgia
 T. C. Shepard, Hawkinsville, Georgia
 P. N. Handley, Lewisburg, West Virginia
 J. E. Minchin, Chipley, Florida
 Wesley Boyd, Fort Myers, Florida
 W. M. Wilson, Fort Myers, Florida
 H. W. Lucky, Fort Myers, Florida
 Robert Dean, Fort Myers, Florida

and colored cooks—

Reese Livingstone, Sanford, Florida
 Jeff Bookman, Sanford, Florida

Mr. Caruthers is chief cook.

* * *

Camp No. 1, [Fort Myers, Fla.], March 15th, 1892.

Mr. Ingraham sent telegrams to Mr. Plant, Tampa and Mrs. Cox, Sanford, notifying [them of] our departure.

Wrote Mr. R. W. Southwick, Agt., P[lant] S[team] S[hip] Line, Key West, to forward to Miami personal effects of members of the expedition sent to his care by express from Myers today.

In camp all day with excursions down town by different members of the party to mail letters, make purchases, etc.

Delay in starting today caused by waiting for some of the Myers men who were engaged to report Wednesday, 16th, who were away on other business.

Opinions of some of the resident population was that we would shortly return to Myers failing in our efforts to cross the Everglades, while others, in whose opinion we had more faith, thought we would succeed.

Two flat bottomed cypress skiffs were bought and sent forward to Shackelford¹⁵ on Mr. George Hendry's ox team, to await our arrival.

Camp No. 1, [Fort Myers, Fla.], March 16th.

The secretary was detailed to go down town and hurry up teams about which there was some unaccountable delay.

The first team got away about 8 A.M., with Mr. Ingraham, Mr. Chase and Mr. Church, being Mr. Frank Hendry's single horse wagon. The balance of the party started about 10 A.M., owing to failure of Mr. Langford's team to arrive earlier.

Rev. Mr. Frazee came to the camp and bade us goodbye.

Took dinner at 7 mile Cypress on the southeast road, where we remained until 2:30 P.M. All the party together. Drove until sunset, going into camp at Half Way Pond, being half way between Myers and the Allen place.

Some of the party began to have blistered feet and mutton tallow was served out to such as required it. All very tired.

The country today was rather poor flat woods. Cross tie timber very scarce. No occupied houses the whole way. Passed two or three abandoned places with small buildings.

Camp No. 2 [Half Way Pond,] Thursday, March 17th.

Mr. Ingraham brought in a fox squirrel and Mr. Shepard a whooping crane [during the day].

At noon we had made about 10 miles when we stopped for dinner, being about 25 miles from Myers.

Started at 3 P.M. and rode and marched until about 6 P.M., making about 8 miles when we went into Camp No. 3.

The timber this morning was of much better character, thicker together and larger sized, than yesterday, there being quite a good deal of cross tie timber. In the afternoon we were crossing the Allen Prairie, a fine body of land some 25 miles long by 3 to 6 miles wide, lying between the Okaloa-cochee Swamp and the Big Cypress from a point 2 miles east of place known as "Carson's." It is a plateau diversified by pine islands, hammock islands and prairie with abundance of water and seemingly of character to afford thoroughly good pasturage with attention, for the raising of stock in large quantities, improving breeds, etc. Para grass planted in spots and protected from cattle until it got a start would undoubtedly take possession and make fine pasture.

Our camp is located at the forks of the roads running to Fort Simon Drum and Camp Rogers. A government road also runs from our camp to Fort Simmons on the Caloosahatchee River.

Camp No. 3, Friday, March 18th.

Broke Camp (No. 3) at 6:20 A.M.

The country for the first four miles was through scrub pine and sapling cypress afterwards opening out into a magnificent open prairie dotted with clumps of cypress, oak and cabbage palms well watered with flowing water.

At 11 A.M. crossed the old government causeway, constructed about 1835 across the Okaloacooache Slough and Big Cypress Swamp. At this point a perceptible flow south was noticed in the stream of water comprising a portion of the slough.

After crossing this slough a heavy rain storm came up from the West. Following the severe shower, the temperature fell 20 degrees by sunset, the wind veering from the South to the Northwest.

The prairie which we entered upon after crossing the slough above noted, extends eastward about 40 miles and is from 5 to 25 miles wide. It is said to be the finest cattle range in the State. We saw a number of cattle, apparently in fine order. The cattle are very wild and it was rare that we could approach nearer than half a mile. A number of different companies have fenced off large pastures, running a fence line from a point on the Big Cypress to the Everglades, a distance of 27 miles. The fence was barbed wire.

Went into Camp No. 4 at 5 P.M., having marched 20 miles, a great part of it in water from 5 to 8 inches deep. During the march at various points, a rock strata appeared at the surface, which is said to be of the same formation as that underlying the Everglades. Where this rock exists the soil appears very poor, being sparsely covered with vegetation. At various points on this stock range the grass is high and thick, said to be very nutritious and affording very wholesome feed for cattle.

Magnificent bodies of cypress timber extending southward along the line of what is known as the Big Cypress, being virgin timber.

We have seen no Indians up to this time, though we passed several of their abandoned camps.

The temperature continues to fall very rapidly accompanied by severe Northwest gale.

The whole gang very tired, foot-sore and weary and full rations of mutton tallow and bandages were served out.

The country appears to have been cleaned up as far as game is concerned and it is not surprising that the Indians should have apparently deserted a country so devoid of wild game.

After going into camp at noon following the severe rain, to get coffee and dinner, many of the men being drenched to the skin[,] some removed their outer clothing. . . . It was at this time that the secretary of the party, who was squatting under a palmetto on the leeward side of the fire used for cooking, calmly remarked that the tents or something made of cotton is burning. He continued squatting until happening to get a stronger whiff than usual of the burning material, he placed his hands behind him to see if his shirt was getting dry when he found it afire, a large portion having been consumed. His equanimity was for a few moments somewhat upset, but under the shouts of the balance of the party and their unrestrained merriment accompanied by various bits of advice and suggestions, he soon recovered and helped to consume a good meal shortly afterwards served.

Camp No. 4, Saturday March 19th.

During the night the temperature continued to fall [,] reaching 40 at 3 A.M. and 38 at sunrise. The wind still heavy from the N. W.

Broke camp at 6:40 A.M. and marched a nearly S.E. course 10 miles, pitching our tents on the site of old Fort Shackleford¹⁶ at 10:20 A.M.; Camp No. 5.

From noon yesterday until today the soil was apparently underlaid with the rock mentioned in the record of the 18th.

Four of the party left the teams, after starting this morning on a hunting trip, going some two or more miles to the southward and following a course parallel to the line of march, reaching camp about an hour after the wagons. They brought in one snipe and the head and skin of a large wildcat.

They found an Indian Camp about one mile N.W. of present camp occupied by a squaw, whom the Mr. Hendrys called Nancy,¹⁷ and three grandchildren of about 2, 4 and 6 years, 2 or 3 dogs and a lot of chickens. She graciously received the party and gave them such information as possible to understand, her stock of English being apparently quite limited. The children were noticeable for their dignity and reserve, — much more so than with anglo-saxons of the same age. The little girl of 6 was rather light colored and had regular features. She was ornamented with a necklace of various colored beads. The children were fat and healthy.

Game continued very scarce being much more plentiful in the more thickly settled portions of the State.

The Indian squaw, Nancy, with the little girl above-mentioned, called upon us in camp before dinner and was furnished with a meal. Several kodak shots were made by Mr. Chase. Upon being questioned in regard to

the distance to Miami, she replied 100 miles and that an Indian could go from Shackelford to Miami in 4 days and, accompanied with a chuckle, that it would take a white man 10 days which indicated amusement at their inferiority as compared with Indians' ability in the woods or Glades.

Nancy claimed to be the widow of Osceola, the great Chief of that name. She is the mother, also, of Billy Jumper, who was drowned in the Miami river some 10 days or 2 weeks since. They call death, "Big Sleep". Her age was said to be 75. She was a little girl at the time of the Indian War, as we elicited by questions. She is well preserved and evidently enjoys good health. She told us that the Indians of her camp were down in the Big Cypress hunting. That only a few remained in this neighborhood. There is certainly not sufficient game in the section we have crossed to support any large number of people. Mr. George Hendry, who with his brother, Mr. Frank Hendry, accompanied us from Myers to this point, estimated the total number of Indians in this section of the State not to exceed 60 or 75 and not over 250 or 300 in the whole State.

The afternoon was spent in arranging for a start into the Everglades on Monday, Sunday being needed to finish our preparations and to get rested up.

We selected the tallest pine tree at this camp and [Mr. Newman] erected thereon, attached to a pole fastened to the top of a tree, a flag¹⁸ emblazoned with the emblem of the Plant System,—a Maltese cross with the "P" in the center.

Discharged and paid off Mr. Frank Hendry with one horse wagon and Mr. Thomas Haskeew with two horse team of Mr. N. L. Langford's. They will return to Myers tomorrow.

Mr. Wesley Boyd concluded he had sufficient of the expedition and will return with the teams to Ft. Myers.

Camp No. 5, Fort Shackelford, Fla., Sunday, March 20, '92.¹⁹

Mr. Chase with Mr. Frank Hendry on a trip today, report having found several Indian villages, in one of which were bananas killed by frost. They also saw lemons, and guavas of two or three varieties, one of which was unknown to Mr. Chase.

One of the men brought in a turkey gobbler of an estimated weight of 18 lbs. Wild turkey. Game very scarce, however, the Indians having evidently killed it off pretty much.

At supper time we were visited by old Nancy, before mentioned, Nancy and Little Lucy, her daughters, the latter being the wife of "Tom Tiger" and

Nancy the wife of "Little Billy". It seems to be custom of the Indians to call their children after themselves prefixing "Little". The daughters' ages appeared to be about 25 and 30 respectively. They brought with them 5 children from babies in arms, upwards. Lee, the oldest daughter of Little Nancy, and the girl previously spoken of, is 7 years of age.

One of the boy babies was not named and was christened Ingraham, in honor of President Ingraham. The nearest they could pronounce the name, however, was "Inglam", which is probably what it will be known by.

Old Nancy told us, the two Mr. Hendrys acting as interpreters, that Harney's River headed about 20 miles south-easterly from here. This distance is corroborated by Mr. Frank Hendry, who has been up that river for an estimated distance of 44 miles. This river empties into the Gulf of Mexico on the southwestern part of the State and is said to contain some very large and rich hammock lands and contains sufficient water to float a good sized steamer for the 44 miles mentioned.

The old squaw sang for us, but it was scarcely melodious. Her compensation was 2 quarts of corn contributed by Mr. Frank Hendry. The young squaws were too diffident to either sing or talk.

Mr. Newman left shortly after breakfast and did not return till the middle of the afternoon having made a reconnaissance of about 5 miles in advance and reported a good camping place for tomorrow.

Camp No. 5, Ft. Shackelford, Fla. Monday, March 21, 1892.

Finished packing and sent one load to the Indian boat landing on the edge of the Everglades three or four miles distant, at 7 o'clock, having retained the ox team for that purpose. Ft. Shackelford is a pine island with perhaps half a dozen pine trees upon it and the only dry camping place for some distance, else we should have camped nearer the Glades. The surrounding country is prairie willow islands[,] small cypresses, etc., and considerable water, but shallow.

Messrs. Ingraham, Newman, Chase, and Church with 11 of the men accompanied the first team. Mr. Moses, Mr. George Hendry, and the balance getting away with the second load about 10 A.M.

Mr. Frank Hendry left for Fort Myers with his one horse wagon shortly after breakfast.

Settlement was made with Mr. George Hendry in full for the use of his two teams and himself. He bade us goodbye at the Boat Landing and took with him our last letters to mail at Ft. Myers.

We left the Boat Landing a little after noon with the two wooden skiffs

purchased at Myers and the two canvas boats brought with us all well loaded and waded about $1\frac{1}{4}$ miles into the Everglades, arriving at Camp No. 6 about 2 o'clock P.M. Did not pitch tents. Mr. Ingraham and Mr. Moses slept in the canvas boats. The camping place is nothing but a slight elevation covered with a few cypresses and bushes and rather wet. The balance of the party pitched their mosquito bars on this elevation. Had a lunch of canned goods, crackers and what was left from breakfast.

The surveyors began chaining and leveling at Shackelford this morning and continued their work, while some of the party went after game. Except for a few ducks which carefully kept out of gunshot, a curlew or two and some gannets and herons, nothing edible was seen. Snakes were conspicuous by their absence, but one of two being seen by anyone.

Messrs. Ingraham, Chase and Moses with one of the canvas boats, visited a little hammock island, lying south of the camp about one mile, on which evidence of an Indian camp remained, — a lean-to-roof that once had been thatched with palmetto, a few poles stuck into the ground and half burned logs, end to end, some small lemon trees and pumpkin vine indicated the absence of frost.

Water covered the surface to the average depth of .5 of a foot in the Everglades today. Rock appeared at various distances but with great regularity, from the boat landing throughout the whole of this march, at from 6 to 18 inches from the surface. Wherever rock is close to the surface the growth is very poor, being covered with somewhat of a coarse grained sand which seems to have but little nutriment in it, but where the rock is deeper it is overlaid with muck on which a rank growth of coarse leaves and other vegetation appears. The current is very sluggish, but as far as observation goes, flows in a southerly direction.

The difference in elevation between Fort Shackelford and Camp No. 6 is 2.1 feet. A short distance from the edge of the Everglades the land in one place fell .2 of a foot below the water level of the glades.

Camp No. 6, Tuesday, March 22nd.

All hands up before day and the routine, which will probably be followed, began, the surveying party starting out at 6 A.M., immediately after a hasty breakfast, while the balance packed up the boats and got away at 7, following the stakes which were marked and driven every 1,000 feet.

Messrs. Ingraham, Chase and Moses left for the cypress timber on foot, in sight to the southward and for this day's march varied in distance from one to four miles from our course and nearly parallel to it. An hour or so

after starting an Indian approached them on foot, accompanied by three dogs. He introduced himself as "Billy Fiewel" and, in English, said, "good morning." He understood English sufficiently to make himself readily understood. Was acquainted with the Hendrys of Fort Myers, Taylor Frierson and others of the same place. After some palaver, he agreed to go with us today for a consideration. Shortly after he said, "wait; will get canoe". Leaving us and going to a little hammock island some 200 yards distant, he soon returned with a fine cypress canoe which he said was made by his son "Little Billy", whose age was 20. All got into the boat, seated themselves in the bottom and Billy stood upon the stern and poled, and pushed when the water was too shallow for polling, following the remainder of the crowd, who by this time were a mile and a half ahead. Overtaking them, we proceeded to a point about 4 miles from camp No. 6 and lunched, the Indian joining us on invitation and conducting himself very politely. About one mile beyond our lunch stop we stopped for the day at Camp No. 7, having made 5 miles in all today through some of the worst bog imaginable, all tired out but cheerful.

Arrangements were made with Billy Fiewel to return tomorrow night and proceed with us, not as a guide but to hunt and make himself useful, and that we might derive such benefit as we could from his knowledge in contending with the difficulties of the way, etc.

The island upon which we are located is perhaps $\frac{1}{4}$ of an acre in extent upon which are grape vines, India rubber or wild fig, elder bushes, briers and a pumpkin vine. Indian signs were noticed.

The average depth of water today, 12 inches[;] the latter part of the day it deepened to 18 inches. In sounding with a pole we discovered rock frequently about one foot below the surface of the water.

Billy told us that no frost occurred in the Everglades and the character of the green growth corroborated his statement.

In this country could be drained, a vast expanse of arable land could be opened to development. It seems rich and would be easily cultivated once the water were permanently removed.

We will call this camp island No. 22 (indicating the day of the month), and enabling the location of any particular point when taken in connection with the engineer's report and plat.

From the top of a tree an Indian camp can be seen about 5 miles to the south of us and supposed to be occupied.

Camp No. 7, Island No. 22, Wednesday, March 23rd.

Up to last night, we made, approximately, 14.7 miles from Ft. Shackelford, which is better than anticipated.

Surveying party left about 6 A.M. on foot, but taking one boat to carry stakes and a portion of the luggage. Broke camp and followed at 7 A.M. and proceeded very well until noon.

Reached island No. 23, Camp No. 8, after sunset. In order to get to the island and secure a dry sleeping place, were obliged to leave our boats . . . behind, packing food and bedding on our backs.

Made about 7 miles on our course today, though we traveled considerably more than that distance, meandering the water courses and keeping the surveyors in sight as much as possible.

This island has a very tropical growth and is the richest yet visited. It is perhaps one acre in extent and, as usual, used by the Indians as a camping ground. It has been partially cleared and cultivated at one time, marks of the corn or potato rows being well defined, especially after lying on them at night. Enormously large ferns with coarse leaves grow on the edge of the island. A leaf from one measured 12 feet in length. Wild fig or rubber trees are also here and of somewhat large size, relatively. The Indians make a practice of cutting off the limbs and sometimes the tree itself for firewood. It is usually cut at one time for use on future occasions, as it does not burn at all readily when green. We had no hesitation in using the seasoned wood we found and probably will be well execrated by them on their next visit, as the consumption of wood by white men is generally much greater than by Indians; the former piling their wood lengthways, while the latter only bring the ends together and push them to the center as the ends are consumed. These trees sprout after being cut off, either trunk or limb, and the cutting continues indefinitely. The seasoned wood gives out but little smoke, but it is quite acrid to the eyes.

Soundings made during the day showed from 3 to 5 feet of mud all underlaid with hard rock. In the saw-grasses, bottom could not always be found with a 5 foot pole. Mud was everywhere today, little, if any, sand being felt by the feet. Reclaimed, it would be very rich land; "the richest we have yet seen," says our engineer.

Saw grass to the southward almost continuously, as far as the eye could reach looking from 15 or 20 feet elevation.

Water averaged for the day 1.2 feet, except on saw grass where it averaged .2 of a foot only.

Our Indian, Billy Fiewel, did not turn up tonight as agreed. Fresh Indian signs were seen by Mr. Newman, who arrived ahead of the party an hour or two before sunset; so he may have come and seeing our saw grass fires to the south and west of the island, concluded we were too far off the course for him to bother about us.

The 2 miles of packing from the point where we left the boats was through the boggiest marsh and saw grass imaginable, and all hands were thoroughly tired out when we reached Camp No. 8, Island No. 23.

The Glades at this point present an endless sea of saw and other grasses, lily pads, a great many of them in bloom, with small patches of water amid clear spots in the grass and small islands here and there. Two large islands of considerable extent can be seen to the eastward from this island—only 2 or 3 very small ones to the southeast and the cypress still very visible to the southwest but further away.

We are 92,750 feet from Shackelford tonight on our course.

At this point the secretary's work was interrupted for a few minutes by an inquisitive moccasin snake attempting to crawl up his left shoulder. The writer immediately rolled over and out of the way with more energy than grace, and commenced a vigorous search for a stick but before it could be found his snakeship had retreated into the recesses of the roots of the rubber tree, under whose refreshing shade the records were being written up. In the brief time there was for examination, the snake appeared to be about 5 feet in length and marked in pale yellow and black.

Camp No. 8, Island No. 23, Thursday, March 24th.

A party went out to bring in the boats, the surveyors started out on the line and the rest who remained in camp made necessary repairs to clothing, cleaned guns, etc.

The boats arrived shortly afternoon. Broke camp about 2 P.M. and followed surveyors. It took until sunset to reach Island No. 24 and Camp No. 9[,] only 2½ miles east. Had to make several portages and drag the boats through saw grass. All hands extremely tired and whiskey was served out from the medicine stores. We captured 5 turtles today, said to be terrapin. They are about the size of the familiar Florida gopher and very palatable. The Indians capture them with a sharpened piece of steel or iron secured to the end of a pole 12 to 15 feet long. The most of ours were trod on by men as they waded and were immediately picked up and transferred to the boat nearest. The movements of this reptile are quite rapid in the water and it is hard to catch them on foot. They will also burrow in the mud and escape.

There were also shot and secured 5 or 6 marsh hens and limpkins and one mallard duck, all of which made a very welcome addition to our bill of fare. This species of duck seem to live in the Everglades continuously and not migratory, as the writer scared several from their nests and found one nest in which were 7 eggs. The nest was made in the saw grass on the edge of a glade.

The water today averaged somewhat deeper and rather more boggy. Rock still underlies everything at about same depths.

Island No. 24 seems to be of 2 or 3 acres in extent.

Upon the trunk of a large rubber tree we found carved with a knife the names of "Tommy Tiger", "Jack Charley" and "Billy Fiewel", the latter undoubtedly the Indian whom we met and engaged to go with us but who failed to appear.

Camp No. 9, Island No. 24, Friday, March 25th, 1892.

Surveyors got away first, balance following about 7 A.M.

This was one of the hardest days yet. Water on our course, sufficient for the boats, scarce[;] and saw grass veery plentiful. Made the longest portage yet over one of the saw grasses, over 2,000 feet. Abandoned the smallest of our wooden boats and threw away some of our impedimenta before crossing. Arrived at Island No. 25 about 3 P.M. The prospecting party reported good showing for tomorrow, which means that sufficient water courses through the saw grass was visible in the direction we want to travel.

Island No. 25 has not been visited by Indians for a long time, as we found it occupied as a rookery by white herons, principally, who flew away at our approach, leaving their nests occupied by many young birds.

No cypress timber could be seen today from either island 24 or 25. From the top of a tree a large body of timber is reported visible 6 or 7 miles to the Southwest, but no one is able to say whether cypress, hammock or pine, but presumably cypress.²⁰

Camp No. 10, Island No. 25, Saturday, March 26th, 1892.

Got away about 8 A.M. and had a very successful day, making nearly 5 miles in a southeasterly direction.

The rock continues from 12 to 18 inches below mud, 4 feet from surface of water to rock. Rather easy day though all were quite tired.

Arrived at Island No. 26, Camp No. 11, at 5:30 P. M. Island about $\frac{1}{4}$ of an acre in extent and recently visited by Indians. A larger island lies $\frac{1}{4}$ of a mile east, in which roosted a large number of birds. We did not visit it, as the smaller island was less odorous and answered our requirements.

Island No. 26, Camp No. 11, Sunday, March 27th.

Found plenty of firewood cut by the Indians and had a good breakfast of hominy and rice and beans. Our flour is out. Corn meal has been out for some days. The corn meal was packed with bottles of syrup which fermenting drove out the corks and was soaked up by the meal. It made very palatable bread and mush, though at first we supposed it was badly damaged.

Mr. Clark[,] who was appointed commissary a day or two ago when we found it extremely necessary to economize our food supplies[,] today refused to act any longer, owing to the guying and chaffing of some of the men whose stomachs were larger than their discretion or judgment. Mr. Matthieux was appointed commissary to have charge of and serve out the stores economically, accepted and assumed the duties. Our consumption of food has heretofore been rather lavish and based on an expected average advance of 5 miles per day through the Glades, which expectation has not been realized, and this step has been taken none too soon.

The day began with rain immediately after breakfast, which delayed the departure of the main body. The surveyors got away earlier and before the rain. The outlook was gloomy but the clouds rolled by, and by noon it was clear, the wind going to the Northwest and the day ending cool.

Got away about 9 A.M. Made $\frac{1}{4}$ of a mile east and 2 miles or so S.E. Ran into large bodies of saw grass and no water on our course sufficient to float boats. The glades all seem to have a tendency to the south and occasionally a little west of south, while our course is almost due S. E. Retraced our steps in a northeasterly course and camped at a small tree, the inception of an island, about $1\frac{1}{2}$ miles east of Camp No. 11, being out Camp No. 12. It was a very discouraging day as we worked hard and travelled several miles that did not count.

Cut down part of the green tree above mentioned for fuel, which our commissary, George Matthieux, finally succeeded in inducing to burn after everybody else had given it up. This gave us hot tea and coffee and hominy. Messrs. Ingraham and Moses slept in canvas boats, the balance cut saw grass, piled it up so as to be out of the water and made their beds thereon. All declared it made the most comfortable beds yet, though it was a little uncomfortable to step out into the water the first thing on rising.

Rock about the same distance below the surface all day.

Mr. Ingraham shot a duck on the wing with a rifle; also shot a marsh hen.

One small island in sight 4 miles to the N.E. One about 7 miles east somewhat larger. Seen from the top of a stunted custard apple tree from which we were prospecting.

Camp No. 12, Monday, March 28th, 1892.

It was decided to take a course for the island to the eastward, South 75 dgs. East and keep it until reached as we must have fuel with which to cook and our provisions are getting low. Our progress, too, is very slow and we are falling behind our average. We will see pretty hard times from now on and much depends upon the strength and endurance of all hands.

Our cook, Mr. Caruthers, had a chill today and was carried on the "Tarpon" as the wooden skiff has been christened by the men. Robert Dean also gave out, occasioned by a strained knee, and rode.

Our Camp No. 13, which we reached about 5 P.M., was in the midst of saw grass, the driest we could find. Our supper was cooked by a little fire made from dead saw grass fed continuously by several men, helped out by pine splinters procured by robbing the canvas boats of some false flooring, and consisted of fried ham, a terrapin, duck and marsh hen secured during the day, and coffee.

We made but 14,000 feet today.

Rock from 4 to 6 feet below the surface of water.

All hands worked very hard today getting across saw grasses in our course which were much more frequent than agreeable, though indicating very rich land when reclaimed.

Camp No. 13, Tuesday, March 29th.

Left Camp No. 13 at 7 A.M., all except Mr. Ingraham, who remained with the boats. Each carried a pack and walked about $1\frac{1}{2}$ miles through saw grass and bog. 14 men went back after the boats. We are endeavoring to reach the same island we saw yesterday and are within $1\frac{3}{8}$ miles of it with our packs, but the boats remain behind yet.

Mr. Baker just caught up with us who are ahead, having had a bad attack of cramp. This has been a terrible strain on everybody. Locomotion is extremely difficult and slow. The bog is fearful and it sometimes seems as though it would be easier to stay in it than to go on. Both legs, up to the waist, frequently become imbedded in the same hole in the mud and to extricate one's self with from 30 to 50 lbs. weight on the back requires strength and time. Packing for any distance is impracticable. A man by himself, carrying nothing, would probably fail to reach the timber from this point. The boats are very necessary to enable one to pull himself out of the mud, and even then the labor is most exhaustive.

No island visible except the one we are making for,—all saw grass and glades.

The two crippled men mentioned yesterday are better and walking today. Lunched in the saw grass.

After an excessively arduous day's work all hands reached Island No. 29, Camp No. 14, about 5 P.M. Found it to be a white heron rookery. By Mr. Newman's direction we killed 15 of the nearly grown young that could not fly and Mr. Matthieux converted them into a dish much better than the average Florida chicken; or so it seemed to us.

Mr. Newman estimates we are 25 to 27 miles from Miami. We have but 5 or 6 days' provisions on hand and our average being only about 3 miles a day from Shackelford and falling behind, we are likely to be hungry before reaching Miami.

Some imagined they heard the roar of the Ocean surf today.

[Camp No. 14,] Wednesday, March 30th.

Very heavy day. So far we have been very fortunate in having little rain to incommode us.

Left island No. 29, Camp No. 14, about 8 A.M. Surveyors chaining for an island to the S. E., but the chainmen giving out, occasioned by physical exhaustion going through high saw grass and limited food, chaining had to be given up for the present and Mr. Newman triangulated for an island nearer and more to the eastward.

From Island 29 there are 6 or 7 islands in sight.

Saw grass almost continuously towards Island No. 30 and we had a hard time reaching it, but finally succeeded about dark. Distance from Island 29, 3 miles and 3,000 feet.

Rock today about 5 feet from surface of water or mud.

Saw smokes to the S. E. during day and near enough to see the blaze after arriving in camp.

Men very tired and irritable, but felt better after supper.

Island No. 30 is a patch of perhaps $\frac{1}{4}$ of an acre in midst of saw grass, covered by a growth of stunted willows and principally inhabited by buzzards. Very odorous, but better than mud alone. We will all appreciate the ability of walking on non-resisting substance.

[Camp No. 15,] Thursday, March 31st.

3 or 4 islands in sight to the south and east.

Got away from Island 30, Camp 15, about 9 A.M.

Triangulated to island South 20 degrees east. The chainmen gave completely out in chaining for the base line to make this triangulation, and had to ride in boat.

Found glades to be bearing east of south with plenty of water all day. Made only one or two short portages. This was very fortunate, as the men are becoming quite weak and somewhat discouraged.

In going from one glade to another through narrow channel we found quite a strong current, flowing towards the S.E. perhaps a mile an hour, but when the center of the glade was reached, the surface broader and shallower, it was not perceptible.

After lunch, got into a stream of water, almost a river, with saw grass banks which led us to another island than the one surveyed and about $\frac{1}{2}$ mile east of it, on which we camped, being No. 31 and Camp No. 16. This was 3:30 P.M. All hands feeling much encouraged at our progress today. Made nearly 4 miles and reached camp sufficiently early to attend to various necessary matters of repair and an opportunity to dry our clothes and scrape off some of the mud, which was a relief even though it lasted but a short space.

We caught and shot, during the day, 7 terrapins, 1 marsh hen, and 3 or 4 fish. The latter jumped into our boats and proved a fine addition to our evening meal.

Wind all day very strong from the S. E.

In the afternoon at one time found sand underlying the mud instead of rock. For the most part the rock is about 5 feet from the surface of water.

This island has willow growth; is perhaps $\frac{3}{4}$ of an acre in extent and the richest soil of any we have struck, although they are all exceedingly fertile. The saw grass stumps from which we cut our bed to lie on, pushed out its center stalk $\frac{3}{4}$ of an inch during the night. This had been noticed several times.

Whether an actual growth or not, it is difficult to prove. It does not seem as though the hard outer covering could recede.

Saw more moccasins today than any day yet.

The stream we followed today for $1\frac{1}{2}$ or 2 miles contained deeper water than anything yet encountered, and had very little mud making locomotion much easier. The current was so slight as to make it difficult to say if any existed by observation. The heavy wind from the S. E. made a surface current in the same direction.

[Camp No. 16], Friday, April 1st.

Broke Camp No. 16 and left Island No. 31 about 8:30 A.M., though we made strong efforts to get away earlier.

Small islands are becoming quite frequent. On some of them is a small stunted tree said to be a custard apple. It resembles the northern apple tree somewhat in color and shape of leaves, as well as its growth. A bloom was mentioned to have been seen on one of the trees.

The character of the everglades is becoming noticeably different. Many islands, some quite large, are visible to the north and east, while little bushes 4 to 8 feet high appeared all around us.

The wind strong from the east all day and felt as though the ocean was not far distant.

Good water for the boats, the deepest yet. About 2.5 feet on an average; sometimes 4 feet. It seemed to have fairly well defined banks. Along the edges of the channels the saw grass was very heavy and tall, as well as quite dark colored.

We came across frequent Indian burns, some made within a few days. Smokes to the east, southeast, and west, indicating their presence, but none were visible.

The water gave out after dinner and we made several portages finally reaching Camp No. 17 about 5:30 P.M. Island No. 1 is exceedingly rich, having been cultivated, and Indian signs found. It was occupied by buzzards that left on our approach.

Rock about 5 feet from surface of water.

All hands, nearly, rather cross and tired.

Made 4 miles[,] 800 feet. Our Engineer, Mr. Newman, estimates the distance yet to go to be about 20 miles. We have 4 days' provisions on hand, which are carefully rationed out daily by the Commissary, Mr. George Matthieux, who has proved very valuable and deserves special mention and commendation. He has not only acted as Commissary since his appointment, but has assumed chief charge of the cooking and by his untiring effort, zeal and good nature won the friendship and good will of all. It must be understood that the rations above mentioned consist almost wholly of hominy and such game, principally herons and terrapins, as we can secure and when cooked and served out is only about one half the quantity craved, though sufficient to sustain life reasonably well. The character of the food, together with its quantity is not muscle producing sufficient to meet the excessive labor required in this expedition.

The growth on the last two islands has consisted largely of morning glories, wild cucumbers, bays, elders, and other familiar growth.

Mr. Lucky found a piece of pine bark on Island No. 1. [The islands were numbered, it must be remembered, on the day on which each was sighted.]

We caught 7 terrapins, 3 blue herons, several young water turkeys, and an alligator whose tail we cut off intending to eat the latter, but the prejudices of some of the party caused it to be thrown away, although the meat looked fully as well as that of sturgeon. It weighed about 40 lbs. and the

writer was sorry to see it go, as with our present appetites it would not be difficult to try the experiment of testing it as an article of diet.

Several very fine trout jumped into our boats, while going through narrow channels connecting the Glades. We had them for supper. As it is requiring our utmost exertions to complete our trip and survey before the provisions become exhausted entirely, no fishing has been attempted while marching. When we reach camp all are too much exhausted, though we have tackle.

High water mark well defined on the saw grass, indicating about 12 inches above present level. We noticed at many points, since leaving Camp 5, nests of ants fastened to leaves and bushes, usually about 18 to 24 inches above present water level.

Crows frequent the rookeries of the herons and water turkeys and, not being afraid of our presence, rob the nests of eggs abandoned by their natural guardians on our approach. The crows thrust their bills through the shell and fly away with them, sometimes dropping them and returning for another. It would seem as though the same flock of crows remained with us, knowing our presence would scare away the old birds.

Camp No. 17, Island No. 1, Saturday, April 2nd.

All hands appeared on deck this morning in pretty fair shape and succeeded in getting away at 8:15 A. M. Save for strains, blisters, chafes, and minor ills the health of the whole company has been excellent.

This island is said by the engineer to be $19\frac{1}{2}$ miles in a direct line from Miami, bearing South 47 degrees east, as near as he can determine by the opposite character of the survey and $\frac{1}{2}$ mile north of our original course from Shackleford.

The outlook for water was rather dubious at the start but soon brightened and we had plenty the balance of the day, getting into Camp No. 18 on the saw grass about 5:30 P.M. having made but 3 short portages. The distance covered estimated at $6\frac{1}{2}$ miles which makes Miami but 13 miles away.

The survey was today postponed until after arrival at Miami, owing to the physical incapacity of the men and the shortness and character of the provisions. Good objective points for triangulation were scarce.

Our water courses today bore to the S. E. continuously, which favored us very much.

We saw one large island to the south and one to the N. E., each perhaps 2 or 3 acres or less.

A good many bushes grew in the saw grass. Rock getting deeper, being from 6 to $6\frac{1}{2}$ feet from surface of water. Less water on the saw grasses.

Half a dozen or so fish jumped into the boats as usual, but we only captured 2 terrapins, the water being too deep.

We met one encouraging sign of civilization today, the printed portion of a paper flour sack floating in the water, indicating that we were on the Indian trail to Miami.

There was a heavy smoke noticed in the east which remained in one place and seemed to be in the nature of a bonfire, as it appeared to be composed of something more solid than saw grass. Some think it may be a relief party from Miami.

Smokes were noticed all around undoubtedly kindled by Indians. From the start they have been noticeable to the north, traveling from the east from day to day and inferred to be a party of Okeechobee or Myers Indians returning from Miami as we were told at Shackleford by Old Nancy would be the case. Billy Fiewel also told us the same thing. Their statements as to what we would encounter in the Glades has been well borne out.

Saw Grass Camp No. 18, Sunday, April 3rd.

Broke camp about 8 A.M., hoping to get to Miami by tomorrow night or Tuesday. Fired the saw grass at intervals as we progressed, as has been our custom, but more particularly at this time to indicate our whereabouts. Smokes were visible in the Southwest, Northeast, and east; the latter in the same place as yesterday.

Had a pretty hard day trying to keep on our course. Made several portages and got bottled up several times in tortuous, narrow, channels through the saw grass. To lighten the boat we cached several things at Camp No. 18, which had an incipient island in the shape of a willow tree on a slight elevation, a few inches above present stage of water.

The Glades still continue to run too much to the south to suit our course which caused the portages. The character of the growth is still changing, the bushes getting more plentiful and the saw grass somewhat less and more resembling prairie.

Wind very high from the S.E. all day and one light shower, but nothing to hurt, merely a sprinkle.

Islands quite scarce as far as we can see. Our range of vision is very limited, owing to the difficulty of getting more than two or three feet elevation which we obtain by standing upon the "Tarpon." Were it not for the boats to lean upon[,] locomotion today would be extremely difficult, if not impossible, for any distance. Some of the deepest bogs yet encountered impeded our progress; the water is also quite deep in places. The men walk

beside the boats and as they bog, raise themselves and so continue. It rarely happens that all are bogged at once. It would require a very strong man to go any distance alone and reach civilization. Of course, when we make portages the men string themselves two and two ahead of the boats and drag them over. Sometimes it is necessary to pack the contents of the boats ahead where the portages are long or unusually boggy.

The rock is 7 feet below the surface, the water averaging 2 feet in depth, mud or muck the balance. This side of the Everglades, in the opinion of the writer, contains the largest volue of muck land, if reclaimed.

A dozen or more fish jumped into the boats today, one weighing about 4 pounds; they helped out our supper greatly. Several more terrapin were also caught. We also secured half a dozen young water turkeys from their nests, which made a fine addition to our store. Special mention is made of these facts, as our bacon has been very low for several days; but we have not suffered very much nor been delayed in our progress by the necessity of hunting food, latterly appearing as we required it. This is all we have though, with the addition of coffee, tea and grits, and more would not go amiss.

We omitted our noon meal as it took all our efforts to get to an island where there was wood for cooking and a dry place to sleep. We arrived at Island No. 3, Camp No. 19 about 3:30 P.M. It contained possibly 1½ to 2 acres, having a scrubby extension for some distance to the S. E. The portion upon which we pitched our bars was circular in form and apparently of second growth. The soil is dark brown and very rich, covered with fallen leaves, making it an ideal camp.

From the top of the one large rubber tree, timber was seen 4 or 5 miles away to the eastward and extending north and south several miles. The character of the timber could not be definitely determined but presumably pine. This was very encouraging and braced everybody up wonderfully, giving them renewed strength and courage as it foretold the beginning of the end. Two or three small shanties were also seen on an island to the North-east about one mile away. A peculiarity of the atmosphere makes it difficult to estimate distances or magnitudes of objects. Small bushes having the appearance of trees and small islands of apparently large area shrinking to quite diminutive proportions on near approach.

Plenty of water appeared to exist otwards the east which is what we desire for tomorrow.

We had our second meal at 5 P.M. and a hungrier crowd would be difficult to find outside the Everglades.

It was noticed today that the blackbirds drive away the crows and fight them viciously, when the latter are making their depredations on the nests of the herons and water turkeys, compelling them to drop the stolen eggs, but they get away with a great many.

A species of insect prevails throughout the Everglades we have gone through, called the alligator flea. It is a small light brown, ragged looking object, somewhat oval on the back and spongy looking[,] about $\frac{1}{8}$ to $\frac{3}{16}$ of an inch in diameter. It attacks and fastens itself to a person's feet and legs while wading and bites ferociously, resembling the sting of a hornet or bumble bee and equally as sudden. It occasioned very vigorous movements on the part of the men who were unprotected by leggings. No ill after effects were noticeable. Small periwinkle shells get into the shoes frequently and as their edges are sharp inflict torture until removed.

Island No. 3, Camp No. 19, Monday, April 4th.

The constant wading in water and bog appears to have weakened all to a greater or less extent and considerable lassitude prevails. No one is ill, however, and the weather continues perfect. Very few mosquitoes or other insects.

We got an early start this morning[,] breaking camp about 7 A.M. with cooked food on hand for lunch. We hope to make the timber today and find friends or a wagon road on which to continue our journey. It is two weeks today since we left Shackelford. The time seems much longer.

The bushes are growing more plentiful and larger and as before mentioned, looking like trees and quite large at a distance but become much dwarfed on a near approach.

After traveling about a mile, making several portages, saw an Indian in his canoe, whose attention we attracted and who came to us. This occurred about 10 A.M. His name is Billy Harney. He is a small[,] wiry-built man of perhaps 65 or 70 years. He would not agree to go with us to Miami, at first, but signified his willingness to get some-one to go. Told us it was 25 miles. Although his houses were in sight, about 500 yards off, he said it was 5 miles around and after following him 3 miles, Mr. Newman decided to go on alone with him in his canoe, leaving us to await his return with a guide. They left at 12 noon after lunching. In the meantime we landed on an island of quite small extent, unpacked all the boats, dried out and repacked our stores and tent, painted the bottom of one of the canvas boats, and got dinner.

They returned about 3 o'clock and being unable to get anyone else, the old man agreed to take two in his canoe, go to Miami and return with pro-

visions. It was decided that Messrs. Newman, Ingraham, Chase and Moses should go, taking one of the canvas boats, and at 3 P.M. they started.

Billy's home consists of a hammock field, one building covered by rived board, and 4 palmetto thatches. Has corn growing 3 feet high, pumpkins bearing, bananas, etc. Mr. Newman saw 4 or 5 good trunks, chairs, mosquito bars and said that he appeared to be in prosperous circumstances. His wife, daughters, and grandchildren were at home, but the balance of the men folks were away hunting 65 miles distant. The houses are built on a sand hill at considerable elevation above the surrounding glades. The island is some miles from the pine timber.

Camped on an island of about 20 feet diameter at sunset. The course from where we left the men to this island was very circuitous and followed narrow channels connecting the Glades.

The water was not very abundant at times. The general character of growth about the same as in the forenoon.

Island No. 4, Tuesday, April 5th, 1892.

Mr. Newman was up at 2:30 preparing coffee and at 5 A.M. we started, arriving at the rapids of the Miami River about 9 A.M. The rock had been approaching nearer the surface all the morning, in many places forming the bed of the glades or streams making the headwaters of the river. At the rapids the rock appeared prominently. Messrs. Ingraham and Newman walked around the rapids through the pine timber and met the canoe with Billy and the canvas boat with Messrs. Chase and Moses, who, under the leadership of the Indian, shot the rapids, coming through without accident, though the trip was quite exciting, the rocks being very sharp and jagged and the current very swift. There appeared to be a fall of perhaps 10 feet in 300 yards. The limbs of the trees which lined the banks thickly met and interlocked overhead, close down to the water. Sharp rocks with but a few inches of water on them impeded progress while the banks were lined with what appeared to be bog iron, having many sharp projections. The river appears to have two or three outlets from the glades which make it.

The character of the Glades changed materially today. Many small islands and some of considerable area appeared in various directions. The bottom was less boggy except in spots, the rock frequently cropping out and the saw grass growing less though there was still plenty of it and the prairie showing occasionally. The timber was plainly visible all the morning.

We arrived at Miami at noon and were warmly welcomed by Mrs. J. D. Tuttle, a friend of Mr. Ingram's, who had been informed of his prospective

arrival and who raised the National ensign and exploded a dynamite cartridge in honor. Her well served meals and soft beds made a profound impression on our minds and bodies as we enjoyed those concomitants of civilization, of which we had been deprived for, apparently, so many days but really few in number.²¹

Mr. Newman immediately hired Omathla and his canoe and with Billy Harney and his boat left at 3 P.M. with a supply of provisions such as he could secure at the store of Mr. William B. Brickell's, for the rescue of the 17 men left behind, who had expected Mr. Newman back by today at noon, through misunderstanding a statement of Billy's, as to how long it would take to go to Miami and return.

The expedition was left in charge of Messrs. Baker and Church with instructions to proceed as usual, on a course S. 23 degs. East[,] following our trail as well as they could and which we marked by various burns.²²

In the meantime Messrs. Ingraham, Chase and Moses will remain at Mrs. Tuttle's until the balance of the expedition arrives.

Omathla is the guardian of the Seminole boy chief whose name we could not ascertain positively. He is said to be called George when mentioned by the Indians.

The banks of the Miami are lined by mangrove and cypress growth. In some places the pine timber is visible near the river, several indications of former settlement were noticed in the shape of boat landings and some coconut trees as the mouth of the river was approached. It is quite an attractive stream. Tide water, but little current at this stage of the water in the Glades. It is called 6 miles from its mouth to the rapids. The width is from 150 feet to $\frac{1}{4}$ of a mile and is quite straight for the most part. The engineer's plat will show its course and correct distance.

Miami is situated on the south side of the Miami River in the angle made by Biscayne Bay, and consists of Mr. Bickell's store, warehouse, and dwelling house. The post office is in the store. Mrs. Brickell is the postmaster. Mr. Brickell has quite a trade with the Indians who bring their skins and before prohibited by law, plumes. Some of them raise sweet potatoes, bananas, and compe which they also dispose of, taking flour, coffee, and tobacco in exchange. The "Margaret" is a 30 ton schooner owned by Mr. Brickell and makes regular trips to Key West carrying passengers and bringing supplies for the store. Many of the Indians come down Snake Creek 8 or 10 miles north of Miami, in their canoes. We are told that they prefer this way to Miami instead of by Miami River from the Glades. The warehouse is sit-

uated near the head of the dock. Has been recently finished. Is two story and is finished off upstairs for renting to winter visitors. The grounds are somewhat attractive and have quite a number of fine cocoanut trees.

Mrs. Tuttle's property is in the other angle of Biscayne Bay and the Miami River, north side and opposite Brickell's. It was formerly known as Fort Dallas. The Fort still remains. It has been converted into a dwelling house after being renovated and repaired with the addition of a kitchen, etc. The barracks, a long one story building, is used as office and sleeping rooms. Both the buildings are of hewn rock finished off with cement, and facing towards the south. They are delightfully located in the midst of orange, lemon, lime, and cocoanut trees, together with other tropical trees and growth. Some of the cocoanut trees are 30 to 40 feet in height. Mrs. Tuttle has quite a stock farm and dairy, with an abundance of chickens. Also a fine kitchen garden. All the improvements are on hammock land which fringes the river and bay from $\frac{1}{4}$ to $\frac{1}{2}$ mile deep. She has shown a great deal of energy and enterprise in this frontier country where it is almost a matter of creation to accomplish so much in so short a time. Her improvements began in November '91. Lemon and lime trees are growing wild all through the uncleared hammock. Where the forest growth remains they look quite healthy. Where the forest growth has been cleared the hot sun or something else seems to have a bad effect on them.

Miami, Fla., Wednesday, April 6th.

Biscayne Bay is a wide shallow body of water from 3 to 6 miles in width and about 40 in length. From Cape Florida south it appears to be open ocean, the keys are so distant and low.

In the immediate vicinity of Miami the bay is fringed with hammock from $\frac{1}{4}$ to $\frac{1}{2}$ a mile in depth. To the west of the hammock usually is pine land. Both are very rocky, dropping out of the surface so as to make ploughing very difficult. The rock is usually several feet deep, hard where exposed to the sun, but soft and crumbling below the surface. Roots of trees examined seem to penetrate between fissures or cracks in the rocks.

At some points on the bay to the southward of Coconut Grove the land immediately on the river is prairie, possibly two or three feet above high water and said to be capable of reclamation.

The day was spent in rest and reading 2 weeks old papers, the mail having failed to arrive for 10 days past. We found our valises sent by express via Key West had arrived all right.

Miami, Thursday, April 7th.

The balance of the expedition arrived in two detachments at 12 and 2 o'clock P.M., bringing the boats.

The expedition having exceeded the estimated time required necessitated drawing on Mr. R. B. Smith for \$500, \$400 of which was turned over to Mr. Newman. Mr. Smith advised by mail.

Arrangements made with the Captain of the Schooner "Flora" by which Messrs. Minchin, Gradick, Matthieux, Handley, Lucky, and Dean were enabled to leave at sunset for Key West, enroute for their respective homes. Their transportation was paid as far as Key West and Mr. Southwick, Agent of the Plant S.S. Line, by mail, requested to furnish transportation to Port Tampa and send bill to Sanford.

Pine apples seem to be the chief industry in this section. Most everyone has more or less cocoanut trees set out but apparently more for ornament than profit. The cost of transportation or possibly competition from South and Central America has had a discouraging effect thus far. Compte is produced to some extent.

Mr. Michael Axer, one mile north of Miami, has some very fine Sappadillo and Mango trees, the growth of which he has encouraged by applying the refuse from his Compte mill and the red water, the latter being the water before the roots have been ground and washed therein. The compte is said to be poisonous until thoroughly washed. It produces a fine starch. A barrel of roots will produce about 15 lbs. of starch worth 5 cents a pound. One of the refuse products is called Sofke and is used by the Indians as food. Mrs. Tuttle uses it to feed hogs and finds it very nutritious.

Miami, Friday, April 8th.

After breakfast Messrs. Ingraham, Chase and Moses with Mrs. Tuttle and her son, Harry, took passage on a sail boat for the "Hunting Grounds" which we reached shortly after noon. The "Hunting Grounds" are so called from the Indians going there to hunt in years past. They are located on the Perrine Grant and the portion we visited was occupied by Mr. John Addison who has lived here for 25 or more years. He was away for the present and we were received by his wife. They have several acres under cultivation; also orange, lemon, lime, mango, guava, and alligator pear trees. Trees of the citrus fruit family did not appear remarkably thrifty. The mangoes and alligator pears looked very well. The soil where cleared was very rocky and [rock] was collected in piles and some of it used for a fence or wall as in New England. It looked like lime rock found in other parts of the state, but was

said to be of coral formation. In the uncleared portion of the hammock which we visited were several small sinks and fissures in which the rock appeared in layers. The sinks were dry and appeared to have been formed by the collapse of the top crust into underground cavities or streams. The growth on this hammock was different from any heretofore seen and but few trees, such as wild mulberry, and red bay, and live oak, were familiar. Cabbage palmettoes were not seen at all. In spots the familiar saw palmetto appeared, also the wild fig or rubber tree, the gum-a-limbo, iron wood, mastic naked wood, crab wood, and many others grew large and plentifully. The rock covered the surface in many places. Tomatoes and egg plants grew luxuriantly in fields of which Mr. Addison had quite a number, perhaps 10 or 12 acres in the aggregate. The tomatoes were pronounced to be the finest flavored and solidest of any ever eaten by them. A severe drouth which has prevailed for some weeks had cut down the crops somewhat.

We next visited the place of Mr. Wm. H. Frizzards, about one mile north of Mr. Addison's, to which we walked through the hammock. His improvements are on pine land and he raises mostly pineapples. He has a neat well painted cottage built by himself and a compte mill. Has 8 or 10 acres under cultivation. Expectsc to ship 25,000 pineapples this year and will begin in a week or two. He estimates his next year's output will be 50,000. He nets from 55 to 65 cents per dozen fruit and higher for choice apples. Has a wife and several children. Was at one time in the compte business preparing it for market by machinery, but gave it up to devote his time to pineapples. Says there is no money in starch making from compte. His orange and lemon trees look better than any seen. The guava trees were abundant and quite large on both the places above mentioned, but the foliage did not look very green apparently suffering from drouth.

We spent the night at Cocoonut Grove Hotel at place of same name, some 2 or 3 miles north of Mr. Frizzards, going in the boat. It is owned and run by Mr. Charles Peacock and wife, who also runs a store in another building at the head of the dock a block away from the hotel. The hotel has a cottage annex separate from the main building. There must be 30 rooms in all and it was fairly well filled. Several people being from New York and Boston. Mr. Peacock is English by birth. His son, Charles, runs the store. Prices of goods at all the stores visited range 20 to 25% above Sanford retail prices.

All, including guests, were quite curious in regard to the expedition and it required considerable care to parry [some of the] questions. The general impression seemed to be that a railroad was projected.

Mr. Kirk Munroe, writer for Harper's publications and author, lives in a very pretty cottage with well kept grounds, about half a mile south of the hotel. We called upon him in the evening and were pleasantly entertained. His wife was sick and did not appear. He kindly gave us a chart of the coast from Lake Worth south including Biscayne Bay.²³

Cocoanut Grove, Fla., Saturday, April 9th.

Before breakfast we visited the [Sisal Hemp] factory of Mr. Ralph W. Monroe, $\frac{1}{4}$ of a mile south of the hotel and were shown samples of sisal hemp and dessicated cocoanut. We secured a sample of the fibre, but it was only loaned to us and we promised to return same. The fibre was long and strong. The dessicated cocoanut was very nice and was in two or three sizes. It equalled in appearance and excelled in flavor the ordinary commercial article.

Mr. Monroe is commodore of the Biscayne Bay Yacht Club, and who has a nice club room and several fine boats. They lease from the United States government the abandoned Cape Florida Lighthouse.

We left immediately after breakfast by the "Margaret", Captains Ned Pent and John Sanders, for Cape Florida, landed and went to the top of the lighthouse. The new lighthouse on Fowey rocks was visible some 2 miles away to the southward and apparently rising from the ocean. Cape Florida is the extreme southern end of Key Biscayne, which is of some extent containing some 200 or 300 acres. The growth is sea grape, which here grows into quite a tree, mangrove, a few cabbage trees and cocoanut palms, and a great many saw palmettoes. The soil is white sand and very poor looking in the vicinity of the lighthouse and the growth on the balance of the Key did not indicate very rich soil. We sailed from here by way of the Atlantic northward, and landed on the south side of the Narrows Cut to examine the rocks on the edge of the cut or inlet into Biscayne Bay. They were found to be of coral formation.

We found a few cocoanuts scattered along the ocean ridge and quite a number on the north side of Bear Cut which appeared to be doing fairly well. They were a portion of the immense tract set out by Field and Osborne a few years ago. We are told that a large percentage are dead or never sprouted. Those that lived—the best of them—could have done much better if they had been properly managed. No clearing was made, the nuts being merely planted in a hole dug to receive them and then left to take care of itself. Thousands of nuts were thus planted extending many miles along the

ocean. The captains of the "Margaret" said the experiment was not generally considered a success.

The waters of Biscayne Bay and the ocean, especially at Cape Florida, show in the sunlight the most intensely blue and green as well as other more quiet shades of color ever seen by any of the party, and a picture or painting true to nature would be considered unnatural in all probability.

There are three schooners aggregating about 75 tons doing business between the various places on Biscayne Bay and Key West, besides several other irregular crafts, and apparently making a living at it. Mr. W. B. Brickell, as before mentioned, has a store at Miami and Mr. Charles Peacock one at Coconut Grove. They carry fair stocks of general merchandise and their goods come in these schooners from Key West. The rates of freight range from 25 cents per box to 35 and 40 cents per barrel. Groceries range at retail from 20 to 40% higher than on the line of the South Florida R.R.

We reached Ft. Dallas after a most interesting day's sail [,] entering the bay through Bears Cut.

Eight more of the men left today on the three masted sharpie "Emily B" for Key West. The schooner is owned by the Jacksonville and Lake Worth Transportation Co., is about 30 tons burthen.

Of the 21 of the expedition only 7 now remain here, Messrs: Ingraham, Newman, Chase, Baker, Church, Wilson, and Moses.

Fort Dallas, Miami, Sunday April 10th.

Mrs. Tuttle took Messrs. Ingraham, Chase, and Moses in a two seated buckboard 5 or 6 miles north from her place calling at several places on the way. Mr. Michael Axers was the first place visited about $1\frac{1}{2}$ miles distant. He has a good many fruit trees, the finest of which were the sappadillos in very full bearing. Alligator pears and mango trees were very thrifty, the latter in full bloom. He had limes, lemons and oranges, all in bearing but looking anything but healthy. They appeared to have the "die back", Mr. Axer said it was drought and the rock in the soil. He showed some trees that he had watered regularly that looked much better. He also exhibited a tree that had been watered regularly which looked as bad as any, so it was difficult to determine what the trouble was with the trees of the citrus family.

Mr. Axer manufactures compte of which he says a barrel of roots will make about 15 pounds of starch for which he gets 5 cents a pound in Key West. He uses the water in which the roots are soaked from 24 to 48 hours and called red water, and the waste with which to fertilize his trees. He has

a shallow ditch running among the trees into which he pours the red water. His place was on pine land. A good deal of rock was visible on the surface. But generally speaking, in today's ride we found less rock than at Cocoanut Grove.

The next place visited was that of Mr. Sam Filer of Key West, who has 10 acres cleared under fence and a small house occupied by a negro family who take care of the place. Mr. Filer has been here all winter and recently returned to Key West. The clearing of his grove was all done by hand, cultivating is done with a hoe. Plowing cannot be done on account of the rock. This is the case with most of the land immediately on the Bay. Mr. Filer's 10 acres were set out in grove form with Villa Fracha, Belaire Premium and Cicily lemons, limes, alligator pears, sappadillos and mangoes. Lemons, however, occupied the most of the ground. They had been set 18 months and looked very fair. Showed the lack of rain, but no disease or insect was seen.

Called on Capt. John Smith who has a place about 1½ miles south of Lemon City. (By the road Lemon City is 6 miles north of Miami.) He had recently sold 5 or 6 acres of his land at \$50 an acre. The place he was living on he had recently bought at the same price and was directly on the Bay, while the other was back. We made no comments on the prices but they seem very high when the sparseness of the population and abundance of the land is considered.

We next visited the so-called Wood hammock, said to be about [?] acres, nearly equally divided in two by Little River. We met Mr. William Freeman who resides near, who guided us by a trail into the hammock. We found lemon and lime trees growing wild therein also many unfamiliar trees and shrubs and some that we had learned to recognize, such as the gum-alimbo, mastic rubber or wild fig, mulberry, bay, etc. The hammock was somewhat low in spots, showing a growth of ferns, but seemed to be above the river some feet for the most part. The river was said to be 10 feet deep at this point. The color of the soil is a seal brown and vegetation very rank. This description will apply to most of the hammocks seen except that this was very free from rock and soil quite deep. Adjoining this hammock is a piece of prairie of large extent on which was a vegetable garden and, considering the dryness of the season, it looked well. The tomatoes were fine flavored. The cabbages were also good. This prairie in the neighborhood of the river seemed to be as high as the hammock above the water and free from saw palmetto. It is on the edge of the Everglades. We were shown compe growing in the pine woods among the saw palmetto and grass. The leaves

look similar to a small fern in a cluster of four or five leaves and the height rarely exceeded 12 inches. It bears a pine apple shaped seed pod of a rich red brown velvety appearance of two or three inches diameter, and four or five long.

Miami, Monday, April 11th.

Our boatmen arrived today to take us to Lake Worth as per agreement, but said the wind would serve better after supper, so Mr. Ingraham took advantage of the opportunity to go to the Falls of the Miami River, called six miles, after specimens of the rock, ochre, etc., and brought back some fine ones.

Mr. Baker went out on horseback today to look up a good route for the survey and a starting point in the Glades which will begin tomorrow, Mr. Newman having succeeded in recruiting a portion of the force necessary, all but two of those coming through the Glades, Mr. Baker and Mr. Wilson, and some that were not desired, declining to remain to complete the survey. In fact, but few were in a physical condition to do so, or be of much value for the work.

When the hour for departure came our two boatmen were drunk, so the start was deferred until tomorrow morning.

Miami, Tuesday, April 12th.

We left at daylight and got breakfast on the boat. Wind light from the west. Went out through Bears Cut and ran to New River, some 20 miles and then up the river 5 or 6 miles, stopping for a few minutes at Fort Lauderdale house of Refuge on the way. The river from the Inlet to this house runs parallel to the ocean then makes a sharp bend to the westward. It helps drain the Everglades and in its general characteristics resembles the Miami River. It is bordered by some hammocks and the pine land appears to be of very good quality. The lands along this river are underlaid with rock of the same kind as on the Miami, but apparently not so close to the surface. Several Indians have their homes on this stream and we passed that of John Jumpers' who with his squaw were at the House of Refuge and followed us until we passed their clearing. We afterwards learned they asked Mr. Denis O'Neil and Messrs. Pent and Sanders, several questions as to what we wanted, who we were, etc. Jumper's improvements consisted of two palmetto thatches and about an acre of hammock land cleared, in which we saw growing corn, potatoes and pumpkins.

On our return to the Inlet a shower came up, the weather looked very unsettled and the boatmen decided to remain until the weather became more

settled and not attempt to get to Lake Worth tonight, so the bar being difficult to cross even in the day time, we camped on the beach.

Before reaching New River Inlet today we saw a very large fish estimated by Capt. Pent to weigh about 2 tons. Our skippers called it a "Grampus". It came within 20 feet of the boat and near the surface, but not near enough for the rifle shot which Mr. Ingraham gave it to be effective, although it made very rapid time for deep water after feeling the ball.

Fort Lauderdale House of Refuge, Wednesday, April 13th.²⁴

The weather still being somewhat unsettled and a somewhat heavy wind blowing from the east, our boatman decided it was not prudent to attempt the ocean trip until change of wind. We sailed back to the house of refuge and made a call on the keeper, Mr. Denis O'Neil, who gave us a cordial welcome and invitation to the hospitalities of the place. While there, we met Mr. C. G. Phillips, a young man at present in charge of the property of the Florida Fibre Company of Jacksonville on Middle River, whose invitation to visit the Company's farm we accepted. It is about 2 miles northwest of the station on west bank of Middle River, which near the station forks from New River in the direction named. The Florida Fibre Company owns about 2 miles north, south of the Middle River, have 7 acres set out in Sisal hemp with perhaps an acre in nursery of same plant. Their buildings consist of two small houses of one room each; frame buildings but unfinished inside. The oldest plants have been out since last summer, only. The land is high pine, sloping to a saw grass prairie on the east and bordering the river. The plants nearest this prairie look the most vigorous. The pine land had but little rock visible or near the surface and looked quite poor. The timber was fair, but saw logs scattering. Mr. Phillips told us that fertilization was said to make the plants grow faster and make longer leaves, but that it injured the quality of the fibre; that poor land a slow growth was best in results. Compte grows profusely all over the pineland we crossed.

Returned to the station and wind still being fresh from the east, remained all night. Had supper at the station.

Three steamers went south today, all within two miles of the beach.

Fort Lauderdale House of Refuge, Thursday, April 14th.

The wind having shifted to the southeast and not very heavy we started at 5:30 A.M. for Lake Worth. Got out of the New River Inlet about 7:30 A.M. From 10 o'clock the wind increased until it blew very heavily. The sea also became very large, so much so that it was not considered safe to come to and reef, as we should have done, compelling us to carry all sail

with a great risk of the main boom catching in the water and capsizing the boat. No such event occurred, however, although the boat was kept within $\frac{1}{4}$ of a mile of shore and we arrived off Lake Worth about 2:30 P.M., distance 50 miles. In going over the bar, took several seas and the men had to jump out and push the boat over bar, as we grounded and broached to. After getting into deeper water inside the bar and in the channel, the tide setting out very strong, we came to anchor and were unable to sail until sunset for the Cocoonut Grove Hotel miles south. The wind was ahead. At 7 P.M. a heavy rain squall occurred from the west which forced us to go to the Lake Worth House kept by Mr. H. P. Dye. The house was closed for the season but the proprietor made us welcome and did what he could for us.²⁵

We left on the steamer of the Jacksonville and Lake Worth Transportation Company, Mr. U. D. Hendrickson, General Manager and Captain, at 8:30 A.M. for the steamer stopping at the Lake Worth House dock, for Juno 10 or 12 miles north, where we boarded the Jupiter & Lake Worth narrow gauge railroad for Jupiter. This road is a portion of the J. R. & K. W. system. On arrival at Jupiter we discovered the Str. "St. Sebastian" was late, not having arrived. Had dinner on the floating hotel steamer, "Rockledge", Capt. [Edward E.] Vaill, proprietor.

Messrs. Chase and Moses visited Jupiter lighthouse from the lantern of which a fine view was obtained and the smoke of the Florida Coast Line Canal & Transportation Company's dredge boat was seen in the direction of Juno. They have followed the meanderings of a small stream through the saw grass between Jupiter and Juno instead of going straight, so that the distance by this canal will be very much more increased when a regular line of steamers is put on.

The country as seen from the lighthouse appears for the most part to be spruce pine scrub, saw grass and prairie. On the west side of the narrow gauge road it is in places quite elevated, looking to be 50 feet above sea level. On the east side of the track which is in some places in full view of the ocean and not over $\frac{1}{4}$ of a mile away from it, we saw several gardens in drained saw grass land looking finely. The line of the road follows the valley between the hills mentioned and the sand ridges thrown up by the ocean in years past. The hills were quite white sand and were doubtless formed by the ocean originally. The saw grass gardens on the east of the track were in the depressions between these ridges or dunes. We saw pine apples growing on this white sand and looking very well. The lighthouse is on a government reservation of 9 square miles most of which seems to be of this character of land in sufficient demand that an effort is talked of to

induce the government to put on the market. Two or three cottages occupied by the U. S. Government employees are all that are on the north side of the river. On the south side are two stores, the U. S. Life Saving Station, and several cottages, all well painted.

Several telegrams were sent to Mr. Plant, Mr. Swope, and other friends appraising them of our re-entry into civilization, and replies were received.

A good many pine apples are being set out at Lake Worth on the west side of the lake and at this point, or between here and Juno, in land that a few years ago was considered of little value for anything. They are said to be doing very well. Orange trees look very well on the east side of Lake Worth, where the most valuable improvements are.

Large quantities of fine table fish are said to be caught at Lake Worth and Jupiter, near the inlets, principally. Among them the pompano, blue fish, king fish, jack, red bass, snappers, etc. We had pompano for dinner; it was very good. Green turtles are plentiful in season; also oysters.

The Steamer St. Sebastian arrived at 5:30 P. M. and left for Titusville as soon as her cargo was discharged. The floating hotel closed after dinner today.

The water has been very low south of Indian River narrows, particularly in Hobe Sound (that body of water between Jupiter and Gilbert's Bar), and steamers have been behindhand a good deal since the 23rd of March, we were told by Lake Worth people who complain that it cut their season very short, which had been good up to that date.

It is expected that the canal between Jupiter and Lake Worth will be completed by next season. After that it is said to be the intention of the canal company to open communication into Biscayne Bay from the south end of Lake Worth, there being now inside water passages which can be taken advantage of and leaving but 4 or 5 miles of heavy dredging to do. It is about 40 miles between the last two named points.

No retaining wall is built to hold the banks. The dredge throws a bank on either side of an 80 foot cut made in the river where the deepest channel is. The wash of the steamers has caused a good deal of the mud to settle back into the cut and this accounts for the difficulty experienced by the steamers in getting through on schedule.

Steamer "St. Sebastian", Indian River, April 16th, 1892.

By sunrise we had arrived at St. Lucie Post Office (Old Fort Capron) and from there to Titusville we had a daylight ride very enjoyable. Many improvements were seen, showing that regular transportation is benefitting the

country very much. The people are generally quite prosperous and healthy. The tax collector, Mr. Enoch Hall, who was on the boat, told the writer that only \$290 of 1891 taxes remained unpaid, which is certainly a remarkable record.

The banks of mud and oyster shells in Indian River narrows, thrown up by the dredge were in many places covered by vegetation that had sprung up voluntarily since the canal was opened about 3 years ago. Among this growth was noticed several Rubber trees, so called, of three or four inches in diameter, a foot from the ground and 10 feet high. Mention is made of this fact because it indicates the richness of the river mud and freedom from frost. The growth on these narrow ridges of mud had the appearance of having been artificially placed to improve or relieve the bareness of the naked banks, but Capt. Mercier of the St. Sebastian assured us that the growth was voluntary.

Oranges were still being shipped from the river and good prices being obtained. We made a short stop at Rockledge. The Indian River Hotel closed a few days ago.

Arrived Titusville 7 P.M. and at 8:30 were carried on special train kindly provided by General Manager Cable to Sanford, arriving at 10:15 P.M. This train enabled a dozen or more passengers to connect at Sanford with train No. 14 for the north and with train No. 15 for the south, which was highly appreciated by them, as otherwise they would have been compelled to remain over Sunday in Titusville, a very unpopular stopping place owing to poor hotel accommodations.

Following is a record of the thermometer kept as accurately as circumstances would permit:

<i>Camp</i>	<i>Sunrise</i>	<i>Noon</i>	<i>Sunset</i>
March 15th, No. 1, Fort Myers -----		82	58
March 16th, No. 1, Fort Myers -----	48		72
March 17th, No. 2 -----	58	82	74
March 18th, No. 3 -----	58	76	56
March 19th, No. 4 -----	38	62	52
March 20th, No. 5, Fort Shackelford -----	40	70	62
March 21st, No. 5, Fort Shackelford -----	52	80	66
March 22nd No. 6 -----	60	77	70
March 23rd, No. 7 -----	58	85	75
March 24th, No. 8 -----	65	88	75
March 25th, No. 9 -----	68	88	78
March 26th, No. 10 -----	70	86	76

March 27th, No. 11.....	66	78	62
March 28th, No. 12.....	53	74	64
March 29th, No. 13.....	54	78	62
March 30th, No. 14.....	58	80	62
March 31st, No. 15.....	64	84	68
April 1st, No. 16.....	62	72	72
April 2nd, No. 17.....	62	76	72
April 3rd, No. 18.....	64	78	72
April 4th, No. 19.....	64	82	73
April 5th, No. 20.....	71	78	72
April 6th, Miami.....	70	78	72
April 7th, Miami.....	70	78	74
April 8th, Miami.....	72	80	74
April 9th, Cocoanut Grove.....	70	78	76
April 10th, Miami.....	64	76	72
April 11th, Miami.....	72	77	74
April 12th, Biscayne Bay.....	74	83	76
April 13th, New River.....	72	78	76
April 14th, New River.....	74	80	76
April 15th, Lake Worth.....	68	80	72
April 16th, Str. "St. Sebastian".....	58	76	72

This ends the secretary's record of the Everglade Exploring Expedition. It has been somewhat difficult at times to determine what was important to note or what would be considered valuable. If the record is found to be prolix or sometimes irrelevant, it arises from an anxiety that nothing important shall be omitted.

All of which is respectfully submitted.

(Signed) : WALLACE R. MOSES, *Secretary*.

N O T E S

James Edmundson Ingraham (1850-1926) was born November 18, 1850, at Dartford, in Green Lake County, Wisconsin. He completed his education at Racine, Wis., and for several years lived at St. Louis, Mo. In 1874 he came to Florida to be associated with Henry S. Sanford, first as a clerk and later as general manager. While in Mr. Sanford's employ, he became president of the South Florida Railroad Co., which later became a part of the Plant System. He was president of the railroad, with offices at Sanford, until after his expedition across the Everglades in 1892. In that year he accepted the position of general agent for Henry Morrison Flagler and undertook much of the pioneering work for Mr. Flagler's development operations south of Daytona Beach. In 1897 he became land commissioner and a vice president of the Florida East Coast Railroad; and later served as president of the Model Land Co., the Perrine Grant Land Co., the Chluota Land Co., and the Okeechobee Co., all auxiliary organizations of the Flagler System. Mr. Ingraham died October 25, 1926.

- Cutler, H. G. *History of Florida, Past and Present*. 3 vols. (Chicago: Lewis Publishing Co., 1923), III, 370.
- 2 Abbey, Kathryn T., *Florida, Land of Change* (Chapel Hill: University of North Carolina, 1941), 355; and Cutler, H. G., *History of Florida, Past and Present*, I, 63, 403.
 - 3 J. E. Ingraham subsequently referred to his expedition across the Everglades as follows: "The project of draining the Everglades attracted the attention of Henry B. Plant in the early nineties, but he was by no means sure that the scheme was feasible; so I, acting under his direction, undertook an expedition through the region. Despite its proximity to centers of population, it was then for the first time thoroughly explored by white men. Ours was virtually a voyage of discovery. We paddled our light boats on lakes, and camped on islands, that I have good reason to believe had never before been visited by any human beings but Seminole Indians, and by them rarely . . . Our efforts were not in vain, for we ascertained the important fact that the Everglades, along the whole 160 miles of the eastern side, are rimmed by a rock ledge. We decided that there was nothing whatever to prevent the water of the lakes from flowing into the ocean and leaving the land drained, if vents could be made in this long ledge of rock. The chief question before use pertained to the practicability of cutting through the ledge in various places, and dredging out outlets into the Atlantic, which is not more than 2 or 3 miles away at numerous points. Experiment proved that this work would present no great difficulties. It was merely a matter of a great deal of digging. Henry M. Flagler took up the project . . ." See *Everglades of Florida*, (62d Congress, 1st Session, Senate Document No. 89. Washington: Govt. print. off., 1911), 107.
 - 4 Cutler, H. G., *History of Florida, Past and Present*, I, 403. According to Alonzo Church, "The railroad had been given a land grant that went through the Everglades and they were anxious to explore it to find out if there was anything of value in it. It was a long hard trek but I made it. Well, we came out of the Everglades and pitched camp on a barren spot that is now Miami Beach. We stayed there to get back our health and the weight we had lost during our expedition. A friend of mine who was with me [Sydney O. Chase] said, 'Alonzo, why don't we buy some of this land. It's only about \$1.00 an acre.' 'Not on your life,' I told him, 'I wouldn't be caught dead with any of this property.'"—*Fire-Away*, v. 1, no. 1 (March 1947), 3.
 - 5 Cutler, H. G., *History of Florida, Past and Present*, I, 535; III, 370.
 - 6 Church, Alonzo, "A Dash Through the Everglades." Manuscript.
 - 7 Alonzo Church (1870–), son of Capt. William Lee Church and Laura (Randolph) Church, was born on the Kirkland Plantation, Madison, Fla. His father having died during his infancy, he was raised by the Whitner family of Sanford, with whom he was related. He attended the University of the South, Suwanee, Tenn., but left before graduation to become employed in the office of the construction engineer of the South Florida Railroad Company. One of his first tasks was compassman on Mr. Ingraham's exploring expedition across the Everglades in 1892. About a year later Mr. Church decided to go into the fire insurance business in Louisiana and Mississippi. In 1900 he set up his own agency, the Underwriters Agency of Louisiana and Mississippi; and successively served as State Agent for the Insurance Co. of North America; vice-president of the LaSalle Fire Insurance Co.; and manager of the Eastern Department of the Inter Ocean Re-Insurance Co. Since his retirement in 1940 he has made his home in New Orleans, La.
 - 8 Church, Alonzo, "A Dash Through the Everglades." MSS.
 - 9 Sydney O. Chase (1860–1941), son of Edwin Theodore and Lucia Toppin (Coffin) Chase, was born near Germantown, Pa., August 4, 1860. He attended the local public schools, and on December 4, 1878, journeyed to Sanford, Fla., where he was first employed on Henry S. Sanford's orange grove at Belair. Later, he became bookkeeper for James E. Ingraham, who was General Sanford's agent. In 1883 he was promoted to a position in the railroad land department of the South Florida Railroad Co., by Mr. Ingraham, who was president of the company. With his brother, Joshua C. Chase, he established at Sanford, Fla., in 1884, the firm of Chase & Co., dealers in fertilizers and insurance. When in 1888 the firm was extended to include orange packing, he

resigned his position as treasurer of the Land Department of the South Florida Railroad.

Mr. Chase was married in 1895 to Laura D. Whitner of Sanford, and there were three sons: Randall, Sydney O., Jr., and Frank Whitner Chase. Mr. Chase died on March 31, 1941.

- 10 Cutler, H. G., *History of Florida, Past and Present*, II, 327.
- 11 This manuscript has never been published. Mr. Church kindly furnished the editor a copy for consultation.
- 12 Letter, Alonzo Church to Watt P. Marchman, October 2, 1946.
- 13 Each successive camp site was numbered consecutively. No attempt was made to name the numerous small islands sited on the journey; the principal islands were referred to by the day of the month on which each was encountered.
- 14 Fort Myers in 1892 was a town of "about 1000 inhabitants," observed Mr. Alonzo Church, and "is handsomely situated on ground 8 or 10 feet above the river, is regularly laid out in broad streets . . . During the Seminole war and for some time afterwards [it] was garrisoned by the government. Some of the old concrete houses built for officers' quarters, still remain, and many of the palms planted by the soldiers along the river bank now beautify the place . . ."—Alonzo Church, "A Dash Through the Everglades." MSS.
- 15 Fort Shackelford was the nearest point to the Everglades to which wagons could travel.
- 16 "Old Fort Shackelford," wrote Alonzo Church, "is merely a clump of pine trees on the edge of the prairie bordering the Everglades, where common report says Fort Shackelford was located. Not a vestige or sign of the Fort remains."—Alonzo Church, "A Dash Through the Everglades." MSS.
- 17 In his diary, Mr. Ingraham refers to the Indian squaw as "Lucy."
- 18 The flag was made from a large piece of canvas on which the emblem of the Plant Investment Co. had been marked in black ink.
- 19 "Mercury 40 at 5:30 and slight frost," Mr. Ingraham noted in his diary. "Very cold night, all suffered much from cold." J. E. Ingraham, *Diary*, March 20, 1892.
- 20 "Islands frequent; from 12 to 20 visible at all times;—some over two acres. Islands seem to be formed by assimilation of vegetables detritus, and are extraordinarily rich. No evidence of frost having ever been felt here. (N.B., Frog jumped into Syd's [Chase] plate of rice last night)."—J. E. Ingraham *Diary*, March 25, 1892
- 21 ". . . Arrived at falls of Miami. Beautiful hammock islands plentiful. Pine comes out to meet outer edge of islands. Rock appears at surface, confirming basin-like condition of Everglades. Shot fails. Arrived at Ft. Daitas, Miami, Mrs. Tuttle's at 1 P.M. Flags upl.] salute and dinner. Newman bought supplies and I arranged through Mrs. Tuttle for him to get Omathier, Chiet of the Seminoles, to take part of his provisions up to camp for him, thus securing the aid of the Indians in future if necessary, committing them to our work. . . ."—J. E. Ingraham, *Diary*, April 5, 1892.
- 22 "Tuesday, April 5, 1892. We stayed that night where we were," wrote Mr. Church in "A Dash Through the Everglades," "had an early supper and an early breakfast next morning, and taking the course given us by Mr. Newman before he left, followed it as nearly as the saw grass would permit. At noon we had made good progress but Mr. Newman could nowhere be seen. The grumblers then took the floor and talked as though there was little hope of ever getting home again. It was decided however to push steadily on in the direction we were told to follow, and when our provisions gave out to turn due East and try to get to the coast.

In the afternoon we had to make several pulls through the saw grass and as we were looking for a convenient camping place we saw something that moved on a little island not far off. We stopped and carefully examined it but could not make it out; some were sure it was an Indian watching us, another thought it was some wild animal, but none were positive. Some of us went forward to examine it, and a close inspection revealed the fact that it was the pair of breeches, worn by Mr. Sydney [O. Chase] when he left us, hanging from a tree.

The sight of those pants was worth a gold mine to us, for it assured us that we were on the right track, that the party ahead of us had been delayed in getting to Miami and that we ought not to expect Mr. Newman back until the following day. That night we decided to again reduce our allowance of food and to have no dinner the next day but to save what we had left for supper. Next morning, Wednesday, April 6, when we left camp we could not but feel a little gloomy as we had nothing for dinner, hardly enough for another meal and there was no certainty of Mr. Newman's return that day. We had gone about a mile when we saw smoke ahead of us and soon after two canoes, and in one was Mr. Newman.

At the sight of the canoes we regained our former vigor and in a few moments had made the distance that separated us and were shaking hands and cheering our rescuers. Mr. Newman had plenty of provisions with him and as soon as we could find a convenient place we stopped and cooked a good meal of bacon, beans, rice, tomatoes and coffee, to which we did ample justice. We feasted royally, while Mr. Newman told us that he had not been able to reach Miami until one o'clock the day after he left us and so had not been able to come back as soon as he expected. He said we could get to Miami next day, and that made us happy.

That night we had another big meal and went to bed feeling happy, but not for long; our hearty meals, after such long abstinence, made nearly every one sick, and none of us slept that night.

One of the Indians (Omathla) who had come out with Mr. Newman, went back to Miami with us, while Billy Harney went on to his camp in the Everglades. Next morning, April 7th, I went down the river with Omathla, in his canoe, and sent back boats enough to bring the rest of the party down. . . ."

23 "Called on Mr. Kirk Munroe. Wife ill with malaria. He gave me canoe chart of Biscayne Bay. Is sorry survey is being made. Is author story of 'In the Everglades', March number of Harpers Young People. Told him we were merely running line for reconnaissance. . . . Am not much impressed with Cocoanut Grove as more than a winter yacht club resort. Not much business except for small steamers from Key West. About forty houses in Cocoanut Grove, and three hundred people, but growing. Want steamer mail from Key West. Five schooners ply between Key West and Lemon City, biggest "Emily B", about 30 tons. Run weekly mail,—very irregular, and other boats small. It seems good field for small light draft steamers from Key West." J. E. Ingraham, Diary, April 8, 1892.

24 "April 13th. Wind from E. blowing too hard to risk making Lake Worth Inlet in night time, so went up to Refuge Station to wait weather change. Very provoking.

"Saw mail carrier returning along beach walking to Lemon City as we came up yesterday.

"Visited Mr. C. G. Phillips at Sisal Hemp plantation 2½ miles up Middle River from Refuge. Florida Hemp Co., D. U. Fletcher and others of Jacksonville. Eight acres planted one year, plants from Indian Key;—50,000 plants in nursery. They figure on increasing their plantation to 1200 acres, and from 400 plants per acre to 600 per acre. Hemp at 6 to 7 cents per pound will clear \$75 per acre. Phillips is a cousin of A. J. Phillips of Sanford. . . .

Saw H. J. Burkhart at Refuge No. 9, of Lauderdale, formerly of Philadelphia. Says country road Miami to Lake Worth won't be open till next fall. Bridges are now being built. He says rock don't injure trees growing, that they grow through it, etc. . . ." J. E. Ingraham, Diary, April 13, 1892.

25 "Lake Worth impresses me very favorably by reason of handsome improvements," wrote Mr. Ingraham in his diary, "but does not compare with Biscayne Bay, in my opinion, for fruit or residence; don't like the dirty lake water." J. E. Ingraham, Diary, April 14, 1892.