

CHAPTER II

THE PHYSICAL ENVIRONMENT

SECTION 1. NATURAL REGIONS

Seminoles in Florida range from the headwaters of the St. Johns to Cape Sable, 180 miles from north to south.

THE EVERGLADES

The core of this region is the Everglades, a marsh about the size of Connecticut, 40 miles wide by 140 long, extending in majestic sweep from the head of Lake Okeechobee to the Bay of Florida and the Ten Thousand Islands. The boundaries of this region are not everywhere definite, but as mapped by the Florida Geological Survey it embraces approximately 3,000,000 acres.

The northern end of this region is a shallow saucer 35 miles across occupied by the second largest lake in the United States, Okeechobee. Five canals now connect Okeechobee with the Atlantic on the east; the Caloosahatchee River connects it with the Gulf.

In spite of this tremendous diversion of water which formerly spilled over the brim of the saucer in the wet season, there is an outpouring at the southern end of the Everglades—through streams emptying into the Bay of Florida as well as through the Shark, the Harney, Rodgers, and Lostmans Rivers above Cape Sable—altogether too large to be accounted for by precipitation. The whole region is underlaid by limestone, and much of the water of the Everglades must be attributed to subterranean sources.

There is no configuration to the surface of the Everglades; it is as flat as the surface of the ocean on a calm day. An ascent of 18 feet from sea level will bring one to Okeechobee.

In the older, northern, part of this great plain, the Pliocene shell marl and limestone are overlaid by six or eight feet of peaty muck. This depth of muck is the basis for local settlers distinguishing the "Upper Glades" from the "Lower Glades," for in the southern portion a layer of Pleistocene limestone crops out at the surface or is covered by a very shallow deposition of muck.

The most characteristic vegetation of the Everglades is saw grass, a sedge with leaves 6 or 7 feet long, edged with teeth capable of tearing a man and his clothing to tatters. In the Upper Glades, say, for half the distance between Okeechobee and the Bay of Florida, this plant occupies such extensive areas that the Seminoles rarely attempt to cross. The Lower Glades are dotted with hammocks capable of cultivation in the dry season and affording sites for a few permanent camps. And the margins of the Everglades are fringed with plant associations as various as pinelands, prairies, and hammocks where cypress, maple, ash, and elm can (or could) be found.

The incredible fertility of the deep muck led to schemes for its utilization. It is too early to say clearly what the outcome is to be. Sugar is grown around the south shore of Lake Okeechobee from Canal Point on the east to Moore Haven on the west, and quantities of garden truck. Garden truck and some citrus cultivation has penetrated the eastern margin of the Everglades.

Roland M. Harper, of the Florida Geological Survey, says:

Possibly 2 per cent of the Everglades area, and other saw-grass marshes, has been cultivated in recent years. But in wet seasons it is difficult to get rid of the water and in dry seasons the drained peat sometimes catches on fire and the soil then goes up in smoke.

Dr. John K. Small, of the New York Botanical Garden, who has studied and written about south Florida constantly for the last 26 years, looks upon the drainage advocates as a herd of wild asses in the wilderness. In the *Scientific Monthly* of January, 1929, he writes:

Various minds have conceived various schemes for the development of the Everglades, or "development" as interpreted by some. Among these ideas "drainage" and "farming" have been prominent excuses for tampering with the Everglades, ravishing directly the "glades" and indirectly the whole of the southern part of the Florida Peninsula.

Since the beginning of this century five water highways, preliminary to the dredging of drainage canals, have been added to the natural outlets for the enormous amount of water of this spring. The sudden upsetting of nature's routine of ages did not better matters, to say the least. Droughts and "freezes" are said to be now more frequent than formerly. Large areas of land between the Everglades and the ocean are said on good authority to have been rendered worthless for farming by seriously lowering the water table and eliminating the capillary water supply necessary for the existence of vegetation, particularly cultivated crops. Thousands of acres of humus, deprived of the moisture naturally covering the rocky or sandy foundation of the Everglades, have completely disappeared in smoke, gases, and scant ashes, thus turning the Everglades back to a desert just as it was when it was first elevated from the sea.

The Everglades were made for plants and animals to inhabit and delight in; not for man to occupy. This fact should have been evident to a mere tyro.

Aside from any indirect devastation caused by drainage, fire has destroyed the humus on many thousand acres. When once started in the dry humus, fire eats in and down, and burns until it reaches water or sand. Fires aerial and subterranean have eaten away many thousands of acres of pure humus in the Everglades during the past decade and the fires are still burning. The Everglades can safely be termed the "Land of Ten Thousand Smokes." Would it not have been a better plan to have closed this land to "development" and had it appear on the maps of Florida as "Lake Okeechobee-Everglades National Park"?

THE TEN THOUSAND ISLANDS

Where the Everglades emerge from the sea down in Monroe County a labyrinth of channels breaks the land into the Ten Thousand Islands. The delta of the Everglades, as it were; mangrove bordered areas which are neither land nor water, in the process of becoming terra firma, now merely a sportman's paradise.

Zane Grey once felt the quality of these appalling solitudes.

I had come to the Ten Thousand Islands and the Everglades to fish and to photograph. And I was finding myself slowly awakening to a profound realization of the tremendousness of this last and wildest region of America * * * The Everglade region was great through its aloofness. It could not be possessed. It would continue to provide sanctuary to the fugitive from justice, the outlaw, the egret hunter. Assuredly the Seminole had been absorbed by it, as proven by his lonely, secretive, self-sufficient existence.

THE BIG CYPRESS SWAMP

West of the Everglades in Collier County lies the Big Cypress Swamp. No geographer, so far as I know, has attempted to indicate the precise limits of this region. It is the very essence of dreariness. Along the Tamiami Trail and beside the road which runs north from the town of Everglades is a fringe of truck gardens. Some cattle are grazed in its northern portion. Otherwise the Big Cypress is waste and water. A wilderness where cypress heads, clumps of slash pine, and occasional high hammocks vary the monotony of open prairies. The saw palmetto is abundant; soil is not. Limestone outcrops over much of the region.

Most of the Big Cypress is so flooded in the wet season as to be impenetrable except to a man on foot or by ox team. The Indians shove their canoes along the eastern margin when the water is high. In the driest part of the dry season the Cypress can be traversed in a Ford.

That is, if one knows his crossings. For Okaloacoochee Slough traverses the Cypress from north to south, and Okaloacoochee is treacherous always. A bog 60 miles long. If the Big Cypress is desolation, Okaloacoochee is the depth of despair. Between Okaloacoochee and the Everglades the bulk of the Seminoles have their homes.

FLATWOODS

The flatwoods consist of open forests of long-leaf or slash pine, with a rather dense undergrowth in which saw palmetto predominates. The soil is usually a fine grayish sand. Not more than 5 per cent of the flatwoods have been cultivated.

PRAIRIES

North and northwest of the Everglades are comparatively dry prairies. The soil appears to be the same gray sand as in the flatwoods, the only readily apparent difference being the comparative absence of trees. Shrubs and herbs make up the bulk of the vegetation, with an occasional cabbage palmetto or slash pine. The prairies bordering the Kissimmee River pasture large numbers of cattle.

It was to a cracker running cattle on the Kissimmee Prairie that a Chicago packing house recently wired for a carload of 3-year-olds averaging 900. The reply went back, "Don't raise any 3-year-olds averaging 900, but can deliver a thousand head of 9-year-olds averaging 300."

Not 1 per cent of prairie acreage is cultivated.

INDIAN PRAIRIE

Indian Prairie, to the south of the Kissimmee River prairies, is wetter. Islands of pine and high hammock vegetation are more frequent than in the northern prairies, but the outstanding feature is extensive areas of almost pure cabbage palmetto. Some cattle are grazed on Indian prairie; it is not cultivated by the white man except for a bit around Brighton.

SECTION 2. CLIMATE

TEMPERATURE

No part of the Seminole's habitat is free from occasional frosts. The lowest temperatures on record are Arcadia 21, Fort Myers 24, Marco 30, Flamingo 29, Miami 27, Fort Pierce 24, and Ritta (on Lake Okeechobee) 29. Absolute maxima rarely reach 100 anywhere in south Florida.

RAINFALL

The rainfall at Arcadia, Fort Myers, and Fort Pierce amounts to a trifle over 50 inches a year; Miami gets 65. The four months from June to September will account for half that amount; not less than 70 per cent of the year's rain, considering the region as a whole, falls during the six months from May to October. It is a seasonal rain. There is a distinct wet season and dry season. This seasonal character of the precipitation accounts for the fact that the Everglades, the Big Cypress, and the Cow Creek country northeast of Okeechobee are all but impassable morasses for five months of the year.

RELATIVE HUMIDITY

The relative humidity is about 80 per cent over most of south Florida, and does not vary much with the seasons, heavier summer precipitation tending to balance the heat of the sun.

WIND

The habitat of the Seminole lies squarely in the track of the great West Indian hurricanes. Every few years they crack him somewhere. All he can be reasonably sure of is that they will strike during August, September, or October; and that after the visitation, many of his chattels will have departed along with the roofs of his shacks.

Although he is far from the main tornado belt of the United States, a tornado did strike Hialeah (just outside Miami) on April 5, 1925, and small ones struck farther up the east coast in the spring of 1926. So there is some chance of wind in the spring as well as in the fall.

SECTION 3. FAUNA

A scientist is concerned with everything; an Indian is concerned with anything he can make use of. I shall discuss the Floridian fauna only from the Indian's viewpoint: Things he can eat, things he can wear, things he can sell, and things that menace him or his property.

MAMMALS

Of the mammals which furnish the Seminole pelts which can be converted into cash, the raccoon is the most important. One otter is worth many coon skins, but otter are getting scarce. Mink in the extreme south are fairly common but do not figure in the exchequer. Buckskin brings him in some money; deer, however, are worth more

for their meat than for their hides. Skunks he does not bother with. The red and gray fox, wolf, wildcat, bobcat, and panther he kills too infrequently to count as assets. Black bear are fairly common in the Big Cypress and there are some north of Okeechobee, but they are not worth much.

Venison is the Seminole's chief article of meat diet derived from the wilds. Deer are still fairly plentiful in the Everglades, the Big Cypress, and north of Okeechobee. If he were approaching the limit of his food supply, the Seminole easily could add great quantities of rabbits which to-day he does not consider worth expending ammunition upon.

Opossum, moles, shrews, bats, weasels, squirrels, mice, and rats exist but do not enter into the Indian's domestic economy.

BIRDS

The avifauna is the glory and the grace of these dismal swamps where dwell the Seminoles. Herons, bitterns, coots, ducks, the cormorant, the Everglade kite brighten the monotony of these dreary wastes, gay things like autumn leaves sailing down the wind. Gone, however, are the brightest of the lot, the flamingo, the scarlet ibis, the roseate spoonbill—too bright to be tolerated by the master of the signboards, the motor car, and moonshine.

So far as sustaining life goes, the Seminole could supply himself abundantly with most delicate meat if the deer were exterminated; wild turkeys, curlew, the whooping cranes, quail, duck, and other luxurious morsels would still suffice.

The egret, once a considerable source of Seminole revenue, no longer can legally be killed for its plumage; the number is increasing, and this bird is no longer in danger of extinction.

REPTILES

The reptile fauna of south Florida includes the crocodile, alligator, 9 lizards, 30 snakes, and 14 turtles. Alligators furnish the Seminole with the one source of cash income which can legally be hunted the year round; they are, however, no longer abundant. Large turtles furnish a delicate item of diet. The water moccasin and rattlesnake occasionally, but not often, ring down the final curtain upon his nomadic career.

FISHES

One fine thing which has resulted from the drainage canals in south Florida is the concentration of the finny tribes in waters where they can readily be caught. The Tamiami is always lined with fishermen. Fresh-water species include large and small-mouth black bass, pike, perch, jack, bream, shell cracker, redbreast, stump-knocker. Harper, of the Geological Survey, says a million dollars' worth of catfish are shipped annually from Okeechobee alone. In the commercial side of fishing, however, the Seminole takes no part; nor are fish much of an item in his diet for the reason that his camps are far from the canals and lakes for the most part. He is permitted plenty of water—but not water that anybody else wants.

INSECTS

When the tourist lets his brain dwell upon the dangers that lurk in the melancholy reaches through which he speeds on the Tamiami Trail at 60 miles an hour, he is apt to fix upon the rattlesnake as the black beast of the picture. The rattlesnake is a house pet compared with sand flies, horseflies, or mosquitoes. Let me turn over the pen for two paragraphs to Zane Grey:

On the afternoon of April 12 we anchored off the mouth of Chatam River * * * Before dusk had really shadowed the sea, mosquitoes arrived in force from the mangroves. They arrived 10,000,000 strong. It was impossible to keep them out of the saloon, and we were soon driven to our staterooms. * * * They darkened the outside of the window screens and kept up a loud whine. * * * Ordinarily mosquitoes never interfered with my activity, if they did sometimes hamper my enjoyment. But in the Everglades mosquitoes must be reckoned with. At times they were terrible. On a windless night like this, if a man were caught out unprotected, they would kill him.

All the way down (Lostmans River) the hot breeze blew on my face, with its tidings of inscrutable things. And as I pondered I watched the huge horseflies that swarmed like bumblebees round our speeding boat. They flew like a humming bird. They had the speed of a bullet, the irregular flight of a bat. They were of many sizes and colors, and some were truly wonderful. I saw one fully 2 inches long. It alighted on my knee. It had a purple head, amber wings, and a body that beggared description. It was veritably the king of all flies, beautiful, yet somehow hideous. I shuddered as I saw it feeling for a place to bite through my clothes. Finally I hit it with my hat—knocked it down hard in the boat; yet it buzzed up and streaked away, high in the air. The Everglades bred that fly; and there seemed something significant in the fact.

SECTION 4. THE CHANGES OF 50 YEARS

RAILROADS

When Clay MacCauley made his Seminole survey in 1880, the southern end of railroad construction was Orlando. Since then the Florida East Coast has pushed rails to Key West, and down along the eastern shore of Lake Okeechobee. The Seaboard Air Line has crossed his habitat with a line through Seabring, Okeechobee City, Palm Beach, and thence down the east coast; and with another line down the west coast that runs through Arcadia and Fort Myers to Naples. The Atlantic Coast Line has driven one line down the west coast to Marco, and another south through the Big Cypress Swamp to Everglades, with a branch which sweeps around the southwest shore of Lake Okeechobee and taps the sugar country.

ROADS

A hard-surface road now cuts the Indian country from Fort Pierce through Okeechobee City to Arcadia and the west coast; the Tamiami Trail cuts square across the southern end of the Everglades; and a third transverse hard-surface road, already completed from the east coast to Clewiston, will within a few years afford a swift crossing from Palm Beach to Fort Myers. Hard-surface roads run north and south along both coasts. A hard-surface road runs north from Okeechobee 20 miles to Fort Drum. The Connors Highway connects Okeechobee City with Palm Beach. A hard-surface road runs out from Stuart to Indian Town. And it seems only a question of time until the hard-surface road along the Miami Canal, already

built to the Dade County line, will be continued north to Lake Okeechobee through the heart of the Everglades, becoming immediately a main north and south thoroughfare.

A good gravel road now runs from Everglades through Immokalee to La Belle; and a very wretched road continues north from Fort Drum to connect with the Tampa-Melbourne hard-surface road. Numerous trails which are all but impassable in the wet season, but which afford ready entrance to the Indian country in the hunting season, cut the Seminole's habitat in all directions.

CITIES

Within this half century, too, have sprung up on the maritime fringe of the Seminole's habitat the most popular winter resorts in eastern United States; Fort Myers, Miami, Fort Lauderdale, Palm Beach, and a score of lesser names.

Miami had the largest numerical increase of any city in Florida during the period from 1920 to 1930, with 81,000 additional citizens on her roster for the last census. Miami now has 110,637 residents.

The population of the entire State of Florida is now 1,468,211, a gain of 51.6 per cent in 10 years.

AGRICULTURAL AND ANIMAL HUSBANDRY

Northwest of the Kissimmee Prairies has developed in the last half century what is the very heart and core of the Florida citrus industry. Sugar and truck gardens have ringed nearly three-fourths of Lake Okeechobee. The best of the land between the Atlantic Ocean and the Everglades has been occupied by truck farms and citrus orchards. All the good grazing lands have been stocked with the white man's cattle.

WHAT REMAINS TO THE SEMINOLE?

Having set down these facts, one unacquainted with the region might imagine that nothing remains for a primitive hunter. Yet the final fact—most important of all to him—is that there remains in the year 1930 in South Florida an area as large as the State of Connecticut, not less than 5,000 square miles, where the Seminole's only competitors are white trappers living the same mode of life as himself. More than half of this wilderness is so forbidding, so difficult, that the Seminole is the only man in Florida who can wrest a living from it. To his camps in the Big Cypress, the Everglades, Indian Prairie, and along Cow Creek we shall now turn.