

SOUTH FLORIDA WATER  
MANAGEMENT DISTRICT

A HISTORY OF THE EVERGLADES  
OF FLORIDA

by

Junius Elmore Dovel

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A HISTORY OF THE EVERGLADES  
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by

Junius Elmore Dovel

A thesis submitted to the Faculty of the  
University of North Carolina in partial  
fulfillment of the requirements for the  
degree of Doctor of Philosophy in the  
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### Preface

One of the major drainage problems of the United States of America concerns the Everglades watershed of the peninsula of Florida. This watershed extends one hundred miles southward from Lake Okeechobee in a shallow valley, thirty-five to fifty miles wide, to the Gulf of Mexico. The area of the Everglades, about four thousand square miles of land and water, is approximately the same size as the state of Connecticut. Within the last century a considerable part of the Everglades has been drained of surplus waters and brought into agricultural and commercial production.

The drainage and reclamation of the Florida Everglades has proven to be an enormous undertaking fraught with many difficulties. This transition from a primeval morass has consumed many years of tedious effort. The attempt to tell the history of the Everglades, of which reclamation is the central theme, is an ambitious one. The story of the background and handling of these problems of drainage and reclamation, a number of which remain unsolved, is narrated in this volume.

This study was begun in 1939 at the University of North Carolina. The author is indebted to Professor Fletcher M. Green of that institution, under whose direction the study was made, for his excellent advice and steady encouragement as the work progressed. The author is also indebted to the

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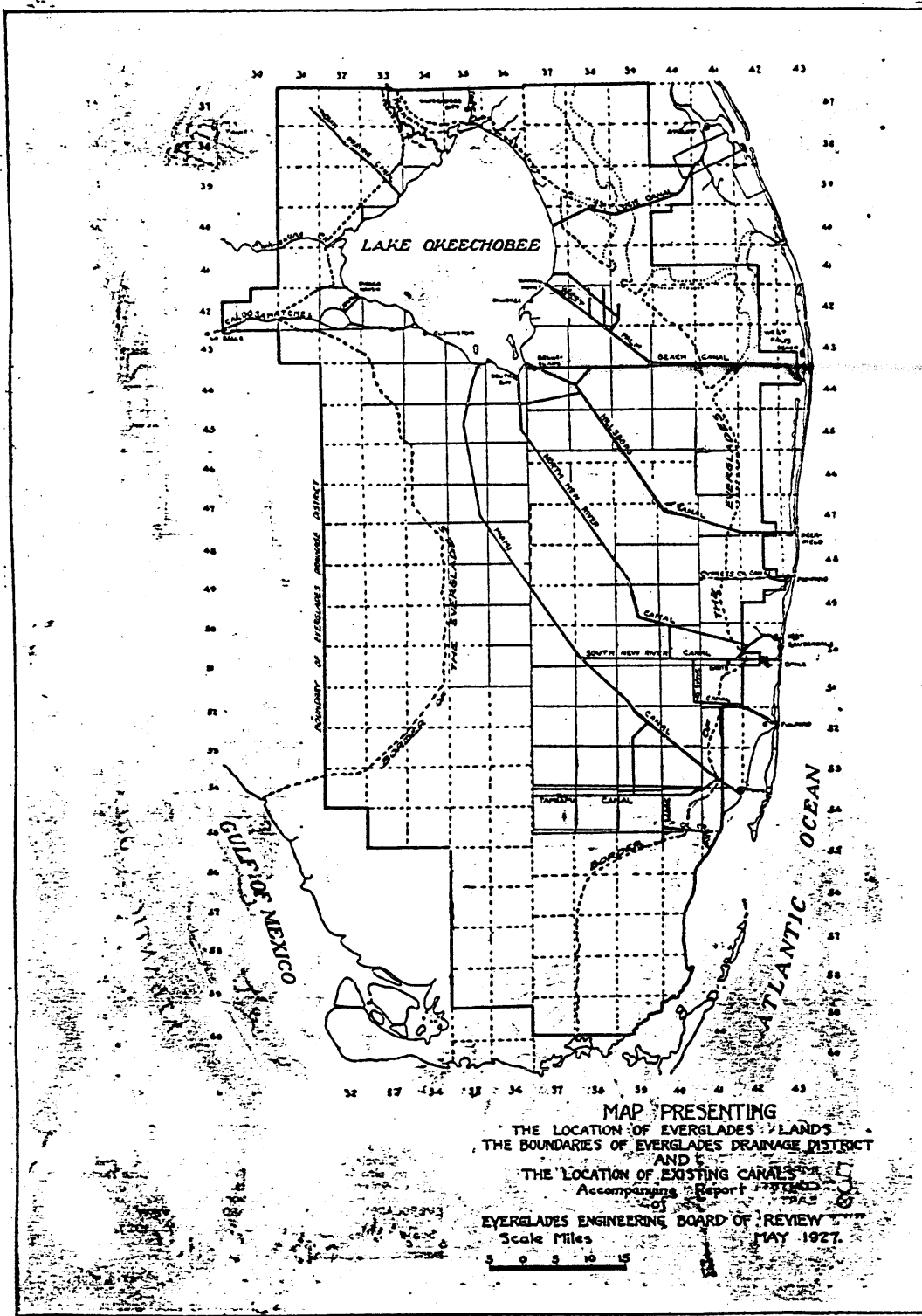
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The author gratefully acknowledges the help and patience of his wife, Lois Adrienne Dovell, without which this study would not have been possible.

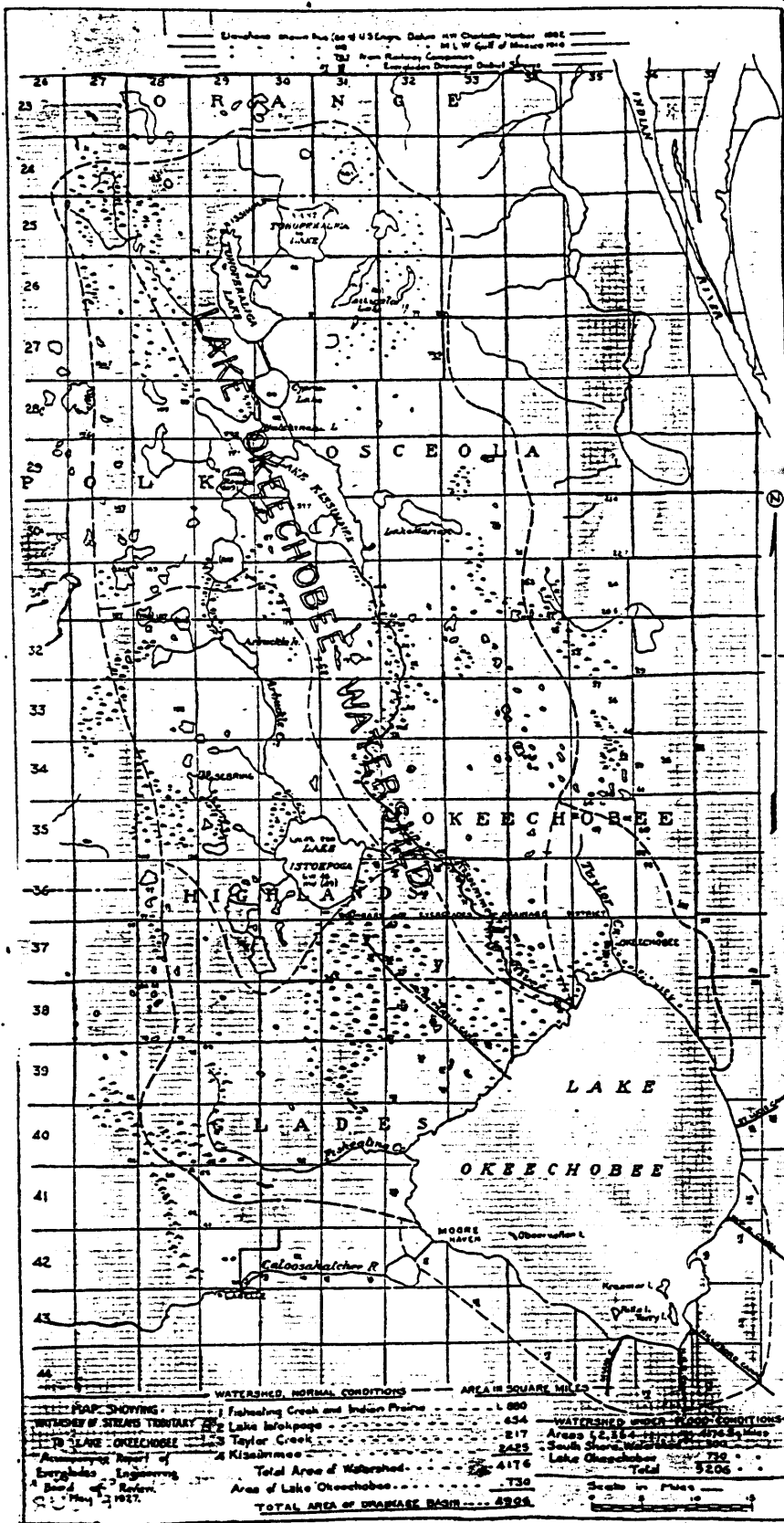
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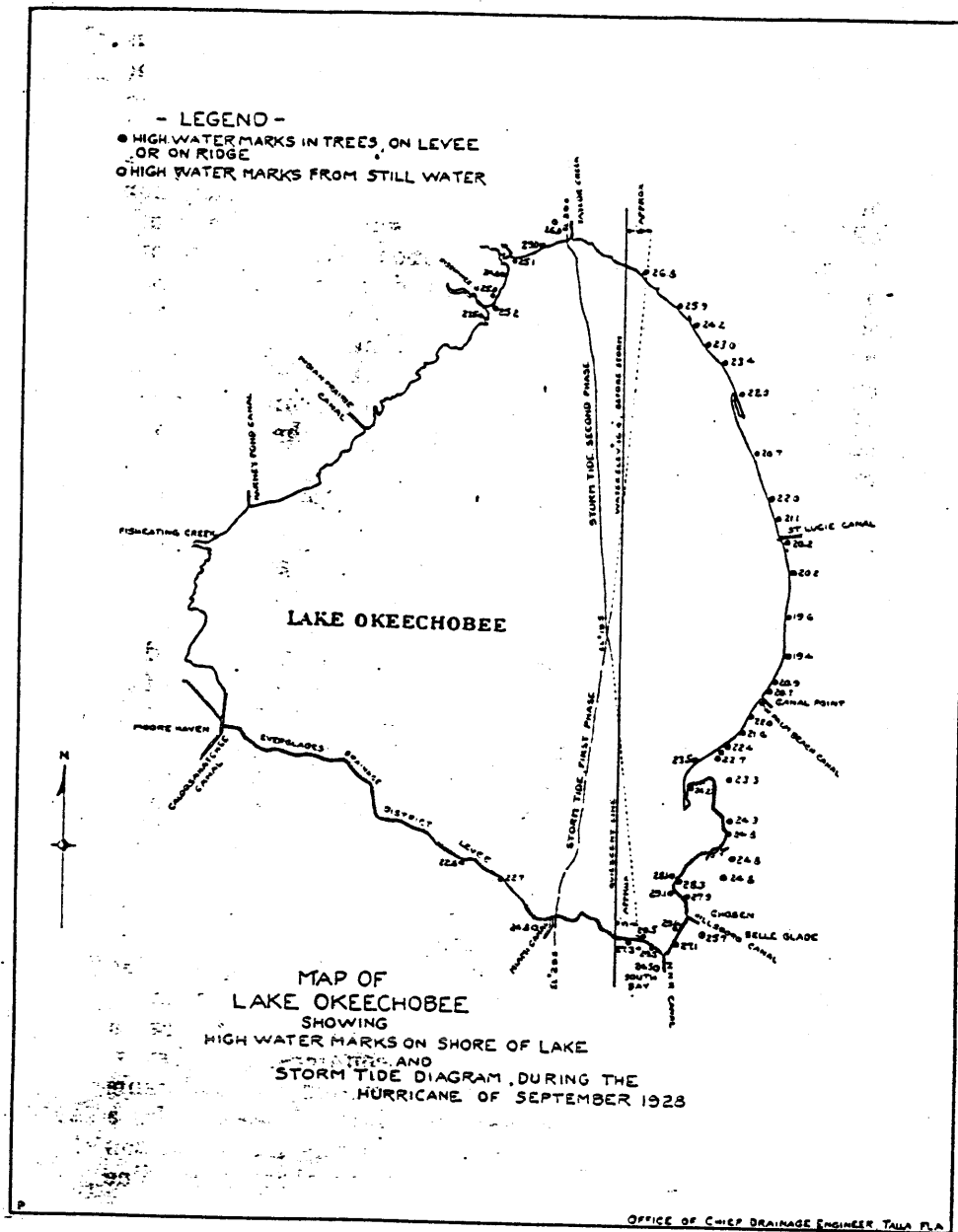


Location of the Everglades, from Anson Marston, S. H. McCrory, and George B. Hills, Report of the Everglades Engineering Board of Review to Board of Commissioners of Everglades Drainage District, figure number 1.



Watershed of Lake Okeechobee, from Anson Marston, S. H. McCrory, and George B. Hills, Report of the Everglades Engineering Board of Review to Board of Commissioners of Everglades Drainage District, figure number 5.





High Water Marks on the Shore of Lake Okeechobee, September, 1928, Hurricane, from Frederick C. Eliot, Biennial Report, 1927-1928, to the Board of Commissioners of Everglades Drainage District, 28.

## CHAPTER I

### PHYSICAL DESCRIPTION OF THE EVERGLADES

#### 1. Geological Background

The Everglades of Florida occupy an irregularly marked shallow slough thirty-five to fifty miles wide and a hundred miles in length. They comprise an area of approximately four thousand square miles, all south of the twenty-seventh parallel of latitude with the exception of a small strip bordering the shores of Lake Okeechobee.<sup>1</sup> The soil of the Everglades is of organic origin.

Bounded on the eastern side by a coastal fringe of sand dunes and on the western side by the Ocalaocoochee Slough and the Big Cypress Swamp, the Everglades extend to the southern and southwestern coast of the state, where the salt-water marshes and the mangrove swamps form the southern border.

The Everglades constitute the third or downstream unit of the watershed of the interior of the Florida peninsula below the twenty-eighth parallel. The first or tributary section of this drainage area, the Kissimmee-Everglades water-

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<sup>1</sup> Samuel Sanford, "The Topography and Geology of Southern Florida," Florida State Geological Survey, Second Annual Report (1909), 189; C. Wythe Cook and Stuart Mosson, "The Geology of Florida," Florida State Geological Survey, Twentieth Annual Report (1928), 43; E. H. Sellards, "Geologic Sections Across the Everglades," Florida State Geological Survey, Twelfth Annual Report (1919), 67-68; J. C. Stephens and C. C. Schrontz, "The Principal Characteristics of the Kissimmee-Everglades Watershed," The Soil Science Society of Florida, Proceedings, IV-A (1942), 14, 24.

shed, comprises some five thousand square miles.<sup>2</sup> The drainage elements of the first area are the Kissimmee River, which drains about two-thirds of the area, and numerous smaller streams such as Fisheating Creek and Taylor's Creek. The second or middle unit of this watershed is Lake Okeechobee, a shallow body of fresh water of seven hundred and twenty square miles whose surface elevation is regulated between fourteen and eighteen feet. The composite area of the three units approaches ten thousand square miles. Under natural conditions, prior to the advent of artificial drainage, the outflow of the waters of the first two units passed onto the third unit.<sup>3</sup>

Taken as a whole the topography of the [southern] Florida mainland has all the aspects of infancy. Drainage is defective, sloughs, shallow ponds and lakes abound. Most of the interior is a swamp, there are no well-defined river systems nor stream valleys. . . . 4

These infantile aspects are due, insofar as the Everglades are concerned, to the gradient of one-tenth of a foot per mile over the hundred miles from the southern shore of Lake Okeechobee to the Gulf of Mexico. This vast basin, forty miles wide, has been the scene of the growth and slow decay of vegetation in an area of low elevation enjoying a warm climate and heavy rainfall. Inside the basin is a wide and

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2 J. C. Stephens and C. C. Schrontz, "The Principal Characteristics of the Kissimmee-Everglades Watershed," loc. cit., 14.

3 C. Wythe Cook and Stuart Mossom, "The Geology of Florida," loc. cit., 43-44.

4 Samuel Sanford, "The Topography and Geology of Southern Florida," loc. cit., 179.

flat plain, flanked by natural drainage ways which have imperceptibly divided the area into a saw-grass plain bordered by a series of ridges and sloughs. In general, surface water flow and vegetative accumulation are in opposition,

. . . but the gradient would have to be greatly increased before running water would begin to cut down the gradually thickening mass of plant remains that makes up the organic soils of the Everglades. 5

The vegetative accumulation, or soil, varies from an average thickness of eight feet at Okeechobee's shores to the thinnest of deposits at the sides of the Everglades.

The line of demarcation between the glades and adjoining areas is extremely irregular: along this line extends a stretch of grass land that may be under two feet of water at the end of the rainy season, but in most years is dry enough for the cultivation of a winter vegetable crop. The actual boundary between the Everglades and the adjoining prairie is where the sedges of the glades are met by true grasses, cypress, salt marsh, or mangroves. 6

Scientific interest in the geology of the Everglades began after the middle of the nineteenth century. The first state geologist of Florida, E. H. Sellards, brought together the geological investigations of the peninsula prior to 1908 in a section of his first report. In 1925 James Pierce

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5 Garald G. Parker, "Notes on the Geology and Ground Water of the Everglades in Southern Florida," *The Soil Science Society of Florida, Proceedings*, IV-A (1942), 52.

6 Samuel Sanford, "Topography and Geology of Southern Florida," *loc. cit.*, 181.

visited south Florida and observed a great savanna which he estimated to be a hundred miles in circumference, but, "The existence of a large permanent lake located by maps in the southern part of the peninsula is doubted."<sup>7</sup> The publication of Buckingham Smith's documentary report on the Everglades in 1848 established the existence and general location of the area.

Smith believed the geology of the southern portion of the state to be similar to that of the sea-coasts of Georgia and South Carolina. "Oolitic lime-rock, filled with the shells and corals of species that still exist, forms the great geological feature of the country."<sup>8</sup> Smith found the rock to be porous and susceptible of easy excavation; exposure to air hardened the rock and made it useful for building purposes.

The same rock forms the bottoms of the openings through the rim of the Ever Glades to an unknown depth. It composes the floor of Biscayne [sic] Bay, and of the other bays and sounds, and of the rivers along the coasts on both sides of the peninsula, and also the basin of the Ever Glades. 9

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7 E. H. Sellards, "Geological Investigations in Florida Previous to the Organization of the Present Geological Survey," First Annual Report of the Florida State Geological Survey (1908), 56.

8 Thomas Buckingham Smith, "Report of Buckingham Smith, Esquire, on His Reconnaissance of the Everglades, 1848," Senate Documents, The Reports of the Committees, Number 242, 30 Congress, 1 Session, 15. Hereinafter cited as "Buckingham Smith Report."

9 Ibid.

In 1851 Michael Toumey examined the limestone at the falls of the Miami River leading into the Everglades. These rocks, he found, were of the same age as those he had seen at Key West, and were identical with living shells in the surrounding waters. Toumey regarded the glades as resting on a basin of what he termed Miami limestone, clearly distinguished from the Tertiary limestone at Tampa Bay. The contour of the ridge surrounding the Everglades, together with its structure and the embedded remains, led Toumey to the conclusion that the elevation of the Florida Keys by twenty feet would produce a similar ridge shutting out the sea between the Florida reef and the mainland. Such an elevation, Toumey believed, would produce another basin similar to that of the Everglades, differing only in greater comparative length.<sup>10</sup>

Because of their accessibility the fossil-bearing beds of the Gulf Coast and the Calcosahatchee River aroused the interest of geologists before 1900. The geologic formation of the southern part of the peninsula, however, remained obscure for another generation on account of the difficulties of making observations.

. . . The combination of low, flat terrain with few and very shallow river cuts, the difficulty of transportation, the lack of cuttings from deep or

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10 E. H. Sellards, "Geological Investigations in Florida Previous to the Organization of the Present Geological Survey," loc. cit., 58-59.

shallow wells, and the mantle of muck, marl, sand, water, and vegetation that covers the underlying rocks . . . 11

caused the investigations of early workers to be restricted to the seacoasts and river banks.

Since the beginning of drainage operations in 1882, the cutting of canals and channels in South Florida has added an abundance of geological information. Other sources of data were found in the excavations made for roads, ditches, and dikes, as well as the samplings of material through which numbers of drills have passed in the sinking of water and oil wells. Had the mass of data now handy for modern geologists been available to Louis Agassiz in 1851, or to Joseph LeConte in 1878, they would never have subscribed to a coralline<sup>12</sup> theory of growth for the southern part of the state.

The name "Floridian Plateau" has been applied to the great projection southeastward of the continent of North America. This projection separates the deep water of the Gulf of Mexico from the deep water of the Atlantic Ocean.<sup>13</sup> This Floridian Plateau has been in existence since very ancient times, and appears to have lain east of the epicontinental seas during the Paleozoic era. The plateau probably

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11 Gerald G. Parker, "Notes on the Geology and Ground Water of the Everglades in Southern Florida," loc. cit., 53.

12 Ibid.

13 C. W. Cook and Stuart Mossom, "The Geology of Florida," loc. cit., 39.

remained dry land during the Triassic, Jurassic, and Lower Cretaceous epochs, but was covered by the seas during the Upper Cretaceous times. In the Cenozoic era the plateau underwent many shiftings, but the water was never very deep, nor the land high above the sea level.<sup>14</sup> At the western edge of the Everglades, fifty miles from Miami, sedimentary rock exists to a depth of at least ten thousand feet. An examination of the cuttings of an exploratory well for oil showed that the drilling ended in Lower Cretaceous strata, ". . . comparable to the Fredericksburg group of Texas and southern Oklahoma, and suggests that this area is underlain by still older sedimentary rocks."<sup>15</sup>

In a resume of the structure and stratigraphy of Florida, Stuart Mosson outlined the sedimentary formations of the state. He found these formations to describe an anticline in a southeasterly direction from the Ocala limestone dome of the Eocene Age. From surface level at Ocala, the Eocene limestone dips to a depth of twelve hundred feet as the Everglades give way to the Gulf. Atop the Ocala formation are the younger groups of Oligocene and Miocene ages which become thicker as they approach the coast lines. The Pliocene and Pleistocene formations do not extend more than one hundred

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<sup>14</sup> C. W. Cook and Stuart Mosson, "The Geology of Florida," loc. cit., 39.

<sup>15</sup> Gerald G. Parker, "Notes on the Geology and Ground Water of the Everglades in Southern Florida," loc. cit., 54.



and sixty feet under the surface.

The Eocene, Oligocene, and Miocene formations extend to a depth of twelve hundred feet in the Miami area, dipping to the sea in every direction. On account of this anticline and the permeability of the rocks, they are excellent artesian aquifers. "The waters of these formations are not only highly mineralized . . . but are corrosive, rendering them unsatisfactory for most needs."<sup>17</sup> The formations of the Pliocene and Pleistocene, flanking the Miocene, are exposed in many places in and around the Everglades.

Angelo Heilprin, exploring the Caloosahatchee and Lake Okeechobee in 1886 found no evidence to support a coralline theory of growth of Florida; he decided that the growth had been through accessions of organic and inorganic material in the usual methods of sedimentation and upheaval.<sup>18</sup> Watson and Clapp expressed the joint belief that the deposition of the Pliocene rocks began with an encroachment of the sea which extended beyond the latitude of Lake Okeechobee. Following the deposition of the Pliocene the land emerged

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16 Stuart Mosson, "A Review of the Structure and Stratigraphy of Florida," Florida State Geological Survey, Seventeenth Annual Report (1926), 171-254.

17 Garald G. Parker, "Notes on the Geology and Ground Water of the Everglades in Southern Florida," loc. cit., 71.

18 Angelo Heilprin, Explorations on the West Coast of Florida and in the Okeechobee Wilderness, 65. Hereinafter cited as Okeechobee Wilderness.

to a probable greater height than at present, and "It was during this period that the major features of the present topography were produced."<sup>19</sup>

Two Pliocene formations are located in the Everglades, the Caloosahatchee marl and the Tamiami limestone. The Caloosahatchee marl, exposed in the banks of the river of the same name, consists chiefly of fine sand and shells. Its color ranges from white to light gray, blue, or yellow. It appears to underlie a large part of Florida south of the twenty-seventh parallel. Deposited in a warm and shallow sea, this marl contains a large proportion of unbroken shells. Water from the marl has a high chloride content, due in part to Pleistocene sea invasions, and in part to the Miocene rocks underneath it.<sup>20</sup>

The Tamiami limestone, coming to the surface in the lower reaches of the Big Cypress and appearing as far north as Fort Lauderdale on the east coast, is a wedge-shaped formation, inclining toward the coast, and the main source of water for the cities of the east coast. "The calcareous sandstones and sandy limestones of this formation are among the most permeable rocks ever investigated by the Federal

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<sup>19</sup> George C. Matson and Frederick C. Clapp, "A Preliminary Report of the Geology of Florida with Special Reference to Stratigraphy," Florida State Geological Survey, Second Annual Report (1909), 167.

<sup>20</sup> C. W. Cooke and Stuart Mosson, "The Geology of Florida," loc. cit., 152-153.

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Geological Survey." These rocks were deposited in a warm shallow sea, followed by an elevation above sea level when erosion and solution took place, and a subsequent lowering under the sea brought about a deposition of the Miami oolite on the Tamiami.

The close of the Pliocene epoch witnessed a great change in the climate of the earth. This change brought about the formation of glaciers that covered a third of the northern hemisphere. "The Pleistocene epoch has been divided into four major glacial stages and a minor one . . ."<sup>22</sup> during which the sea level fell in producing the massive fields of ice. In the interglacial stages the seas rose again, as the ice melted, and the lower lands of the world were covered by the seas. These successive inundations were accompanied by the deposition of marine materials and were followed by the recessions of the waters which gave the land its approximate present appearance in lower Florida by building up the lands on the north, east, and west of the Okeechobee-Everglades depression. Longshore currents swept sands from the north, along both coasts, which merged with the lime deposits in

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21 Garald G. Parker, "Notes on the Geology and Ground Water of the Everglades in Southern Florida," *loc. cit.*, 71.

22 Garald G. Parker and Nevin D. Hoy, "Additional Notes on the Geology and Ground Waters of Southern Florida," *The Soil Science Society of Florida, Proceedings*, V-A (1943), 37.

the south. These mergers built up the edges of the Floridian Plateau and produced the large slough in the area under study.<sup>23</sup>

The first of the Pleistocene formations to be laid down was the Miami oolite, present in the southern and eastern parts of the Everglades. The oolite varies in thickness from the merest deposit to thirty feet and is overlain by sand, muck, and marl, and cut through by sandy channels in many places. It is a white or light yellow limestone of very high porosity, easily quarried, and used for rough constructional purposes. Because of its outcroppings along the east coast and in the banks and rapids of the short rivers, it was the first of the south Florida rocks to be noted.<sup>24</sup> Modern geologists believe the oolite was formed as a shallowly submerged bar which, as has been suggested, shut off a wide shoal, now the Everglades, from deeper water of the Atlantic. It is possible that Lake Okeechobee marks a deeper part of the sea, as its present bottom is fifteen feet lower than the neighboring Everglades.<sup>25</sup>

That part of the Everglades soils not underlain by Miami

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<sup>23</sup> Garald G. Parker and Nevin D. Hoy, "Additional Notes on the Geology and Ground Waters of Southern Florida," loc. cit., 41-42, 54-55.

<sup>24</sup> C. W. Cook and Stuart Mossom, "The Geology of Florida," loc. cit., 204-205.

<sup>25</sup> Garald G. Parker, "Notes on the Geology and Ground Water of the Everglades in Southern Florida," loc. cit., 68.

oolite and Tamiami limestone is generally underlain by the Ft. Thompson deposits, also of Pleistocene age. This formation averages ten feet in depth over the northern part of the glades and includes freshwater, marine, and brackish-water limestones and marls. Found at the surface near Ft. Thompson on the Caloosahatchee River, the formation covers the area occupied by Lake Okeechobee when that body of water extended from the present site of the town of La Belle to the present eastern border of the Everglades and south to the Tamiami

Trail.<sup>26</sup> The alternation of marine and brackish water deposits combined with fresh water shells provides a clear record of the several inundations of the seas. Ground water in the Ft. Thompson formation is found in the shallow wells in the vicinity of Lake Okeechobee, where it is sought for domestic use. "The fact that the Ft. Thompson is relatively low in permeability makes it a valuable asset in areas of ditching and diking for water control."<sup>27</sup>

The Anastasia and Pamlico formations, found in the coastal ridge on the Atlantic and along the eastern borders of the Everglades, are composed of sand, sandy limestone, and calcareous sandstone. In the strip bordering the Everglades where the sands of these formations are mixed with glades

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<sup>26</sup> C. W. Cook and Stuart Mosson, "The Geology of Florida," loc. cit., 211-212.

<sup>27</sup> Garald G. Parker and Nevin D. Hoy, "Additional Notes on the Geology and Ground Water of Southern Florida," loc. cit., 51.

organic soils the lands are valuable for cropping and grazing. Water wells developed in these deposits are of relatively indifferent quality.<sup>28</sup>

The most recent geological formation in the Everglades is the Lake Flirt marl, composed of soft gray marl or calcareous mud almost universally present under the deeper muck of the upper Everglades. Flirt marl is of value because of its impermeability, which prevents the percolation of ground waters in the organic soils of the region. "Where it is present under sufficient thickness of soil that ditches do not cut through it, the water table can be controlled even in areas of permeable underlying rocks."<sup>29</sup> The top fifty feet of rock strata in the northern half of the Everglades is relatively impermeable and subjects this half to water control. In the lower half of the Everglades the strata become looser and highly water-bearing as the rim is approached. Canals cut through permeable strata drain adjacent lands to the limit of the canal; contrariwise, the success of water control by dikes and pumps depends on impermeability.

Lacking modern geological information, yet seeking the truth, John R. Mizell in 1902 compared the Okeechobee-Everglades formations to a large bowl with two rims. The inner

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28 Garald G. Parker and Nevin D. Hoy, "Additional Notes on the Geology and Ground Water of Southern Florida," loc. cit., 50.

29 Ibid., 49-50, 55.

basin he likened to the big lake, a small sea within itself. The outer basin he likened to the Everglades, with the rock rim on the east and swamps and sloughs on the west. Mizell believed the normal condition of the glades to be unaffected by the inner basin until the lake was taxed beyond its capacity to relieve itself through the Caloosahatchee Canal. The short streams on the Atlantic side of the Everglades were produced by the head of water from the lake overflow being unable to force its way down the Caloosahatchee, and seeking its way across the low spots in the outer rim.<sup>30</sup>

## 2. The Soil Deposits of the Everglades

The topography of the rock foundation on which the cumulative deposits have been built is, in reality, not similar to a basin, but more comparable to a broad and open trough fifty miles wide and a hundred miles long. The Everglades are a component of an immense hydrologic unit consisting of the Kissimmee River Valley as the watershed, Lake Okeechobee as the storage basin, and the Everglades as the overflow area. Seen in this light,

The Everglades are the result of slow vegetative decay in an area having low elevation, warm climate, and heavy rainfall, and would continue

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<sup>30</sup> Cited in, "Message of Governor W. S. Jennings to the Legislature of Florida Relating to the Reclamation of the Everglades," April 7, 1903, Senate Documents, Number 89, 62 Congress, 1 Session, 88.

to build up on a surface having even a steeper gradient than that now existing were it not for the drainage systems man has installed. 31

The northern and eastern sections of the Everglades are nearly devoid of trees, being covered with saw grass (Mariscus janicensis), a sedge growing in dense tussocks to heights of ten and twelve feet. Although saw grass covers most of the glades, bushes and trees of myrtle, willow, and bay often appear in sporadic clumps or little islands. On the eastern and western edges many islands or hammocks appear in close proximity to the mainland. These hammocks consist of a dense growth of broad leaved trees and shrubs and appear as true islands during periods of high water. 32

This rank growth of herbaceous vegetation has occupied this large trough through the center of southern Florida, and from its decay and settlement has built up the ground level at the southern shore of Lake Okeechobee to fourteen feet above bed rock. This thickness of the cumulative soils at Okeechobee gradually thins out to a feather edge at the sides of the Everglades. 33 Charles T. Simpson, a naturalist

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31 Garald G. Parker, "Notes on the Geology and Ground Water of the Everglades in Southern Florida," loc. cit., 52.

32 John K. Small, From Eden to Sahara: Florida's Tragedy, 14; M. H. Gallatin and J. R. Henderson, "Progress Report on the Soil Survey of the Everglades," The Soil Science Society of Florida, Proceedings, V-A (1943), 95-104.

33 Samuel Sanford, "The Topography and Geology of Southern Florida," loc. cit., 190-191; Charles Torrey Simpson, In Lower Florida Wilds, 119.



who spent a good many years in southern Florida, believed that "The southern part of the glades was recently elevated and there has not been sufficient time as yet . . . to form any great depth of vegetable deposits. In fact the rock appears on the surface over extensive areas in the newer part. . . ."<sup>34</sup>

The publicity attending the progress of canal excavation and land sales in 1912 gave rise to a demand for information as to the chemical composition and productiveness of the soils of the Everglades. The examination of thirty-five samples of soils taken from Lake Okeechobee to Miami was the first scientific analysis of these soils. Previous to that time examinations of Florida muck soils had been on the basis of other localities in the state, principally in the Kissimmee-St. Cloud area. The analyses of the glades soil showed an exceedingly high nitrogen content with comparatively small quantities of potash and phosphates.<sup>35</sup> In 1913 State Chemist Rufus E. Rose reported that the soil would grow large crops of foilage plants without fertilization, but would need the addition of potash and phosphate for a satisfactory yield of

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<sup>34</sup> C. T. Simpson, In Lower Florida Wilds, 119-120.

<sup>35</sup> R. E. Rose, "Analyses of Everglades Soils," Florida Department of Agriculture, Florida Quarterly Bulletin, XXXIII (January, 1913), 11.

grain or sugar.

A survey of the Everglades soils from the site of the rock rim at the head of the north branch of the New River at Ft. Lauderdale to the south shore of Lake Okeechobee was made in the winter of 1915, under the auspices of the United States Department of Agriculture. This soil survey covered a strip two and a half miles wide on each side of the North New River Canal. The surveyors reported that "From the rock rim to the shores of Lake Okeechobee the soils mapped in this survey are composed largely of organic matter in various stages of disintegration and decay." <sup>36</sup> Grouping the soils according to the percentage of mineral constituents and the stage of decomposition of the vegetable tissue, the survey located three classes of Everglades soils.

Near Lake Okeechobee, bordering the shore for a width of one to two miles, the material was found to be black and well decomposed, and averaged sixty percent ash content. The inorganic matter consisted of fine sand, silt, and clay, and gave the soil a heavy silty texture. Because of the growth of the custard apple tree on this type of soil, it has been called the custard apple muck. <sup>37</sup> "The best land in the Everglades is where the custard apple grows. Some claim

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36 Mark Baldwin, H. W. Hawker, and Carl F. Miller, Soil Survey of the Fort Lauderdale Area, Florida, 16. Hereinafter cited as Baldwin, Hawker, and Miller, Soil Survey.

37 Ibid., 17, 31.

the custard apple is there because the soil is naturally better, others that the soil is better because of the custard apple."<sup>38</sup> Silting, bird rookeries, depth, and age have all had a part in the development of this band at Okeechobee's edge. Baldwin and his associates measured the depth of the muck and noted that it averaged from forty to seventy-five inches, and that it was underlain with peaty-muck to the limestone at one hundred twelve to one hundred and fifty inches. The surface was flat with a very gentle slope away from an elevation of twenty-one feet above sea level at the water's edge.<sup>39</sup>

Twenty-five years later, in 1940, the Soil Conservation Service of the federal government began mapping the Everglades soils, and found the most valuable to be the Okeechobee muck, known locally as custard apple. Bordering the shore of the big lake on the eastern and southern exposures for a distance of one to three miles, this earth measured from thirty to sixty inches and lay on brown fibrous peat which in turn rested on rock at a depth of five or more feet. A heavy, black, organic material with a high mineral content of from thirty to sixty per cent, this belt is highly desirable for the growth of sugar cane and vegetable

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<sup>38</sup> John C. Gifford, The Tropical Subsistence Homestead, 89.

<sup>39</sup> Baldwin, Hawker, and Miller, Soil Survey, 32.

crops.

South of the area of the custard apple muck, Baldwin and his associates surveyed a gradational belt of less decomposed material with a smaller percentage of mineral matter which they called Peaty Muck. Known throughout the Everglades as "Willow and Elder Land," because of this characteristic growth on a belt of two to four miles to the south and east of the Okeeshobee muck, it consisted of a transition strip between the lake border soils and the Everglades Peat at its rear. With from six to eighteen inches of finely fibrous and partially rotted matter lying on a stratum of Okeeshobee muck varying in thickness from two to thirty or more inches, it is underlain with peat to a depth of from five to eight feet before reaching the bed rock.<sup>41</sup> Mapped by the 1940 survey as Okeelanta Peaty Muck, this soil has been found to be very desirable from the standpoints of both location and quality.<sup>42</sup>

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40 Charles B. Evans and R. V. Allison, "The Soils of the Everglades in Relation to Reclamation and Conservation Operations," The Soil Science Society of Florida, Proceedings, IV-A (1942), 43.

41 Ibid.

42 "As usually mapped this soil has three distinct layers: (1) the surface 6 to 12 inches of finely fibrous, decomposed peat, (2) a layer of plastic, sedimentary muck which varies in thickness from 2 to 30 or more inches, and (3) another layer of fibrous, brown peat." M. H. Gallatin and J. R. Henderson, "Progress on the Soil Survey of the Everglades," loc. cit., 99.

Approaching the interior of the Everglades away from Lake Okeechobee the material becomes less decomposed and is nearly pure organic matter. The 1915 survey came upon the soil which occupies the majority of the Everglades within two or three miles of the lake and mapped it as brown fibrous peat. The surveyors determined that this material averaged from eighty-five to ninety-three per cent combustible, and to comprise over sixty per cent of their mappings.

. . . a remarkably uniform body of material, typically it consists of brown fibrous to dark brown semifibrous, slightly decomposed organic matter, underlain by limestone at depths varying from about 36 to 140 inches. 43

In 1915 the depth of this region of Everglades Peat varied from 110 to 130 inches 10 miles south of the lake to 50 inches at the 32 milepost below the lake.

The surface of the upper part of the large area of this type is flat and nearly level. No natural drainage channels are apparent and the flatness is broken only by infrequent alligator holes and runways. 44

The 1940 Soil Survey identified the Everglades Peat as the most extensive soil type in the area. It found the top six to eighteen inches to be a fine, black, fibrous material containing up to fifteen per cent mineral matter, lying over<sup>45</sup> rock or sand.

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43 Baldwin, Hawker, and Miller, Soil Survey, 35.

44 Ibid., 39.

45 Charles B. Evans and R. V. Allison, "The Soils of the Everglades in Relation to Reclamation and Conservation Operations," loc. cit., 44.

The agriculturally important types of organic soils surveyed in the Everglades to 1943 were: Okeechobee muck, deep and very deep phases, 25,000 acres; Okeelanta peaty muck, deep and very deep phases, 30,000 acres; Everglades peat, deep and very deep phases, 350,000 acres; and Everglades peat over sand, 130,000 acres.<sup>46</sup>

In the portion north of the Hillsboro Canal and west of the Lake Worth Drainage District dikes, roughly the far northeastern corner of the Everglades, the 1940 Soil Survey mapped 165,000 acres of Loxahatchee peat. Found in the more inaccessible portions of the glades, this soil is a soft, felty, brown, fibrous material which is spongy in character, and in general has been laid down from tenderer plants than the saw grass. This earth loses three-fourths of its volume on drying and is not considered particularly desirable for agricultural purposes. Since it is covered with water during the greater part of the year it has become a refuge for frogs, fish, alligators, and ducks. Attempts to bring the Loxahatchee peat into cultivation have been generally unsuccessful.<sup>47</sup>

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<sup>46</sup> Separation into phases on the basis of depth was made as follows: more than 96 inches, very deep phase; 60 to 96 inches, deep phase; 36 to 60 inches, shallow phase; less than 36 inches, very shallow phase. M. H. Gallatin and J. R. Henderson, "Progress Report on the Soil Survey of the Everglades," loc. cit., 97-100.

<sup>47</sup> Charles B. Evans and R. V. Allison, "The Soils of the Everglades in Relation to Reclamation and Conservation Operations," loc. cit., 45.

Local classification of the soils of the Everglades has been according to the native vegetation growing upon them. The custard apple is a true muck of a sedimentary nature, while the saw grass is a true peat of an accumulative nature. The elderberry and willow is not distinct, but a combination of the other two.<sup>48</sup>

Between 1940 and 1943, 5,800 of the 7,000 square miles in the Everglades and Everglades Drainage District had been surveyed and mapped by the United States Soil Conservation Service. The information obtained indicated that some 435,000 acres of the land examined was "suitable for long time use for crop production."<sup>49</sup> Non-agricultural organic soils, marls, sands, rockland, tidal marsh, and dredged land made up the remainder of the soils found in the Everglades and the district. The non-agricultural organic soils included Everglades peat of the shallow and very shallow phases and peat over shallow marl, as well as every phase of Loxahatchee peat. While a small percentage of the marls and sands have been brought into agricultural production, their most extensive use has been for dry weather grazing and wildlife and water conservation.<sup>50</sup>

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48 Harold E. Hammar, "The Chemical Composition of Florida Everglades Peat Soils, with Special Reference to their Inorganic Constituents," Soil Science, (July, 1929), 1-13.

49 M. H. Gallatin and J. R. Henderson, "Progress Report on the Soil Survey of the Everglades," loc. cit., 104.

50 Ibid., 100-104.

### 3. The Flora and Fauna of the Everglades

The Everglades are situated in a semi-tropical climate. The average yearly rainfall varies from sixty inches at Miami to fifty inches at Okeechobee. The yearly variation is considerable, and even the distribution within the year produces wet and dry seasons. Temperatures vary from the summer high of 98° F. to winter temperatures as low as 9° F. under conditions of very low water in the open glades.

"The region is . . . remarkable for the fact that it is a meeting place for many temperate and tropical types of plants and animals."

It is by definition, and by the usual boundaries applied to it, a region without many trees and dominated by grasses, sedges, reeds, rushes, and other herbs growing on peat, marl, or even sandy soils that are nearly level, and which are flooded or wet nearly to their surface most of the year. . . . From the point of view of the plant ecologist, these marshes are like "low moors" which are similar in some respects to bogs because peat does accumulate in them.

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51 J. C. Stephens and C. C. Schrontz, "The Principal Characteristics of the Kissimmee-Everglades Watershed," loc. cit., 24.

52 R. V. Allison, "The Soil and Water Conservation Problem in the Everglades," The Soil Science Society of Florida, Proceedings, I (1939), 38.

53 W. E. Safford, "Natural History of Paradise Key and the Nearby Everglades of Florida," Annual Report of the Smithsonian Institution, 1917, 377. Hereinafter cited as, "Everglades Natural History."

54 John H. Davis, Jr., "Vegetation of the Everglades and Conservation from the Point of View of the Plant Ecologist," The Soil Science Society of Florida, Proceedings, V-A (1943), 105.



The plant ecologist has divided the vegetation of the Everglades into six broad types, with the general areas covered by them as follows: (1) custard apple and willow-elderberry zone along the eastern and southern shores of Lake Okeechobee- 140,000 acres; (2) saw grass marsh plains of the northern and central glades- 1,000,000 acres; (3) saw grass and wax myrtle or bay-berry thicket areas, along the sides of the central plain- 240,000 acres; (4) slough and tree-island areas north of the Hillsboro Canal and west of the Miami Canal- 775,000 acres; (5) mixed marshes and wet prairies east and west of the central plain sough of the Tamiami Trail- 300,000 acres; and (6) bordering prairies with scattered hammocks and stands of trees along the borders of the Everglades- 145,000 acres. <sup>55</sup>

A majority of the plants in this great partially submerged bog stem from aquatic families. Covering the larger part of the Everglades, the saw grass has been the predominant growth which has impressed every traveler in the area. Misnamed a grass, this luxuriant growth is in fact a sedge whose leaves are armed on their edges with teeth like a rip saw and ". . . attain a length of seven feet and in the spring or early summer the plant sends up a nearly round flower stem to a height of ten feet or more." <sup>56</sup> The water

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<sup>55</sup> John H. Davis, Jr., "Vegetation of the Everglades and Conservation from the Point of View of the Plant Ecologist," loc. cit., 105-112.

<sup>56</sup> Charles T. Simpson, In Lower Florida Wilds, 121.

hyacinth, a naturalized plant, has become as predominant on the canals of the Everglades as the saw grass on the soils.<sup>57</sup> Introduced into Florida just before the turn of the nineteenth century, the hyacinth has completely outstripped its floating cousin, the water lettuce, which Heilprin noted in the Taylor's Creek swamps in 1886.<sup>58</sup>

In the sloughs and deeper waters of the glades, where not crowded out by the saw grass, are found other grasses and water plants. Hugh Willoughby encountered great masses of an underwater grass similar to that used in aquaria, and to which he attributed the clarity of lower Everglades waters.<sup>59</sup> Gama grass, oftentimes cultivated for ornament in gardens, with its twelve-foot-long flowering stems, cattails and their accompanying reeds, giant foxtail similar to domesticated millet, common reeds, boneset, elegant thalia, bull-rushes, and maiden cane form but a part of the prolific plant life in the grassy water.<sup>60</sup> ". . . handsome blue nama and two charming pond lilies, one . . . with yellow and the other . . . with white flowers;"<sup>61</sup> arrowheads with lance shaped leaves; pickerel weed, with spikes of blue flowers; water arums, like jacks-in-the-pulpit; and spider lilies all contribute to the twelve hundred species of native and natural-

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<sup>57</sup> Charles T. Simpson, In Lower Florida Wilds, 121; R.V. Allison, "The Soil and Water Conservation Problem in the Everglades," loc. cit., 51.

<sup>58</sup> Angelo Heilprin, Okeechobee Wilderness, 45.

<sup>59</sup> Hugh L. Willoughby, Across the Everglades, 40.

<sup>60</sup> Charles T. Simpson, In Lower Florida Wilds, 124-126.

<sup>61</sup> Ibid., 125.

ized flowering plants growing on the lower mainland of Florida, many of which are located on the glades and island hammocks below Lake Okeechobee. With the advent of artificial drainage and the creation of spoil banks came a rank growth of poke-weed, pickerel weed, pig-weed, and water hemp. The amazing growth of these annual plants to a height of twenty feet may lead the unsuspecting to mistake them for a real forest.

Through the length and breadth of the Everglades, and especially near the eastern and western edges, marsh shrubs and trees grow in isolated clumps or on the islands. Among them, the amphibian willow, elderberry, wax myrtle, swamp bay, cocoa plum, and the custard apple predominate. For many years the eastern and southern shores were bordered with a two to three mile belt of the custard apple, flanked to the rear by the elderberry. In 1911 a traveler made the first note of the moonvine covering the custard apple growth almost in its entirety, like a green mantle. Growing on the small islands on the edge of the glades and forming a dense green foliage on the streams, the cocoa plum with its insipid purple and white fruit was used by the

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62 W. S. Blatchley, In Days Agone, Notes on Fauna and Flora of Sub-Tropical Florida in the Days when Most of its Area Was a Primeval Wilderness, 102. Hereinafter cited as In Days Agone.

63 Charles T. Simpson, Out of Doors in Florida, 233.

64 W. S. Blatchley, In Days Agone, 101.

Seminole as a part of his diet.

On the larger islands or keys in the area, as well as on the eastern and northern shores of Lake Okeechobee, many large trees were found. Here grew the live oak, cypress, maple, bay, and a few of the long leaf pine.

Of special interest is the strangling fig which begins life somewhat like a mistletoe, sprouting from a tiny seed dropped on the limb of a tree. It soon sends down threads which take root when they reach the ground, and which grow together wherever they touch one another, forming a meshwork about the trunk of the host which is slowly strangled to death. 66

Among the climbing plants, always indigenous to tropical climes, W. E. Safford catalogued many interesting specimens. Wild grapes, hunter's vine with the sap filled stem for drinking, cockspur, and the climbing brambles caught his attention among the myriad plants of the hammocks and glades. In the limbs of the trees and amidst the vines encompassing them he located many modest and inconspicuous orchids and other epiphytes. Of these the creeping, spider, shell, Ghintz-flowered, and marsh orchids he believed attractive for their odd forms and fragrance. Included among the other air plants collected were the resurrection fern, Spanish

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65 John C. Gifford, The Reclamation of the Everglades with Trees, 22.

66 W. E. Safford, "Everglades Natural History," loc. cit., 383.

moss, the pineapple-like bromelads, and a number of tree  
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ferns.

One of the most utilitarian members of the plant life of the Everglades is the cabbage palm or sabal palmetto. This palm grows to a majestic height on the islands of the glades and adjoining prairies. Its trunk is used for building purposes, its leaves for thatch, and the tender bud at the heart of the uppermost end of the trunk is a succulent food when properly cooked. It is known locally as swamp cabbage. The royal palm, found on Paradise Key, grows only in hammock or wet soil. These palms, with a clean, gray, and smooth trunk, crowned by ten or twelve shining and deep, dark green leaves, rise as high as a hundred and twenty feet. Describing the royal palms on Paradise Key in 1921, Charles T. Simpson wrote:

Viewed from a distance of half a mile or more this forest is one of the most beautiful my eyes have rested on. The whole forms a superb emerald island decorated with splendid palms which everywhere cut the skyline with unsurpassed effect, and it is set in a sea of green everglades. 68

The animal life of the region of the Everglades is equally as varied as the plant life. Safford in his paper on the natural history of Paradise Key and the surrounding glades

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67 W. E. Safford, "Everglades Natural History," loc. cit., 385-386.

68 Charles T. Simpson, Out of Doors in Florida, 241.

wrote that "the insect fauna alone must certainly include thousands of species. . . ." <sup>69</sup> Charles T. Simpson, in one of his many fascinating books on the flora and fauna of southern Florida, commented that one hundred twenty-eight species of birds had been sighted on or near the same locality and a considerable variety of small mammals, fish, and <sup>70</sup> frogs.

Of great interest to naturalists, the shell life of the Everglades has produced many specimens of crustacea and gastropoda. The tree snails found on the trees of the islands are among the most attractive of their species, with their shells of varying and beautiful colors. <sup>71</sup> The marsh snails thrive in the grassy waters and furnish a large food staple to the bird life in the area. Crawfish abound throughout the grassy waters and likewise form a part of the diet of the marsh birds. Centipedes and scorpions are found on the islands in large numbers around rotting logs and other vegetable matter.

In his study of the insect life of the Key and its environs, Safford was able to collect and classify a large number of spiders, white ants or termites, dragon flies, roaches, grasshoppers, beetles, moths, butterflies, ants, wasps, bees, hornets, and flies.

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<sup>69</sup> W. E. Safford, "Everglades Natural History," loc. cit., 390.

<sup>70</sup> Charles T. Simpson, Out of Doors in Florida, 241.

<sup>71</sup> W. E. Safford, "Everglades Natural History," loc. cit., 391; Charles T. Simpson, Out of Doors in Florida, 243.

The Diptera of Paradise Key include many groups zoologically related but with very diverse habits: mosquitoes; horseflies and deer flies, which not only attack animals but even pursue automobiles for miles; robber flies, which catch their insect prey on the wing; flower flies, which feed on nectar and pollen; parasitic tachina flies, which lay their eggs on living insects; and carrion-eating flesh flies. 72

The mosquitoes of Florida, and especially southern Florida, are renowned for their painful bite. Simpson related an incident where the insects covered the exposed parts of his body until the skin could not be seen. With cheeks swollen and eyelids puffed from the poisoning, he could scarcely see, and felt stupid with a desire to lie down and sleep. One of his companions, not so badly affected, was able to find some wild limes, the juice of which he applied to the swollen parts, and relieved Simpson almost instantly. He noted that there were well authenticated instances in Florida and elsewhere of death occurring from the attack of mosquitoes. <sup>73</sup>

Equally blood-thirsty are the Florida horsefly and deer fly. Zane Grey, on a hunting and fishing trip through the Ten Thousand Islands and Shark River waters in 1924, reported the following experience:

Suddenly something bit me fiercely through my shirt. . . . I slapped my shoulder. A huge black fly dropped to the floor of the launch. He had brought the blood. . . . He resembled the common horsefly I had observed in the west, yet he appeared more vividly colored. 74

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72 W. E. Safford, "Everglades Natural History," loc. cit., 408.

73 Charles T. Simpson, In Lower Florida Wilds, 107.

74 Zane Grey, Tales of Southern Rivers, 67.

The several varieties of horseflies in South Florida can become the most annoying of pests, "often flying after automobiles and railway trains; so annoying . . . to painters and other workmen that they have to protect . . . themselves by means of portable smudges."<sup>75</sup> Simpson pointed out the curious nuptial flights of the males, in which they swarmed in millions, "making an almost deafening noise."<sup>76</sup> Several members of the deer fly family, smaller and more brightly colored than the horseflies but just as blood thirsty, have been found throughout the area. Other types of flies thriving in the glades include the soldier fly, the Midas fly, the tachina fly, and the screw-worm fly. The last, a terrible little fly, lays its eggs in wounds or in the nostrils of living animals. "It has even been known to deposit its eggs in the nostrils of human beings sleeping out of doors, but this is a rare occurrence."<sup>77</sup> The larvae from the hatched eggs, known as screw worms, eat the flesh of the host, and stock owners must be ever alert to arrest the ravages of this insect.

Lake Okeechobee and the Everglades have been near perfect homes for fish, especially in times of high water. During these periods the fish go into the weedy sections border-

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<sup>75</sup> W. E. Safford, "Everglades Natural History," loc. cit., 409.

<sup>76</sup> Charles T. Simpson, Out of Doors in Florida, 242.

<sup>77</sup> W. E. Safford, "Everglades Natural History," loc. cit., 410.



ing the lake and the glades to enjoy new feeding grounds. Without doubt, the most interesting species of fish in the region is the predatory alligator gar. It looks for all the world like a freak of prehistoric ages and ichthyologists find it is a direct descendant. John C. Gifford, pioneer Miami resident, related an incident in which he had been attracted by a great stench in the glades during a season of low water. Approaching a great pool of water, he saw garfish by the thousands in the slowly falling water.

The fringe was lined by thousands of birds fighting, squawking, and gorging themselves on these dying fish. We returned a few days later. The slough was dry and covered with a layer of guano. 78

The vertebrae of the garfish are similar to ball and socket joints, and the head may move independently. The scales, arranged in diagonal rows, are fitted together by a system of hooks and do not lap each other. Simpson declared the scales to be so hard that fire could be struck from them with the use of steel. 79

The black or big-mouthed bass roamed the length and breadth of the Everglades prior to the beginning of drainage operations. The black bass is the pluckiest of Florida fresh-water game fish and when feeding will strike at any likely moving object. Specimens of twenty pounds or over

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61. 78 John C. Gifford, The Tropical Subsistence Homestead,

79 Charles T. Simpson, In Lower Florida Wilds, 128.

have been taken from the peninsular waters. While in the lower glades in 1896, Hugh Willoughby crossed many pools ten feet wide and five feet deep which, he said, were inhabited by black bass up to a foot in length.<sup>80</sup> Bass that jumped into the boats of the Ingraham expedition furnished the men with a part of their bill of fare when they crossed the middle glades in 1892.<sup>81</sup> Other fish found in the Everglades include the gamy and voracious mud or dogfish, which is "one of the hardest fighters that ever took the hook."<sup>82</sup> Catfish, shiners, kill fish, sunfish, bluegill bream, and numerous minnows are found in the lakes, pools, and sloughs of the Everglades:

Perhaps the fauna which most quickly come to mind at the mention of the Everglades are the reptiles, the largest of which are alligators. "These huge animals are not at all dangerous, but will flee at the sight of a man and will not show fight unless brought to bay."<sup>83</sup> Heilprin noted an instance of a gator feeding in the Okeechobee-Hicpochee Canal by grabbing a turtle and pulling it under the water. Naturalists have found that the alligator feeds on practically any animal that passes within its reach. On his trip through

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80 Hugh L. Willoughby, Across the Everglades, 119.

81 W. R. Moses, (MSS), "The Everglades Exploring Expedition," 27. Typescript copy in Albertson Library, Orlando, Florida.

82 W. E. Safford, "Everglades Natural History," loc. cit., 411.

83 Ibid., 415.

the very southern end of the glades Zane Grey came upon a Seminole encamped at the headwaters of Lostman's River with  
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a catch of eleven gators for a night's work.

The Everglades are well supplied with a great variety of snakes. The cottonmouth or water moccasin, a lover of wet and swampy lands, is perhaps the most unpopular and predominant of the snake population. The snake is very poisonous and dreaded by all travelers in the glades. The diamond back and ground rattlesnakes are encountered occasionally, but both these rattlers prefer a drier habitat. Garter, water, black racer, gopher, coachwhip, and green tree snakes are additional members of the family encountered in the  
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glades.

The bird fauna of southern Florida is especially rich, not only on account of the mild climate, favorable to many subtropical species, but also because Florida is a highway for migratory species which spend their winters in the West Indies. 86

Practically all of the birds which frequent the states of the eastern seaboard are found in or near the Everglades at some time of the year. The distinctive members of the feathered animals in the glades are those who frequent a watered plain for a natural habitat. Of these, the roseate spoonbill and the flamingo have almost disappeared from the Everglades.

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84 Zane Grey, Tales of Southern Rivers, 75-76.

85 W. E. Safford, "Everglades Natural History," loc. cit., 416-418.

86 Ibid., 419.

As late as 1887, several flocks of the spoonbill, a rose tinted heron with a shovel shaped bill, were found in the Everglades. The snowy egret and the white ibis, once the prey of plume hunters and threatened with extinction but now protected by the wardens of the law, are present in large flocks throughout the area.<sup>87</sup>

Angelo Heilprin found the swampy prairie from Fort Thompson to Lake Okeechobee a virtual paradise for birds; at Taylor's Creek he observed several flocks of parakeets.<sup>88</sup> Other visitors to the area observed teeming bird life over all the territory. Heron, crane, bittern, grebe, water turkey, duck, turkey vulture, limpkin, hawk, osprey, rail, gallinule, coot, dove: veritabily ad infinitum, the list grows with scarce mention of songbirds like the thrush and cardinal. Before passing on, mention should be made of the kite, a bird of prey. Zane Grey ably described it as follows:

Opportunity was afforded to watch an Everglade kite, a rare bird I had not seen before. This one soared above us, round and round swooping down to the treetops. It was about the size of a pigeon, only more slender, a little longer, and possessed a remarkable build. It was a giant swallow. The wings were perfectly bowed. . . . The tail was wide with a deep fork. Its head

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<sup>87</sup> Frederick A. Ober, The Knockabout Club in the Everglades; The Adventures of the Club in Exploring Lake Okeechobee, 148; Charles T. Simpson, In Lower Florida Wilds; Angelo Heilprin, Okeechobee Wilderness, 35.

<sup>88</sup> Angelo Heilprin, Okeechobee Wilderness, 46.

appeared small. Perhaps its most striking feature was the color. The underside of the wings was half black, half white, and the tail had the same beautiful markings. . . . In beauty, grace, and wildness this Everglade kite equalled the frigate bird of the keys. 89

The mammals which are found in the Everglades proper are very few in number. Deer graze in open spots on the tender grass. An occasional wildcat will make his home on one of the islands in order to prey on rats and mice. Possum and raccoon are found along the borders and sometimes on the islands. Perhaps the mammal best adapted to the glades is the Florida otter, whose trails Willoughby saw by the thousands. Constant hunting for the valuable pelts has reduced this animal to a veritable rarity in his natural habitat.<sup>90</sup> Other than birds, fish, and reptiles the center of the Everglades is nearly devoid of life. In the tall saw grass, inundated for a large part of the year, the lack of life is not hard to understand.<sup>91</sup>

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89 Zane Grey, Tales of Southern Rivers, 56-67.

90 Charles T. Simpson, In Lower Florida Wilds, 128; W. E. Safford, "Everglades Natural History," loc.cit., 423-424.

91 Hugh Willoughby, Across the Everglades, 160; W. R. Moses, "The Everglades Exploring Expedition," 27-30.

## CHAPTER II

### THE ARRIVAL OF MAN

#### 1. The Aborigines

Of the few as yet but very imperfectly explored regions in the United States, the largest perhaps is the southernmost part of Florida below the 26th degree of northern latitude. This is particularly true of the central and western portions of this region, which inland are an unmapped wilderness of everglades and cypress swamps, and off-shore a maze of low mangrove "keys" or islands, mostly unnamed and uncharted, with channels, "rivers" and "bays" about them which are known only to a few of the trappers and hunters who have lived a greater part of their life in that region. <sup>1</sup>

The above paragraph from the pen of Ales Hrdlicka, the author of a definitive study of anthropology in Florida written in 1922, remains undisputed twenty-four years later. On a trip from Chocoloskee Island on Florida's southwestern coast to the southernmost point of Cape Sable, a distance of fifty miles, Ales Hrdlicka found the actual settlers to consist of only five or six families in the early 1920's. <sup>2</sup> The seasonally inundated shores of Lake Okeechobee, the grassy waters of the Everglades, the swampy isolation of the Ocaloacoochee Slough and the Big Cypress, and the tidal flooded islands of the Mangrove Coast infested with mosquitoes and other pests could never have been the habitations for a large population.

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<sup>1</sup> Ales Hrdlicka, The Anthropology of Florida, 5.

<sup>2</sup> Ibid., 6.

Various canals and small harbors along the southwestern coast and tremendous piles of shells on the mangrove islands indicate that southwest Florida was once inhabited by numerous and enterprising men.<sup>3</sup> Excavations in many large mounds have produced various types of potsherds; obsidian knives found on nearby Key Largo suggest Mayan stock, perhaps in the Caloosa tribe which held the area in the sixteenth century. Diggings in a series of deposits at the fork of the New River several miles west of Ft. Lauderdale revealed pottery of a primitive nature. These mounds, located in 1908, ranged up to eight feet in height above the surrounding land and as much as fifty feet in diameter.<sup>4</sup> On Long Key, in the Everglades, a refuse deposit two hundred feet in diameter gave up numerous potsherds which bore shell-cut workings on marine shells. The ancient inhabitants of the region used terrapin shells extensively as well as alligator, fish, and bird bones in their primitive handicraft. Ancient camp sites have been found on a number of Everglades islands.<sup>5</sup>

A joint state and federal archeological survey, working in the Dade County area in 1936 on mounds near Opa Locka and Golden Glade, unearthed a large variety of shells, beads,

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<sup>3</sup> John C. Gifford and Alfred H. Gilbert, "Prehistoric Mounds in South Florida," Science, LXXIV (March 18, 1932), 313.

<sup>4</sup> Mark Raymond Harrington, "Archeology of the Everglades Region," American Anthropologist, XI (January-March, 1909), 139-142.

<sup>5</sup> Ibid., 142.

pottery, and other artifacts which indicated two distinct Indian cultures, one on top of the other. ". . . the results obtained will prove to be of utmost value to archeologists in more clearly understanding the type of man who lived in Florida in pre-Columbian days."<sup>6</sup> These investigations in the mounds near Miami brought to light valuable and important materials which definitely proved that an earlier race inhabited these village sites than the Tequestas or other Indians discovered in South Florida by the Spanish explorers.

Ales Hrdlicka, in his anthropological searches in Florida, located a great number of mounds, shell heaps, and kitchen middens on the western and southwestern coasts, and a number of relatively insignificant sand mounds along the Caloosahatchee River from Ft. Myers to La Belle.

About eight miles northeast of the small town of La Belle, however, there is a large sand mound which may be seen . . . oval in outline, about 20 to 25 feet in height and approximately 160 yards in circumference at the base. A number of excavations have been made by local explorers in the mound, but so far as could be learned without results.<sup>7</sup>

Between La Belle and Lake Okeechobee, Hrdlicka could find nothing of importance in the way of Indian remains, nor could

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<sup>6</sup> Florida State Archeological Survey, Second Biennial Report to the State Board of Conservation (1936), Part IV, 145.

<sup>7</sup> Ales Hrdlicka, The Anthropology of Florida, 52.



he locate anything in the vicinity of the lake itself. The canals and other works of drainage construction in the area failed to reveal any Indian remains of importance; consequently Hrdlicka concluded:

It appears that no mounds have as yet been located either about Lake Okeechobee or to the east of it. The interior of the peninsula at this latitude is, therefore, according to all indications so far, much more sterile in Indian remains of all sorts than the coast regions. <sup>8</sup>

A report on the location of ". . . a great plan of earth works elaborately laid out in embankments and mounds, covering an area a mile square" at the very edge of the Everglades near the shores of Lake Okeechobee and the present town of Belle Glade was made in 1931.<sup>9</sup> The central figure of the earth works consisted of a flat-topped rectangle thirty feet by two hundred and fifty feet, with earthen embankments enclosing a court at the front of the figure. A semi-circular bank, partially enclosing the rectangle and embankments, extended farther forward. Matthew W. Stirling, chief of the Bureau of American Ethnology, found these Everglades constructions the nearest approach to the famous Fort Ancient earthworks in Ohio of any in North America. Excavations on a small scale disclosed potsherds identifying the locality

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<sup>8</sup> Ales Hrdlicka, The Anthropology of Florida, 52.

<sup>9</sup> Matthew W. Stirling, "Explorer Finds First Traces of Unknown Everglades Tribe," Science News Letter, XIX (May 23, 1931), 325.

with an aboriginal inhabitation long before that of the  
<sup>10</sup>  
 Seminoles.

While plowing ground on the northern shore of Lake Okeechobee in 1921, M. A. Miller discovered an idol cut from *lignum vitae*. This idol, carved to represent a human figure in a squatting position, lent additional strength to the theory that a race antedating presently known abo-  
<sup>11</sup>  
 riginal tribes lived in the area. J. Walter Fewkes, then chief of the Bureau of American Ethnology, pointed out that this object, found in the earth where Lake Okeechobee waters formerly stood six feet deep, possessed a remarkable similarity to a wooden idol found some years previously in Cuba; both were approximately the same size, both had been cut from *lignum vitae*, and both had weathered to an identical color. Fewkes, comparing this artifact with others found on Key Marco and near Ft. Myers, regarded it as typical of a culture unrecorded in the past but opening a new phase of  
<sup>12</sup>  
 archeological research in Florida.

## 2. Early Explorers

Ponce de Leon, the earliest recorded white man to reach

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<sup>10</sup> Matthew W. Stirling, "Explorer Finds First Traces of Unknown Everglades Tribe," loc. cit., 325.

<sup>11</sup> Jesse Walter Fewkes, "Aboriginal Wooden Objects from Southern Florida," Smithsonian Miscellaneous Collections, LXXX (March, 1928), Number 9, 1-2.

<sup>12</sup> Ibid., 1-2.

Florida, found the area peopled by sedentary Indians. There exists no authentic evidence as to the origin, arrival, or blood relation of these aborigines, though they were found to have had some contact with other continental tribes and with Cuba.<sup>13</sup> Daniel Brinton, one of the earliest anthropologists to give serious study to Florida, divided Florida, as occupied by the Indians in the sixteenth century, into several districts. Two of these covered most of the Everglades: from Cape Canaveral to the tip of the peninsula on the east coast lay Tequesta; and the west coast area, at least as far as Tampa Bay and into the interior around Lake Okeechobee,<sup>14</sup> was inhabited by the Caloosa or Calos.

Ponce de Leon, no doubt, had heard tales of the Caloosa, for on his second voyage to the continent he chose the western coast for his itinerary. When the explorer attempted to land near the present site of Ft. Myers at the mouth of the Caloosahatchee River in 1521, his forces were met by a fleet of eighty canoes filled with these Indians. The Spaniards<sup>15</sup> were compelled to withdraw after an all day fight.

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<sup>13</sup> James Mooney, "Calusa," Handbook of American Indians, Part I, Bulletin 30, Bureau of American Ethnology, 1912, 195-196.

<sup>14</sup> Daniel Garrison Brinton, Notes on the Floridian Peninsula, Indian Tribes and Antiquities, 112.

<sup>15</sup> Woodbury Lowery, The Spanish Settlements Within the Present Limits of the United States, 1513-1561, 158-159.

Even at this early date they were noted among the tribes for their golden wealth which they had accumulated from numerous Spanish wrecks cast away upon the keys in passage from the south and two centuries later they were regarded as veritable pirates, plundering and killing without mercy the crews of all vessels, excepting the Spanish, so unfortunate as to be stranded in their neighborhood. 16

The name Caloosa, defying interpretation, appears in the early French and Spanish records as Calos, Carlos, and Calusa; in the English records as Caloosa, Carloosa, and Charlotte. The name survives today in Caloosa village, Caloosahatchee River, and Charlotte Harbor.<sup>17</sup> The language of the Caloosa, surviving only in a few place names, shows affinity with the Choctaw, and Caloosa may be a combination of Kallo, "strong," and lusa, "black." The second element of Caloosahatchee is the later Seminole hachi,<sup>18</sup> "river."

When Ponce de Leon landed on the west coast, he was able to find an Indian who understood Spanish. Wherever the Spaniard traveled along the coast he encountered a hatred for the Spanish which bore testimony to previous unfortunate

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16 James Mooney, "Calusa," Handbook of American Indians, Bulletin 30, Part I, Bureau of American Ethnology, 1912, 195.

17 John R. Swanton, Early History of the Creek Indians and their Neighbors, Bulletin 73, Bureau of American Ethnology, 1922, 29-30. Cited hereinafter as Early History of the Creeks.

18 William A. Read, "Florida Place-Names of Indian Origin and Seminole Personal Names," Louisiana State University Studies, XI (1934), 45-46. Cited hereinafter as "Florida Place-Names of Indian Origin."

experiences. De Leon had with him, ". . . one or more Indians who gave him the Indian place names of Florida and translated their meaning into Spanish."<sup>19</sup> These competent guides must have been brought along with the expedition, thus showing previous contacts between the Spanish and the Florida aborigines.

In the period from 1521 to 1560, Spanish attempts at colonization in Florida and the nearby regions of the Atlantic and Gulf coasts ended in dismal failure. France, sunk in a slough of "decadence and civil war" from which the Huguenot leader Coligny dreamed of rescuing her "by snatching treasure and colonies" from Spain, sent out several expeditions in the decade of the 1560's.<sup>20</sup> The French Protestants turned to the southern coast of North America for settlements and Jean Ribaut attempted to plant colonies, at Port Royal in 1562 and at the mouth of the St. Johns River in 1564, from which locations the Spanish treasure fleets might be seized. The Port Royal colony ended in the settlers embarking for France in a leaky ship, while the St. Johns colony was also short lived, being destroyed by Pedro Menendez de Aviles in 1565. The little French colony in Florida was twice visited by Rene de Laudonniere, who was

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<sup>19</sup> David O. True, editor, Memoir of D<sup>o</sup> d'Escalente Fontaneda Respecting Florida Written in Spain, about the Year 1575, Translated from the Spanish with notes by Buckingham Smith, Note 47E, 62. Cited hereinafter as Memoir of Fontaneda.

<sup>20</sup> Kathryn T. Abbey, Florida, Land of Change, 26-27.

accompanied by an artist, Jacques Le Moyne. Le Moyne made a great many sketches of the scenes he saw in the new world, and on his return to France the drawings were published, together with an explanatory narrative and one of the better maps of the times. From Le Moyne's account it is possible to glean something of Lake Okeechobee and the Everglades in the sixteenth century.

During the time of Laudonniere's second visit to the Florida colony stories were heard of foreigners living with some of the Indian tribes. The French offered rewards to the Indians who would bring such persons to them; as a result two Spaniards were brought into the French village. When questioned as to how they arrived in Florida, these men related that they had been members of an expedition which had been wrecked on the Florida reefs and had fallen  
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into the hands of the Caloosa.

Both were brought in, naked with hair down to their hams, Indian fashion. Spaniards by birth, but so accustomed to the natives' manners, the French seemed foreigners. They were clothed, shaved, and bathed, they kept their hair to show the hardships they had experienced in India. 22

The two Spaniards related the details of their shipwreck near one of the Florida keys, and how the chief of the

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21 Jacques Le Moyne, Narrative of Le Moyne, an Artist Who Accompanied Laudonniere, 1564, 10-11.

22 Ibid., 10.

Caloosa, King Calos, had kept for himself the greater part of the riches from their vessel and others that had suffered similar disasters. The majority of the crew and passengers, many of whom were women and children, had been saved and continued their existence as slaves of the Caloosa. They regarded King Calos as the handsomest and largest Indian of all that region, a powerful ruler, possessed of a great store of gold and silver collected from marine disasters along the coast and from trade among neighboring tribes.<sup>23</sup> The king was held in great veneration because of his magical incantations which his people believed furnished them with the goods of life. At harvest time each year the barbarous king sacrificed a man set aside for this purpose, usually one of the group of captive whites.

According to these Spaniards, the village of the chief of the Calos lay on a river beyond the Cape of Florida, forty or fifty leagues towards the southwest.<sup>24</sup> One of them told how he had acted as a courier to the chief and had been sent several times on a four or five day journey from Calos to a chief named Oathchaqua on the east coast.

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<sup>23</sup> Jacques Le Moyne, Narrative of Le Moyne, an Artist Who Accompanied Laudonniere, 1564, 11.

<sup>24</sup> The river was most likely the Caloosahatchee. Buckingham Smith, editor, (MSS) "Memoir of Hernando D'Escalante Fontaneda on the Country and Ancient Indian Tribes of Florida," 48-50.

Midway on this journey there is, in a great freshwater lake called Sarrope, an island about five miles across, abounding in many kinds of fruit, and especially in dates growing on palm trees, in which there is a great trade. There is a still greater one in a certain root of which flour is made, of so good a quality that the most excellent bread is made of it, and furnished to all the country for fifteen leagues about. Hence the inhabitants of this island gain great wealth from their neighbors, for they will not sell the root except at a high price. Moreover, they are reckoned the bravest people of all that region. . . . 25

Woodbury Lowery's placement and description of the Indian tribes in southern Florida in the sixteenth century put the province of the Caloosa on the southwestern extremity of the peninsula about the river which recalls their name. A populous and powerful nation, rich in pearls, they were settled in many little villages along the Gulf coast and the shores of Lake Okeechobee. This region was also inhabited by descendants of Cuban Indians who had come in

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25 Jacques Le Moyne, Narrative of Le Moyne, an Artist Who Accompanied Laudonniere, 1564, 11. On his crude map of Florida Le Moyne placed the territory of Calos at the southernmost end of the peninsula, a little to the west of the cape at the extreme south, the country of Oathcaqua at Cape Canaveral, and approximately midway between the Atlantic Ocean and the Gulf of Mexico. Swanton believed Le Moyne's placing of Lake Sarrope in the south central section of the state to be too far south and too far inland, as the French knew of it only by hearsay. Swanton pointed out that the island was probably Merritt Island behind Cape Canaveral and between the Banana and Indian Rivers rather than one in Lake Okeechobee. Buckingham Smith held that the lake was Okeechobee and the island was situated in it. John R. Swanton, Early History of the Creek Indians, 329; David O. True, editor, Memoir of Fontaneda, Notes 15S, 15Sw, 42-43.



search of the traditional rejuvenating waters. Lowery placed the province of Tequesta, peopled with aborigines who worshipped the sun under the semblance of a stuffed deer, on the Florida east coast from the southern end of the Indian River to the Florida Keys. He placed the Ais at the upper end of Tequesta in the vicinity of Cape Canaveral, the Indian and Banana rivers, and the Mosquito Lagoon.

In the summer of 1565, the Spanish adelantado Menendez directed Francisco de Reynoso, one of his captains, to visit Chief Carlos of the Caloosa on the west coast of Florida. With a company of thirty soldiers, Reynoso was directed to erect a fort for the protection of Spanish interests ashore and afloat, and to discover a waterway to "Lake Miami" through which communication by ship might be established from the Atlantic Ocean to the Gulf of Mexico by way of the St. Johns River. <sup>27</sup> The Caloosa, into whose country Reynoso was sent, were ". . . masters of a large district of country, as far as a town they call Guacata, on the Lake of Mayaimi,

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<sup>26</sup> Woodbury Lowery, The Spanish Settlements Within the Present Limits of the United States, 1513-1561, 63. James Mooney estimated the number of Caloosa Indians at 3,000, and their neighbors, the Ais and Tequesta at 1,000. James Mooney, "The Aboriginal Population of America North of Mexico," Smithsonian Miscellaneous Collections, LXXX (1928), Number 7, 7.

<sup>27</sup> Woodbury Lowery, The Spanish Settlements Within the Present Limits of the United States, Florida, 1562-1574, 263, 276.

which is called Mayaimi because it is very large." <sup>28</sup> Reynoso experienced a great deal of trouble with the Caloosa chief-tan, who was becoming restless with the lordly foreigners whose presence was whetting his thirst for blood. The Spanish captain and his little band of men withstood several sly attempts on their lives before the wily Carlos was put to death under a sentence of Reynoso. <sup>29</sup>

D<sup>o</sup> d'Escalente Fontaneda, born of Spanish parents in the service of the King of Spain in Peru, was on his way to the fatherland when the ship on which he was taking passage went afool on the notorious Florida hazards. <sup>30</sup> Captured by the Indians at the age of thirteen, the Spaniard remained in their hands until the age of thirty, when he was rescued by Menendez on one of the latter's explorations, probably in <sup>31</sup> 1566. His Memoir, written about 1575, has become one of

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<sup>28</sup> David O. True, editor, Memoir of Fontaneda, 12. "This name, of which Miami is a variant, may be a compound of Choctaw Maiha, 'wide,' and mih, 'it is so.' By Laguna de Mayaimi Fontaneda meant what is now called Lake Okeechobee. Aviles on his expedition up the St. Johns River in 1566, called this lake Maymi." William A. Read, "Florida Place-Names of Indian Origin," loc. cit., 17-18.

<sup>29</sup> Ibid., 16.

<sup>30</sup> Ibid., 17, 19.

<sup>31</sup> "In the year 1564, Pedro Menendez d' Aviles asked permission of the King to seek his only son; and soon after was appointed adelantamiento of Florida. He sailed the next year; and having broken up the French settlement of Fort Caroline of the Saint John's River, he went in search of Don Juan at the Bay of Carlos, and found that he was no longer living. It was probably at this time, in the year 1566, that Fontaneda was relieved from captivity." Buckingham Smith comment in note, David O. True, editor, Memoir of Fon-

the few source records concerning the Everglades prior to 1700.

Fontaneda described the locale of the present day Miami and nearby south Florida area as

. . . a place of the Indians called Tequesta, situate on the bank of a river which extends into the country the distance of fifteen leagues, and issues from another lake of fresh water, which is said by some Indians who have traversed it more than I, to be an arm of the Lake of Mayaimi. On this lake, which lies in the midst of the country, are many towns, of thirty or forty inhabitants each; and as many more places there are in which people are not so numerous. They have bread of roots, which is their common food the greater part of the time; and because of the lake, which rises in some seasons so high that the roots cannot be reached in consequence of the water, they are for some time without this bread. Fish is plenty and very good. There is another root, like the truffle over here, which is sweet; and there are other different roots of many kinds; but when there is hunting, either deer or birds, they prefer to eat meat or fowl. I will also mention that in the rivers of fresh water are infinite quantities of eels, very savory, and enormous trout. . . . The Indians also eat lagartos (alligators), and snakes, and animals like rats, which live in the lake, fresh-water tortoises, and many more disgusting reptiles which, if we were to continue enumerating, we should never be through. 32

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taneda, note 36S, 55. True, on the other hand, decided that Fontaneda could not have left Florida before 1569. Since the Spaniard became a member of Menendez's entourage, True's statement would not be inconsistent with Smith's speculation. Ibid., 23.

<sup>32</sup> David O. True, editor, Memoir of Fontaneda, 13. Undoubtedly the bread of roots refers to the koonti of the later Seminoles, and the smilax or red koonti. The root similar to a truffle is probably the mud or reed potato, common on the shores of many of Florida's mud-bottom lakes. The rats were probably otters.

Fontaneda commented that these Indians occupied a very rocky and very marshy country. The former was the rock ridge and pineland bordering the Everglades, and the latter cannot be mistaken for other than the glades. The clothing of the men and women was remarkable for its non-existence.

"They are subjects of Carlos, and pay him tribute of all the things I have before mentioned, food and roots, the skins of

deer, and other articles."<sup>33</sup> The lands of Florida, Fontaneda wrote, were abundant in pasturage and he recommended the Spanish government make stock-farms for the breeding of cattle, but he was not certain they were fit for settlement or the plantings of sugar cane, although he had seen stalks of the latter which had been set out and had begun to grow.<sup>34</sup>

In 1567 the Spaniards established a mission among the Caloosa, but it was never popular with the Indians and was soon discontinued; but the tribe later came under Spanish influence. One of the villages under the dominance of the Caloosa was inhabited by descendants of the Arawakan stock which lived in Cuba and South America as far south as Brazil. These Cuban aborigines had, according to Fontaneda, come to

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<sup>33</sup> David O. True, editor, Memoir of Fontaneda, 14. "These Indians have no gold, less silver, and less clothing. They go naked, except only some breech cloths woven of palm, with which the men cover themselves; the women do the like with certain grass that grows on trees. This grass looks like wool, although it is different from it." Ibid., 11.

<sup>34</sup> Ibid., 21.

Florida in search of the mythical waters of rejuvenation, and had been detained by the Caloosa. About the year 1600, and thereafter, the Caloosa carried on a regular trade by canoe with Havana in fish, skins, and amber.<sup>35</sup>

From the close of the sixteenth century to the transfer of Florida from Spain to England in 1763, little account can be found of the Caloosa on the west coast or their neighbors, the Tequesta, on the east coast. John R. Swanton, citing letters from the Lowery manuscripts, writes of an expedition sent to punish certain chiefs for attacking Christian Indians, and said that in 1681 many Indians fleeing from Guale were settling in the Caloosa towns.<sup>36</sup> "Another effort to missionize the Calusa in 1697 also failed but it is said that the Indians then living on Matacumbe Island were 'Catholics.'<sup>37</sup>"

The question as to what happened to the four thousand Caloosa, Tequesta, and Ais that Mooney estimated to be in Florida in 1650 is not easily answered. Mooney assigns the chief causes for the decrease in the aboriginal Indian population in the Gulf states to smallpox, dissipation, wars, slave raids, and removals.

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<sup>35</sup> James Mooney, "Calusa," loc. cit., 196; James Mooney, "Arawakan Colony," Handbook of American Indians North of Mexico, Bulletin 30, Part I, Bureau of American Ethnology, 74; David O. True, editor, Memoir of Fontaneda, 15.

<sup>36</sup> John R. Swanton, Early History of the Creek Indians, 343.

<sup>37</sup> Ibid.

The populous tribes of Florida seem to have dwindled rapidly under Spanish rule, and their destruction was completed in the eighteenth century by intrusions of the Creeks, who were armed with guns by the English of Carolina, while the Spanish Government refused firearms to its own dependents. 38

Hrdlicka assigned war, disease, and deportation as the causes of the aboriginal disappearances in Florida, though he believed traces of the earlier races might be discovered among the Everglades Seminoles.<sup>39</sup>

Buckingham Smith, in his report on the Everglades in 1848, refers to the traffic of the Indians of southern Florida at the turn of the seventeenth century, and quotes Barcia as saying ". . . that the traffic [with Cuba] in the month of March, 1698, was worth \$17,000. . . ." The invasions of the Creeks and other Indians allies of the English in the eighteenth century drove the Caloosa from the peninsula and forced them to take refuge on the Florida keys, especially Matecumbe, Key Vacca, and Key West.<sup>41</sup>

### 3. The First Tourists

References to the Everglades during the sixteenth and seventeenth centuries are vague and confusing. The Spanish established missions at Tequesta on the Miami River and, as before mentioned, on the Caloosahatchee River on the west

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38 James Mooney, "The Aboriginal Population of America North of Mexico," loc. cit., 7.

39 Ales Hrdlicka, The Anthropology of Florida, 70.

40 T. F. Smith, "Buckingham Smith Report," loc. cit., 20.

41 Ibid., 19-20; James Mooney, "Calusa," loc. cit., 196.

coast, but these activities did not prosper. Buckingham Smith, in his 1848 report on the Everglades, briefly traces the policies pursued by Spain in the interior and along the southern coasts of the state prior to the cession to the British in 1763. He says:

The Indians on the southern part of the peninsula spoke different languages, and were frequently at war with each other. . . . religious missions were established among them, and Catholic priests, accompanied by families of whites, were sent to reside among them as teachers to effect their conversion to Christianity, to advance their civilization, and to improve their social condition. . . . The savages were restrained from wars with each other and with the whites . . . were taught to observe the dictates of humanity and hospitality towards the unfortunate who were wrecked on their coast . . . were induced to devote their time to agriculture and the raising of stock, and encouraged to commence a traffic in peltries, birds, skins, and ambergis with Havana. The whites under this policy made settlements, and several religious houses were erected in the interior. 42

English and Indian invasions of the early 1700's from Georgia and Carolina interfered with the Spanish activities. Several missionaries were murdered and the inland and south Florida settlements and missions were ultimately abandoned by the Spanish. Trade between the remaining Caloosa and Havana was kept up, with the Indians adding fish and terrapin to the produce for which they received arms, cloth, and other articles. "Occasionally a large pirogue, or canoe, manned entirely by the Indians and their slaves, could be seen running in fair weather across from the keys to Havana,

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42 T. B. Smith, "Buckingham Smith Report," loc. cit., 19-20.

laden with articles for sale, or barter, in that market."

Under the provisions of the Treaty of Paris of 1763, Florida became an English colony. Interest in the peninsula was revived with this change in sovereignty, and a number of literary, historical, and descriptive productions concerning this newest English acquisition came off the London presses. In William Roberts' An Account of the First Discovery and Natural History of Florida, published in London in 1763, reference is made to the "Laguna del Espiritu Santo . . . situated between the islands, extending from north to south about 27 leagues . . . near eight leagues wide." <sup>44</sup> In the Thomas Jeffreys' map accompanying this work the lake is represented as having communications with the bays on the south and west of the peninsula, "and at the end of it . . . are two shoals and six islands, called the Cayos del Espiritu Santo:" <sup>45</sup> this large lake is as yet but little known." Commenting on the Jeffreys' map in 1886, Angelo Heilprin observed that a broad arm of the sea designated as Bahia del Espiritu Santo corresponded with the modern Tampa Bay, and that an opening into it from the west was possibly the <sup>46</sup> Manatee River.

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43 T. B. Smith, "Buckingham Smith Report," loc. cit., 21.  
44 William Roberts, An Account of the First Discovery, and Natural History of Florida With a Particular Detail of the Several Expeditions and Descents Made on that Coast, 18.  
45 Ibid.  
46 Angelo Heilprin, Okeechobee Wilderness, v.



William Gerard de Brahm, surveyor general for the southern district of North America, hired as one of his assistants a fellow Dutchman by the name of Bernard Romans.<sup>47</sup> Romans published his A Concise Natural History of East and West Florida in 1775. He mentions the Okeechobee-Everglades area, but was not sure that Lake Okeechobee existed. He related a conversation he had held with a Spanish pilot who had been a captive of the Florida savages.<sup>48</sup> The Spaniard spoke of a lake, wrote Romans, "Mayacco, seventy-five miles in circumference by his account. . . . The man told me that he had formerly been taken by the savages, and by them carried a prisoner in a canoe . . . to their settlements on the banks of the lake."<sup>49</sup>

William Stork, writing from the notes of De Brahm in 1769, gathered information on the province in general. In Stork's discussion of the Shark River section behind the cape of Florida and the sea coast eastward he pointed out that it consisted

. . . of swamp and highlands, the latter not exceeding 28,000 acres, in coarse reddish land, containing much moisture, whose luxurious plants are the pomegranate, the arboreous grape vine, the Chicasau plumb [sic], the opunita, spice trees,

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47 Carita Doggett Corse, "De Brahm's Report on East Florida, 1773," Florida Historical Quarterly, XVII (January, 1939), 219-226.

48 Bernard Romans, A Concise Natural History of East and West Florida, 285.

49 Ibid.

and a variety of unknown shrubs; the soil is as rich as dung itself, producing mangrove 50 and 60 feet high. . . . 50

Buckingham Smith declared in 1848 that, "From the works written during the possession of the Floridas by Great Britain, it is evident that the best informed, then, knew little of the interior of the Everglades."<sup>51</sup>

During the second occupation of Florida by Spain from 1783 to 1821 and for some time after the purchase of Florida by the United States little or no attention was given to the southern end of the mainland. The area remained one of mystery. The best accounts of the Everglades prior to the Seminole War are found in Charles Vignoles' Observations Upon the Floridas, and John Lee Williams' Territory of Florida. Vignoles made a lengthy trip around the peninsula and into the interior of the state. He described the Everglades as follows:

The Glade, or as it is emphatically termed, the Never Glade,<sup>52</sup> appears to occupy almost the whole interior from about the parallel of Jupiter inlet to Cape Florida, thence round to Cape Sable to which point it approaches very near, and northwardly as far as the Delaware river discharging into Chatam Bay: Its general appear-

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50 William Stork, editor, A Description of East Florida, with a Journal Kept by John Bartram, of Philadelphia, Botanist to His Majesty for the Floridas; Upon a Journey up to St. Johns River as far as the Lakes, 12.

51 T. B. Smith, "Buckingham Smith Report," loc. cit., 13.

52 Undoubtedly a typographical error as on pp. 52-53 the appellation Ever Glade is used, as are Great Glade and Eternal Glade on pp. 49 and 53.

ance is a flat sandy surface mixed in the large stones and rocks, with from six inches to two feet of water lying upon it, in which is a growth of saw and other grasses, so thick as to impede the passage of boats where there is no current. 53

Vignoles saw a number of islands and promontories in the glades, many of which were covered with hammock growth mixed with some pine and cabbage palm. These he believed capable of cultivation but they were located in such inaccessible positions as to repel most efforts at penetration.

The determination of the circumstance of this immense body of low land occupying the whole southern interior of East Florida, easily affords an explanation of those upon ancient maps, representing it as cut up by rivers and lagoons, communicating with each other and the sea; and it is by no means improbable that the knowledge of its existence, prevented the late government from commencing settlements in a country of so little promise, for had the regions boasted of as equal to Cuba existed here, there is enough of speculation in that island to have improved the land of promise long before this period. 54

Vignoles believed the Everglade morass had been exaggerated by the Indians, Negroes, and refugee whites, and that a sectional survey would have shown rich pieces of land in detached spots.  
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John Lee Williams visited the lower east coast in 1828 and, observing the Miami River, wrote: "The Miami [sic] River is a small stream that issues out of the glades and

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53 Charles Vignoles, Observations Upon the Floridas, 50.  
54 Ibid., 53.  
55 Ibid., 83.

enters Sandwich Gulf [Biscayne Bay] behind Cape Florida. . . .  
 The height of the glades above the tide has not been ascer-  
 tained.<sup>56</sup> Local inhabitants told Williams that they reck-  
 oned the altitude to be all of forty feet, but Williams felt  
 twenty feet was more nearly correct.

The fall of the Rattones, New Hillsboro, St. Lucie, Miami, Shark, Delaware, Caloosahatchee, and other rivers emptying out of the glades led Williams to speculate on the possibilities and results of deepening the channels of the rivers which drained the central area between the Atlantic Ocean and the Gulf of Mexico. Williams described the area as follows:

On reaching the level of the glades, a vast grass meadow is expanded, apparently as boundless as the ocean; you then pass on the winding lagoons from six to twelve miles westwardly and the grass, by degrees disappears and you are left in an unexplored grassy lake to which you can discover no bounds. . . . The grassy border of this lake is usually covered with water during the winter season, not so deep, however, as to hide the grass which is very thick and tall. During the summer, the ground is often dry and hard for ten miles beyond the timbered land. This tract is at all times stocked with wild game, and would afford a superior range for cattle.<sup>57</sup>

Reflecting upon the future development of the Everglades, he anticipated much of what has actually taken place. He said:

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<sup>56</sup> John Lee Williams, The Territory of Florida or Sketches of the Topography, Civil and Natural History of the Country, the Climate and the Indian Tribes from the First Discovery to the Present Time, 50. Cited hereinafter as Territory of Florida.

<sup>57</sup> Ibid., 151.

Could it be drained by deepening the natural outlets? Would it not open to cultivation immense tracts of rich vegetable soil? Could the waterpower, obtained by draining, be improved to any useful purpose? Would such draining render the country unhealthy? . . . . Many queries like these passed through our minds. They can only be solved by a thorough examination of the whole country. Could the waters be lowered ten feet, it would probably drain six hundred thousand acres; should this prove to be a rich soil, as would seem probable, what a field it would open for tropical productions! What facilities for commerce! 58

After studying old maps of the interior of the peninsula which depicted the principal rivers connecting the coasts on both sides and talking with native Indians working in the Spanish fisheries on Charlotte Harbor, Williams came to the conclusion that the area had never been explored. "Not one of the writers who have described this country since the change of flags, has been able to obtain any certain intelligence relating to this part of the peninsula."<sup>59</sup>

#### 4. The Seminole War

The Seminole Indian War in Florida was but a phase of the general movement in the United States in the nineteenth century to push the Indian farther west. The movement in the southernmost state differed from that in the Mississippi Valley in that it was from north to south, rather than east to west. American pioneers began to move into the new territory from adjoining states soon after the transfer in 1821.

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58 John Lee Williams, Territory of Florida, 151.

59 Ibid., 61.

While the territory had been in the hands of the Spanish from 1783 to 1821 a great deal of Indian trouble had resulted from the laxity of the Spanish policy in dealing with Indian problems. Andrew Jackson's invasions of Florida in 1814 and 1818 had almost caused war between the United States and Spain. But

The determination of the Seminoles to hold forever their lands in Florida, and to live there on an equal basis with the white inhabitants created the biggest single problem with which Territorial leaders had to deal. 60

The acquisition of Florida by the United States opened the lands of the peninsula to settlement by citizens of the republic. As much of the good land of the area was held by the red men, it was almost inevitable that attempts would be made to remove the natives, a custom which had prevailed in North America since earliest colonial days. Within two years of the acquisition of Florida the United States negotiated the treaty of Moultrie Creek with the Indians, providing that the latter move from the lands of Florida between the Appalachicola River and St. Augustine into a four million acre tract in the central portion of the peninsula, fifteen miles from the Gulf and twenty miles from the Atlantic.

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60 Sidney Walter Martin, Florida During the Territorial Days, 224.

61 John Titecomb Sprague, The Origin, Progress, and Conclusion of the Florida War; to which is appended a Record of Officers, Non-Commissioned Officers, Musicians and Privates of the U.S. Army, Navy, and Marine Corps, Who Were Killed in Battle or Died of Disease, 24-25. Hereinafter cited as Florida War.

In 1825 the Florida Indian agent petitioned the Indian Bureau in Washington to run a line for

. . . the northern boundary of the Indian territory . . . in order to show a line of demarcation to the white settlers, who are already thronging to the vicinity of the Indian settlements; and some . . . have taken positions near to, if not south of, where the line will necessarily run; and will, I fear, if not expelled, become troublesome, and create disturbances among the Indians, --they are squatters upon the public lands. . . . 62

Writing in 1848, Buckingham Smith declared that the primary source of the Seminole War was the arrangement of 1823, by which the upper Florida Indians were assigned to the region south of Micanopy. He believed, and with reason, that the treaty of that year effectually prevented the settlement of the coast and the interior; that it consolidated the Indians and placed them in the most defensible positions against removal. "Had they been assigned to the western part of the Territory, nearer a dense white population, it is conceived their ultimate removal west of the Mississippi could have been effected without the great delay, vast expense, and bloodshed that ensued."<sup>63</sup>

The decade from 1823 to 1833 was marked by an almost continuous series of Indian depredations and the white man's reprisals. Agitation to remove the red men reached a head in the signing of the Treaty of Payne's Landing and the

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62 John T. Sprague, Florida War, 28.

63 T. B. Smith, "Buckingham Smith Report," loc. cit., 22.

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Treaty of Fort Gibson in the latter year. By these treaties the Indians signified their willingness to migrate to the western territory. Both treaties were probably obtained under duress, and as Grant Foreman wrote: "In the dishonorable record of our dealings with the Indians there is perhaps no blacker chapter than that relating to the Seminole people."<sup>64</sup> Regardless of the niceties of treaty-making, the United States government was going to carry out the provisions for removing the redmen. After two years of stalling on the part of the Seminoles, January 8, 1836, was set as the date for embarkation from Tampa.<sup>65</sup>

But the Indians were unwilling to leave their homes and on December 28, 1835, massacred Major Francis Dade and his band of men who were on a march from Fort Brooke to Fort King. This act of the Seminoles signalled the beginning of warfare. The Seminole conflict was marked by few true battles; rather it was a series of raids, ambushes, and guerilla warfare.<sup>66</sup> The largest skirmish was fought on the northern

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<sup>64</sup> Grant Foreman, Indian Removal: The Emigration of the Five Civilized Tribes of Indians, 321. Cited hereinafter as Indian Removal.

<sup>65</sup> W. A. Croffut, editor, Fifty Years in Camp and Field: Diary of Major-General Eathan Allen Hitchcock, U.S.A., 83-85. Cited hereinafter as Hitchcock Diary. Grant Foreman, Indian Removal, 321.

<sup>66</sup> "Climaxing a decade of misrepresentation and misunderstanding between Washington and the Indians, it marked the inception of the longest, costliest, and bloodiest war in United States history. To congressmen at the capital, this war would mean an appropriation of thirty million dollars. To fifteen hundred soldiers, death; to Zachary Taylor, a tortuous path to glory, and the brevet of brigadier." Holman Hamilton, Zachary Taylor, Soldier of the Republic, 122.



shore of Lake Okeechobee on Christmas day, 1837, between the American forces under Colonel Zachary Taylor and the Indians. Taylor had moved out from Fort Brooke on Tampa Bay the previous week. He had with him eight hundred regular troops, one hundred and eighty Missouri Volunteers, and seventy Delaware Indians. The Seminoles were well concealed in a dense hammock surrounded by a swamp which separated them

. . . from the enemy, three quarters of a mile in breath [sic], being totally impassible for horse, and nearly so for foot, covered with a thick growth of saw-grass five feet high, and knee deep in mud and water, which extended to the left as far as the eye could reach, and to the right to a part of the swamp and hammock we had just crossed, through which ran a deep creek.

The soldiers were obliged to proceed on foot through this swamp to a disastrous engagement with the Indians who had skillfully planned the setting for it. The loss of the attacking force was twenty-six killed and 112 wounded, a large portion of whom were officers. The bodies of ten Indians were found and it was learned four others had been killed. 67

Taylor and his men succeeded in routing the Seminoles, who fled to the deeper recesses and more isolated spots of south Florida.

In the span of the years from Dade's massacre in December of 1835 to the cessation of hostilities in August of 1842 the Indians were gradually hunted down; the majority of the Florida red skins were sent to the western lands; the remainder escaped and fled into the areas south of Lake

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67 New York Observer, January 20, 1838, quoted in Grant Foreman, Indian Removal, 356-357.

Okeechobee and the Caloosahatchee River. General Thomas S. Jesup wrote the Secretary of War in February of 1838 of the foolishness of seeking to transfer Indians from one wilderness to another, from lands not required for agricultural purposes, ". . . when they were not in the way of the white inhabitants, and when the greater portion of this country was an unexplored wilderness, of the interior of which we were as ignorant as of the interior of China."<sup>68</sup>

Criticism of the army's conduct of the long drawnout Florida war spread from a local territorial concern to the national arena, and even caused some international comment. Captain Frederick Marryat, in his diary published in 1840, traced the causes and course of the Seminole War to the end of 1837. He cited American papers estimating the loss of men as high as three thousand, and the cost at \$30,000,000, all to subdue two thousand Indians who had held out against the American government and managed to subsist against an army four or five times their number.<sup>69</sup> But those who criticised were not well aware of the circumstances, as General Jesup pointed out. He said:

I, and my predecessors in command,<sup>70</sup> were not only required to fight, beat, and drive

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<sup>68</sup> John T. Sprague, Florida War, 201; see also Joshua Giddings, The Exiles of Florida, 182-183.

<sup>69</sup> Frederick Marryat, A Diary in America, with Remarks on its Institutions, 289-290.

<sup>70</sup> The list of army commanders is long and imposing. It is as follows: Edmond P. Gaines, Duncan Clinch, Winfield

the enemy before us, but to go into an unexplored wilderness and catch them. Neither Wayne, Harrison, nor Jackson, was required to do this; and unless the objects to be accomplished be the same, there can be no just comparison as to the results. 71

The general knew whereof he wrote, for in January and February of 1838 he led an expedition down the east coast from the head of navigation on the St. Johns River. On January 25 Jesup and his men engaged the Indians at the headwaters of the Loxahatchee River in the middle of the swamp of the same name. Theodore F. Rodenbough, a member of the Second Dragoons of the Second Cavalry, had vivid memories of the encounter. He wrote:

All I can say is that it is a most hideous region, in which nothing but serpents and frogs exist. The Indians themselves say that they cannot live here after March. While you are freezing we are melting with the heat, which equals that of July in New York. 72

Jesup ordered his men into camp at Jupiter Inlet for rest and rehabilitation after the long march from the St. Johns and the Loxahatchee battle. The men were almost naked and a third of them were without shoes. <sup>73</sup> Operating up and down

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Scott, Richard Keith Call, Thomas S. Jesup, Zachary Taylor, Alexander Macomb, Walker Armistead, and William J. Worth.

71 John T. Sprague, Florida War, 196.

72 Theodore F. Rodenbough, From Everglade to Canon with the Second Dragoons, an Authentic Account of Service in Florida, Mexico, Virginia, and the Indian Country, including the Personal Recollections of Prominent Officers, 30. Cited hereinafter as From Everglade to Canon.

73 Ibid.; John T. Sprague, Florida War, 193.

the coast from Jupiter, Jesup captured 678 Indians in February, the news of which caused a band of 360 more to surrender to Taylor on his trip through the central portion of the state. Jesup reported he had taken 1,955 Indians, while 33 escaped and 35 were killed between September, 1837 and May, 1838.<sup>74</sup>

On April 24, 1838 Colonel William S. Harney with a detachment from Jesup's command had a sharp skirmish with a group of Indians twenty miles below Biscayne Bay, but the Indians fled to the Everglades before the Americans could catch any of them.<sup>75</sup> By May of 1838 the Seminoles had been driven south to the environs of Lake Okeechobee and the Everglades, and the remaining four years of the war were fought in this remote region.<sup>76</sup>

Major General Alexander Macomb, commanding general of the army, came to Florida in April, 1839, hoping to bring an end to the strife. It was thought his high command and rank would impress the foe. Macomb released the Indian prisoners on hand and sent them to find their remaining tribesmen with offers of peace from the army. After a series of conferences the Indians agreed to retire to the region below Peace Creek, and on May 18 Macomb issued an order that the war had

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74 Grant Foreman, Indian Removal, 363.

75 T. F. Rodenbough, From Everglade to Canon, 34.

76 Charles H. Coe, Red Patriots: The Story of the Seminoles, 35-40.

77 terminated. One of the stipulations to the agreement was the establishment of a military post and a civilian trading house at Charlotte Harbor on the Caloosahatchee River. Colonel William S. Harney with a detail of thirty-two men was sent to the Caloosahatchee to set up the post and act as a guard for the white traders.

The usual vigilance was relaxed with the cessation of the fighting, and before dawn on July 23 eighteen soldiers were killed and six captured. Harney and the rest managed to escape the murderous band. 78 Strangely enough this outrage was not the product of Seminole cunning; rather, it was committed by a group of Spanish Indians under the leadership of Chikika, an intelligent chief of a group of about a hundred warriors. 79 John Lee Williams, who had traveled in the Charlotte Harbor region in 1828, described these Indians as follows:

. . . [they] never appeared at the agency to draw annuities, but lived by cultivating their fields, hunting, trading at the Spanish ranchos, bartering skins, mocking birds, and pet squirrels for guns, ammunition and clothing, and sometimes assisting in the fisheries. This race

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77 John T. Sprague, Florida War, 228-229; Joshua Giddings, The Exiles of Florida, 257-258.

78 T. F. Rodenbough, From Everglade to Canon, 36-38; John T. Sprague, Florida War, 233-236.

79 John T. Sprague, Florida War, 99-100; Grant Foreman, Indian Removal, 373; T. F. Rodenbough, From Everglade to Canon, 36.

of Indians would have remained peaceable to this day had not an order been issued . . . ordering them all to remove. 80

These Spanish Indians took no part in the Seminole War until the Seminoles, driven from central Florida, moved in- to the region below Lake Okeechobee. The Spanish Indians, as they are called in the accounts of the nineteenth century, had made no treaties regarding removal and had remained un- noticed in their coastal haunts, carrying on their commerce with Havana. The Seminoles quickly made friends with the Caloosa descendants and induced them to aid in the fight for their homeland on the peninsula.<sup>81</sup> "Their knowledge of the country and their long connection with the Spanish traders and fishermen afforded perfect facilities for supplying the Seminoles with arms and munitions of war. . . ."<sup>82</sup>

That the Spanish Indians had a just grievance against the United States government is made clear in the breakdown of the number of evacuees from Florida in New Orleans in May of 1838, waiting transportation to Arkansas. Foreman gives the figure as approximately 1,200, of whom nearly one-third were Negroes who had been raised among the Seminoles." "Among those who have gone up are about 150 Spanish Indians or Spaniards who have intermarried with the Seminoles."<sup>83</sup>

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80 John Lee Williams, Territory of Florida, 242.

81 John R. Swanton, Early History of the Creek Indians, 344-345.

82 John Lee Williams, Territory of Florida, 242.

83 Arkansas Gazette, May 30, 1838, quoted in Grant Fore- man, Indian Removal, 365.

Seven Spanish Indians who were in the group at New Orleans protested against further relocation and were left on their promise not to return to Florida until the close of the war.

The massacre at the post and trading house on the Caloosahatchee in July of 1839, close upon the Macomb-Fort King proclamation of the previous May, resulted in renewed criticism of the prosecution of the war by the army. The Seminole leaders hastened to report their innocence of this July crime, but the affair reopened a campaign that lasted for two years.<sup>84</sup> Determined to track the red men down, the army dispatched an agent to Cuba to secure trained man-hunting bloodhounds. The dogs subsequently arrived on the scene of action; however, the experiment ended in failure because of the hot weather and the amount of swamp and overflowed land of the Everglades and Big Cypress.<sup>85</sup>

The struggle with the Indians dragged on through 1839 although operations were considerably limited by the hot weather of the summer and the attacks of yellow fever in the autumn. When General Walker R. Armistead relieved General Taylor in April of 1840, the army had five thousand officers and men at the various forts in south Florida of whom almost six hundred were on the sick list.<sup>86</sup> The man hunts continued through the spring of 1840 with the capture

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<sup>84</sup> Grant Foreman, Indian Removal, 373.

<sup>85</sup> T. F. Rodenbough, From Everglade to Canon, 44; John T. Sprague, Florida War, 240-242.

<sup>86</sup> John T. Sprague, Florida War, 243, 277.

of 220 Indians in March and 200 in May.

On August 7, 1840 the Spanish Indians under Chikika again made their presence known when they attacked Indian Key, one of the chain south of Cape Florida. The Indians went ashore and proceeded to pillage and burn a small white settlement. Dr. Henry Perrine, a noted botanist, was among the whites murdered by the redskins. A former United States consul at Campeachy, Yucatan, Dr. Perrine had secured a township in the Biscayne Bay area in 1838, where it was his intention to experiment with the introduction of tropical

<sup>87</sup> crops. The scientist was residing on Indian Key with his family, who miraculously escaped murder by hiding under a wharf. Perrine had been waiting for the cessation of hos-  
<sup>88</sup>tilities in order to occupy his grant.

With the arrival of cooler weather in the fall of 1840, General Armistead ordered the resumption of operations against the fugitive enemy. Colonel William S. Harney and others led their commands from headquarters at Fort Pierce on the east coast,

. . . south and west, extending from the coast to Lake Okeechobee, thence through the Everglades, and. . . laid open the country, disclosing large fields once cultivated by the Indians; but the approach of troops had driven them still deeper into their fastnesses. 89

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87 William T. Cash, The Story of Florida, I, 333-334.

88 Senate Documents, Reports of Committees, Number 242, 30 Congress, 1 Session, 33; John T. Sprague, Florida War, 243-246.

89 John T. Sprague, Florida War, 261.



Entering the Everglades at the headwaters of the Miami River on December 4, 1840, Colonel Harney and the ninety men in his command followed a southwest course along the eastern shore of the grassy waters. They traveled in canoes, using individual paddles to ensure silence. The party pitched camp each night on the nearby islands, looking all the while for recent Indian signs. On the fourth day out the group reached Cochickeehadjo's Island in the southwestern glades, where they captured eight Indians, two of whom were warriors. These latter Harney summarily disposed of by hanging to a tree.<sup>90</sup> On December 8, Harney proceeded to Chikikai's Island in the early evening in hope of a night surprisal, but the guide got lost and it was late the following morning before the party made a landing.

Harney was not to be denied revenge for the Caloosahatchee massacre of part of his command in 1839. His detachment surprised a small group of Indians on the island, shot one warrior and captured two others and a number of squaws and children. Chikikai was wounded and fled, but was overtaken and killed.<sup>91</sup> Remaining in the area until the sixteenth Harney hanged nine warriors and killed an equal number in skirmishes. Reaching Shark River the party went down to the Gulf and from thence to Indian Kay, Ft. Dallas, and Ft. Pierce.

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90 T. F. Rodenbough, From Everglade to Canon, 507.

91 Ibid., 507.

A second trip into the Everglades made by Harney and a detachment in January, 1841, was important because of its disclosure of the nature of the Seminoles and their habitat. Leaving Ft. Dallas on New Year's Day with four large canoes and fifty men, the party went up Little Miami River to the edge of the glades where it spent the night and waited for sunset of the following day. "We then moved forward swiftly and noiselessly, at one time following the course of serpentine channels opening out occasionally into beautiful lagoons, at another forcing our way through barriers of saw-grass."<sup>92</sup>

After paddling several hours the party moved up on Chitto-Tustenuggee Island, an island some twenty acres in extent with soil two feet deep and very rich. The center of the island was cleared with the circumference protected by a wide fringe of live oak, wild fig, and wild mangrove trees. The Indians had located two towns, two dancing grounds, and a council lodge there in former times. All were now overrun with pumpkin, squash, and melon vines, occasional lima beans, and Cuban tobacco. Signs showed that the natives had been gone at least two weeks.<sup>93</sup> On a nearby island the soldiers found patches of green corn and sugar cane in addition to the usual vegetable vines.

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<sup>92</sup> Silvia Sunshine [Abbie M. Brooks], Petals Plucked from Sunny Climes, 247. Cited hereinafter as A. M. Brooks, Sunny Climes.  
<sup>93</sup> Ibid., 248.

After spending several days in scouring the islands along the eastern edge of the glades north from the Miami headwaters, the party reached a small island on which they flushed a party of four warriors, five squaws, and two children. Three of the warriors were shot on the spot, and three squaws and a child taken, "the other [child was] drowned by its mother to prevent its cries leading to her detection."<sup>94</sup> Harney and his command reached the headwaters of the New River at sunset on January 10 and were at Ft. Lauderdale by midnight.

On the last day of May, 1841, General Armistead was relieved by Colonel William J. Worth. Sprague estimated there were but two hundred and twelve Indian warriors remaining in the state, and yet the war was to drag on for another year. This number was reduced by almost twenty with the capture of Coacoochee, or Wildcat, and a party of fifteen in the middle of June.<sup>95</sup> Worth, seeking to bring the seemingly futile struggle to a close, worked on Coacoochee to bring his people in for the trip to the west and thus end the war. Rodenbough places the date as the Fourth of July, 1841, when the Indian, hearing a salute in honor of the day replied, "Yes, the white man is free, but he would make the red man his slave!"<sup>96</sup>

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94 A. M. Brooks, Sunny Climes, 248.

95 John T. Sprague, Florida War, 297.

96 T. F. Rodenbough, From Everglade to Canon, 511.

Coacoochee's full reply to Worth: "'I was once a boy,' said he, in subdued tones. 'Then I saw the white man afar off. I

By 1841 the Seminole War was being fought on Lake Okechobee and in the Everglades. In a report to the Secretary of the Navy dated January 24, 1841, Lieutenant John T. McLaughlin, commanding the Florida Naval expedition, recited the part played by his command of ninety seamen from the barges Ostego and Wave and the schooner Flirt. The Naval unit had cooperated with Colonel Harney in the latter's January trip into the eastern area of the glades near Miami and Ft. Lauderdale. <sup>97</sup> Leaving Harney near the headwaters of the New River, the McLaughlin command skirted the eastern edge of the Everglades on a southwest course, searching all the islands for Indians and arriving at the Gulf

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hunted in these woods, first with bow and arrow, then with a rifle. I saw the white man, and was told he was my enemy. I could not shoot him as I would a wolf or a bear; yet like these he came upon me. Horses, cattle, and fields he took from me. He said he was my friend. He abused our women and children, and told us to go from the land. Still he gave me his hand in friendship. We took it. Whilst taking it he had a snake in the other. His tongue was forked. He lied and stung us. I asked but for a small piece of these lands, enough to plant and to live upon, far south--a spot where I could lay the ashes of my kindred. This was not granted me. I was put in prison. I escaped. I have again been taken. You have brought me back. I feel the irons in my heart.' At this moment the battery of a government vessel at anchor fired a salute in honor of the day. The council recessed briefly and then reformed after the salute, when the chief asked what it meant. The interpreter, with some hesitation replied that, 'On that day many years ago the white people gained their rights as free men, and became their own masters.' As he listened the chief's eye flashed and he involuntarily clutched the handcuffs and turned to Colonel Worth, who for the first time in his life felt like 'going home,' and exclaimed bitterly, 'Yes, the white man is free, but he would make the red man his slave.'

<sup>97</sup> Senate Documents, Number 242, 30 Congress, 1 Session, 106-108.

of Mexico through Harney River on January 19.

Joint operations, of the army, navy, and marines, began in earnest in the fall of 1841. A joint expedition moved in October from Ft. Dallas, crossed the lower glades to the pine woods near the west coast, and thence to Punta Rassa. Leaving the Ft. Myers area on the second of November the expedition moved up the Caloosahatchee and into Lake Okeechobee and from there to the Loxahatchee and the east coast. The armed force saw a half dozen Indians on the whole trip but was not able to effect a capture. <sup>98</sup>

As illustrative of the peculiarity of the service to which these various corps were subjected, there was, at one time to be seen, in the Everglades, the dragoon in water from three to four feet deep, the sailor and marine wading in the mud in the midst of the cypress, and the soldiers, infantry and artillery on the land, in the water, and in boats. . . . Here was no distinction of corps, no jealousies, but a laudable rivalry in concerting means to punish a foe who had so effectually eluded all efforts. Comforts and conveniences were totally disregarded, even subsistence was reduced to the lowest extremity. Night after night, officers and men were compelled to sleep in their canoes, others in damp bogs, and in the morning cook their breakfast over a fire built on a pile of sand in the prow of a boat, or kindled around a cypress stump. 99

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98 John T. Sprague, Florida War, 333-335; Senate Documents, Number 242, 30 Congress, 1 Session, 109-112.

99 John T. Sprague, Florida War, 354. A day by day account of a sixty day naval expedition into the Everglades, Lake Okeechobee, the Kissimmee River, and Lake Tohopekaliga is found in George Henry Preble, "A Canoe Expedition into the Everglades in 1842." Tequesta: The Journal of the Historical Association of Southern Florida, V (1946), 30-51.

Reporting to Abel P. Upshur, Secretary of the Navy, on April 29, 1842, Lieutenant McLaughlin was able to state that "every portion of the Ever Glades and water courses of the interior, from Lake Tohopkeliga south, have been visited by [various detachments] . . . and examined and large fields and settlements broken up and destroyed." <sup>100</sup> McLaughlin reported that one of the detachments had, with the exception of twenty days, been employed without intermission in their canoes since October 9, 1841. The ships Flirt and Wave put in the Hillsboro River in May, gave chase to two Indians to the head of Snake Creek, where Indian fields of sugar cane, corn, and bananas were in cultivation. The command was divided into two scouting parties: one entered the country between the Miami and New Rivers, and the other into the glades. The second scout, composed of marines, was compelled to return to the post for want of water.

The fatigue and privation undergone by this detachment was so great that private Kingsbury fell in his trail and died from sheer exhaustion.

The waters of the Everglades had fallen so low that it was necessary to track the boats at all times; and at some to make ways of the boats' seats for miles and miles to slide them over. <sup>101</sup>

President John Tyler informed Congress on May 10, 1842, that he had authorized Colonel Worth to declare the

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<sup>100</sup> Senate Documents, Number 242, 30 Congress, 1 Session, 116.

<sup>101</sup> John T. Sprague, Florida War, 389.

hostilities against the Indians at an end when the military commander deemed it expedient. "He is instructed to open communications with those yet remaining, and endeavor by all peaceable means to persuade them to consult their true interests by joining their brethern at the West. . . ."<sup>102</sup>

Tyler estimated there were only two hundred and forty Indians left in Florida, of whom only eighty were capable of bearing arms. In order to relieve the federal government of further expense for protection, the president suggested certain inducements to settlers in the form of land, arms, and subsistence to families settling the Florida frontiers.

"Making a virtue of necessity, General Worth agreed that several hundred Seminole Indians might remain for the present in Florida upon conditions to which the Indians paid little attention."<sup>103</sup>

General Order number 28, issued by Colonel Worth on August 14, 1842, announced the Indian hostilities had ceased and put the few Indians in Florida within certain limits, roughly the section of Florida south and west of Lake Istokpoga and a line drawn through the middle of the mouth of the Kissimmee River at Lake Okeechobee to the Gulf of Mexico.<sup>104</sup> Sprague estimated there were three hundred

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<sup>102</sup> James D. Richardson, A Compilation of the Messages and Papers of the Presidents, 1789-1897, IV, 155.

<sup>103</sup> Grant Foreman, Indian Removal, 384.

<sup>104</sup> Ibid., 407; John T. Sprague, Florida War, 486.

and sixty Indians in Florida in 1845, of whom one hundred  
 and twenty were warriors.<sup>105</sup>

Among the significant results of the Seminole War were the removal of the majority of the Indians to the western lands and the consequent opening of the peninsula of Florida to white settlement. The reports brought back by the men in the armed services regarding the hitherto unknown lands and waters of south Florida served, in some measure, to acquaint the public at large with the territory. Army troops had garrisoned forts on both coasts and in the interior and military roads had been blazed throughout the whole section. Naval and marine units had cruised the inshore waters and carried out expeditions through the inland waterways.<sup>106</sup> Engineers had mapped and charted the area and all of the "exploring" soldiers and sailors had observed the fertile islands of the Everglades. Many of the islands were covered with a very rich soil and had been intensively cultivated by the Indians, producing crops of corn, beans, sugar cane, pumpkins, squash, melons, bananas, and tobacco.<sup>107</sup> Many of the men who fought in the Everglades, among them the Florida volunteers, remained in the state and undoubtedly remembered the primitive gardens on the little islands.

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<sup>105</sup> John T. Sprague, Florida War, 512.

<sup>106</sup> Joseph Christmas Ives, compiler, Memoir to Accompany A Military Map of the Peninsula of Florida South of Tampa Bay, 1-42.

<sup>107</sup> A. M. Brooks, Sunny Climes, 247-248; T. F. Rodenbough, From Everglade to Canon, 507-508; John T. Sprague, Florida War, 389.



## CHAPTER III

### FEDERAL AND STATE ATTEMPTS AT RECLAMATION OF THE EVERGLADES

#### 1. Action to Secure Title to the Everglades

The people of the territory of Florida recognized the need for government financed internal improvements some years before attaining statehood. In the St. Joseph Constitution, adopted by the convention which assembled in 1838, Article XI, Section 2, declared:

A liberal system of internal improvements being essential to the development of the resources of the country, shall be encouraged by the government of this State, and it shall be the duty of the General Assembly, as soon as practicable, to ascertain by law proper objects of improvement in relation to roads, canals and navigable streams, and to provide for a suitable application of such funds as may be appropriated for such improvements. <sup>1</sup>

In 1841, Congress aided the cause of internal improvements of states entering the Union by passing an act granting 500,000 acres of land to each new state. <sup>2</sup> This grant, which Florida received on its admission in 1845, formed the nucleus of the internal improvement fund of public lands in the state. Further public lands granted the state on admission included eight sections for a seat of government, four townships each for two seminaries of learning, and section sixteen of every

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<sup>1</sup> Acts and Resolutions of the General Assembly of the State of Florida, 5 Session, 1851, XVI.

<sup>2</sup> 5 United States Statutes at Large, 455.

township for the support of public education. In addition, the federal government allotted five per cent of the net proceeds from the sale of its lands within the states for the purposes of public education of the particular states concerned.<sup>3</sup>

The attention of the citizens of Florida had turned toward other federal lands, even before the peninsular territory became a state. On December 30, 1842, Florida's territorial delegate to the Congress, David Levy, offered the following resolution on the floor of the House of Representatives:

Resolved, that the Secretary of War be directed to place before this House such information as can be obtained in relation to the practicability and probable expense of draining the everglades of Florida.<sup>4</sup>

The resolution was transmitted to the Secretary of War after being adopted by the House. On January 7, 1843, the Secretary's reply to the resolution was referred by the Speaker of the House to the Committee on Territories. The reply contained a report by the colonel of the corps of topographical engineers that there was no information in the department on the matter of Everglades drainage, ". . . and all that has come to my knowledge is speculation, supposition, reasoning from supposed facts, verbally communicated by officers and others who have been in that region of country."<sup>5</sup> The army

<sup>3</sup> 5 United States Statutes at Large, 455.

<sup>4</sup> Congressional Globe, 27 Congress, 3 Session, XII, 102.

<sup>5</sup> House Documents, Number 43, 27 Congress, 2-3.

engineer reported that such meagre data would not justify the practicability of the project nor furnish an estimate of the cost of the proposed works. Furthermore, the colonel continued, an additional appropriation of \$10,000 would be required to make the survey, since all moneys appropriated for surveys had been assigned to the investigation of the military defenses of the nation and to a study of the topography west of the Mississippi River.

Florida became a state on March 3, 1845, and assumed equal footing with the original members of the union. Ten months later the legislature, now representing a commonwealth, passed a resolution instructing the Florida Congressional delegation to bring the important subject of Everglades drainage ". . . to the attention of Congress at the earliest day, and earnestly press upon its consideration the propriety and policy of forthwith appointing competent engineers to examine and survey the aforesaid region."<sup>6</sup> The resolution reached the floor of the United States Senate, where it was referred to the Committee on Public Lands and ordered printed.<sup>7</sup> It should be noted that this 1845 resolution called attention to the fact that these lands had hitherto been considered valueless in consequence of being covered by water at stated periods of the year, but

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<sup>6</sup> Acts and Resolutions of the First General Assembly of the State of Florida, Adjourned Session, 1845, 151.

<sup>7</sup> Senate Documents, Number 35, 29 Congress, 1 Session, 1-2.

that recent information had induced the belief that the region could be entirely reclaimed. Such reclamation, the state legislature pointed out, would be to the interest of the national government with "its vast donation of unlocated land, to adopt some early and efficient measures to test the accuracy of these representations."<sup>8</sup>

Senator James D. Westcott, Jr., of Florida became the champion of the Everglades drainage proposition in the national capital. On May 11, 1847, Westcott wrote to Robert J. Walker, Secretary of the Treasury, referring to the conversations and letters he had written Walker on the subject of the Everglades.<sup>9</sup> Westcott pointed out that repeated demands had been made on the Florida legislature, and that the legislature had passed numerous resolutions seeking to invoke the action of the United States government in making surveys of the Everglades. He cited the opinions of army officers who had been on duty in southern Florida, as well as those of men who had lived in the vicinity, to show that the Everglades were from six to ten feet above sea level; that standing water on the glades was from one to five feet in depth; that the distance to tide-water from the glades was in many places not more than a mile; and finally, that the rock ridge separating the

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2. <sup>8</sup> Senate Documents, Number 35, 29 Congress, 1 Session,

<sup>9</sup> Senate Documents, Number 242, 30 Congress, 1 Session, 66-69.

glades from sea level consisted of soft coral rock composition, easily excavated, and but ten to twelve feet thick. Westcott said that he was in no position to set a value on the lands when once drained, but that parties familiar with the area assured him that many of them would be the best rice and sugar lands in the nation. Lastly, he asserted that it would not be a chimerical idea to anticipate a channel from the Gulf of Mexico to the Everglades for the use of small coasting vessels in the navigable waters of that part of the peninsula. He closed his letter by asking that an agent be sent to make a reconnaissance of the lands so that a report might be laid before Congress at its next session.

## 2. The Buckingham Smith Report

Secretary Walker did not delay in taking action on Westcott's request to secure information on the Everglades. On June 18, 1847, Walker sent a letter of instruction, detailing certain services to be performed, to Buckingham<sup>10</sup> Smith of St. Augustine, Florida. The letter directed

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<sup>10</sup> Thomas Buckingham Smith, (1810-1871), lawyer, politician, and antiquarian, was born on Cumberland Island, Georgia. He moved with his family to St. Augustine, Florida, during the second period of Spanish rule. He attended Washington College, Hartford, Connecticut, and was graduated from Harvard law school in 1836. In 1839 he was secretary to Robert R. Reid, governor of Florida, and in 1841-43, a member of the territorial legislative council, being elected Speaker in 1843. He later entered the diplomatic service of the United States, and was stationed at different

Smith to examine the land offices at Tallahassee, Newmansville, and St. Augustine, Florida, in the capacity of auditor, and serve as an agent in ". . . the procurement of authentic information in relation to what are generally called the 'Ever Glades' on the peninsula of Florida."<sup>11</sup>

In the letter to Smith, Walker cited the representations which had been made to the treasury department that there were several million acres of public lands in the area that could be reclaimed at a comparatively small expense and that great advantages would result from such a measure. "It is represented that these lands can be drained by two or three small canals from the lake into the rivers opposite to it, emptying into the Gulf of Mexico and into the straits of Florida."<sup>12</sup> Walker wrote that it was expected that Smith would visit the section and make a reconnaissance, for which the department furnished sundry charts and maps.

Any information that you can obtain in writing, from intelligent citizens acquainted with this subject, you will communicate with your report; and you will seek from them facts

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times in Spain and Mexico. While in Spain he did considerable research in the national archives, from the results of which he published narratives of the various documents concerning the history of Spanish Florida. James Alexander Robinson, "Thomas Buckingham Smith," Dictionary of American Biography, XVII, 243-244; William T. Cash, The Story of Florida, I, 402-403.

<sup>11</sup> Senate Documents, Number 242, 30 Congress, 1 Session, 71.

<sup>12</sup> Ibid., 71.

and specific data showing the grounds of opinions that may be given. . . . the department relies with confidence on your impartial fulfillment of this service, free from any sectional or local predilections. . . . 13

During the first week of January, 1848, the Florida legislature again passed a resolution regarding the subject of the Everglades. The resolution stated that the large tracts of public lands lying in the state south of Lake Okeechobee were covered with water, were incapable of survey, and therefore valueless to the nation, but that it was believed the lands could be drained and made valuable for the cultivation of tropical produce. In addition, it declared that the reclamation would not only remunerate the state for the expense, but would conceivably yield a surplus above such expense. The General Assembly urged Congress to grant to Florida all of such lands lying south of the Caloosahatchee River and the northern shore of Lake Okeechobee between the Gulf of Mexico and the Atlantic Ocean on condition that the state drain the lands and apply the proceeds of the land sold, after defraying the expense of draining, to the purposes of public education.<sup>14</sup> Senator Westcott introduced this resolution on the floor of the United States Senate on February 29, 1848. The resolution

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13 Senate Documents, Number 242, 30 Congress, 1 Session, 72.

14 Laws of the State of Florida, Passed at the Third Session of the General Assembly of the State, 1847, 80-91.

was read, referred to the Committee on Public Lands, and  
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ordered to be printed.

Approximately a year after he had been commissioned as an agent to examine the land offices of Florida, Buckingham Smith submitted a report on his inspection of the Everglades. This report, in the form of a scholarly essay, remains today a monument to the resourcefulness of the man who gathered the material.<sup>16</sup> Smith left St. Augustine, Florida, on August 29, 1847, aboard the revenue cutter Wolcott, which had been furnished by the Treasury Department, and arrived at Ft. Dallas on the Miami River the last day of the month. With a small boat from the cutter he explored the various streams emptying into the Biscayne Bay area and made an eight day trip into the Everglades. On September 21 the cutter departed for Key West, remaining there for two days before making for Cape Sable. Smith investigated the islands around Whitewater Bay beyond the cape, and then put out for Punta Rassa on the west coast of Florida. Pausing at Punta Rassa for four days, Smith made an excursion up the Calcoosahatchee River to Lake Flirt, which he found to be the headwaters of that river. After leaving Punta Rassa, the cutter sailed to St. Marks, where Smith debarked

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15 Senate Documents, Number 69, 30 Congress, 1 Session, 1.

16 Senate Documents, Number 242, 30 Congress, 1 Session, 10-38.



and returned to his home in St. Augustine.

In his report, Smith declared:

To reclaim the Ever Glades . . . and the low lands on the margin of the Kissimee <sup>[sic]</sup> river and its tributaries, and the other rivers emptying into Lake Okechobe, this lake must be tapped by such canals running into the Caloosa-Hatchee on the one side, and into the Loca-Hatchee or San Lucia, or both on the other, and cuts must also be made from the streams on both sides of the peninsula into the Glades. 17

Smith further declared that after the waters of the glades were lowered as much as five feet, there would probably be a necessity for several drains through the glades by which surplus waters accumulating from the rains could be conducted to tidewater. The fact that the Everglades received a large share of its water from the overflow of Lake Okechobee, which in turn received most of its water from the Kissimmee River, was known, but Smith was one of the first to publicize it. He estimated the average elevation of the glades to be twelve feet above sea level, and believed them to be covered with water in the fall of the year to an average depth of six feet. With respect to the cost of the undertaking, Smith estimated that \$500,000 would defray the outlay necessary for the successful accomplishment of cutting the rim of the glades on the east and west coasts at the heads of the various streams. These streams,

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17 Senate Documents, Number 242, 30 Congress, 1 Session, 16.

which received their initial waters at low places in the rim, could be made into canals and thus drain the surface of the Everglades.<sup>18</sup>

In answer to the question of adaptability of the lands of the area to cultivation, Smith stated that the deposit of soil above the rock was generally two to three feet in depth, and that it was exceedingly light when dry and easily broken into pieces.

The Ever Glades are entirely below the region of frost, and the meteorological and barometrical statistics . . . prove that the climate is as favorable to the cultivation of tropical fruits as that of any country between the twenty-eighth and twenty-fourth parallels. 19

It was Smith's belief that the land so reclaimed would be profitable for the growth and production of coffee, sugar, cotton, rice, tobacco, sisal hemp, as well as citrus, bananas, figs, olives, pineapples, cocoanuts and other tropical crops and fruits.<sup>20</sup> Smith concluded his report with the following statement:

The Ever Glades are now suitable only for the haunt of noxious vermin, or the resort of pestilent reptiles. The statesman whose exertions shall cause the millions of acres they contain, now worse than worthless, to teem with the products of agricultural industry; that man who thus adds to the resources of his country . . . will merit a high place in public favor, not only with his own generation, but with posterity. He will have created a State! 21

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17. 18 Senate Documents, Number 242, 30 Congress, 1 Session,

19 Ibid., 31.  
20 Ibid., 30-33.  
21 Ibid., 34.

With his report Smith submitted a number of letters, extracts of letters, quotations from other writers on the area, and memoranda pertaining to the Everglades, as had been requested in his instructions. The first of these was an extract from the report of Colonel Robert Butler, surveyor general of Florida in 1847, to the Commissioner of the General Land Office. From Colonel Butler came the dictum that the Everglades could not be surveyed until they had been drained. This gentleman advised the granting of the area to the state of Florida, since the Everglades were in the interior of the state, without navigable rivers, and thus their reclamation by the federal government would conflict with the sovereignty of the state. He proposed the grant to the state of one moiety, conditioned on the state's drainage of the Everglades within a certain period of time. The United States would, thereby, realize for survey and sale the other moiety, ". . . thus would be opened a large fertile surface for the habitation of man, cultivating sugar and tropical fruits extensively thereon."<sup>22</sup>

Another letter which Smith transmitted with his report was one from General James Gadsden of South Carolina, who had been one of the army commanders in Florida during the Seminole War. Gadsden had written Secretary Walker in 1848 that:

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<sup>22</sup> Executive Documents, Number 2, 30 Congress, 1 Session, 155.

The elevation of the Everglades . . . above tidewater proved the capability of being drained, while the inlets along the coast, and the number of small rivers and creeks, which at seasons relieved the overflowings of the interior basin of Florida, showed that by deepening these natural outlets at their heads, and multiplying the number of parallel and artificial cuts at favorable points, the whole country at times submerged, might be reclaimed and brought into profitable cultivation. 23

Gadsden added that the subject was one of great public interest, for the reclamation of southern Florida would open the only portion of the United States capable of competing with the tropical latitudes in all the productions which enriched them.

A third letter included by Smith was one written by General Thomas S. Jesup, Quartermaster General of the Army in 1848. Jesup had commanded troops in Florida during the Seminole War. Writing to Senator J. D. Westcott on the Everglades, Jesup declared:

The swamps are peat swamps, which if drained, would soon be converted into olive, lime and orange plantations, and would be cultivated by a numerous white population, which would be interposed between the sugar plantations, cultivated by slaves and the free blacks of the West Indies. This in a military point of view, would be highly important, and add greatly to the strength of the south. 24

General William S. Harney had made several long trips through the Everglades during the Seminole War. In his

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23 Senate Documents, Number 242, 30 Congress, 1 Session, 42.

24 Ibid., 43.

letter to Buckingham Smith, Harney declared that canals from Lake Okeechobee to both the Caloosahatchee and the Loxahatchee should be dug, as well as canals into the Ratonas, Little, Arch Creek, Miami, and Shark rivers. Harney declared that the two chief canals should be ten to fifteen miles long, thirty feet wide, and from five to fifteen feet deep. He concluded:

No person can say with positive certainty what the soil of the Everglades when drained would or would not produce; but it is my opinion it would be the best sugar land in the south and also excellent for rice and corn. 25

One of the correspondents from whom Smith sought information regarding the Everglades was Stephen Russell Mallory, Collector of Customs at Key West, Florida. Mallory had lived in Key West since 1820, and had fought in the Seminole War.<sup>26</sup> Mallory, later to become a United States Senator and Confederate Secretary of the Navy, had closely observed that particular part of the state in question. He wrote:

My own impression is that large tracts of the Glades are fully as low as the adjoining sea, and can never be drained; that some lands around the margins may be reclaimed by drainage or dyking, but that it will be found wholly out of the question to drain all the Ever Glades. As the country now is, healthy and mild, with its good lands in small parcels, with water at

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<sup>25</sup> Senate Documents, Number 242, 30 Congress, 1 Session, 44-45.

<sup>26</sup> Kathleen Bruce, "Stephen Russell Mallory," Dictionary of American Biography, XII, 224-226.

hand anywhere for irrigation, I think it offers inducements to small capitalists, men with from one to ten hands, to go there and raise fruits. Fruit will grow well there. 27

Captain John T. Sprague, whose book on the Seminole War appeared in 1848 and remains today the most definitive study, was astounded at any proposal to drain the Everglades. He informed Smith that he had

. . . never supposed the country would excite an inquiry, other than as a hiding place for Indians, and had it occurred to me that so great an undertaking, one so utterly impracticable, as draining the Ever Glades was to be discussed, I should not have destroyed the scratch of a pen /notes used in writing his book/ upon a subject so fruitful, and which cannot be understood but by those who have waded the water belly deep and examined carefully the western coast by land and by water. 28

### 3. The Swamp and Overflowed Lands Act

Among the bills submitted to the first session of the Thirtieth Congress was one introduced by Senator Westcott which would have given the "Peninsula State" all lands, lakes, and watercourses south of Township 36 South, through the islands or keys adjacent to the coast and north of Cape Sable.<sup>29</sup> The Senator gave notice of his intention to introduce this bill on May 3, 1848, but it was not until the night of August 1 that the proposed law was introduced, read twice, and then referred to the Committee on Public Lands as

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55. 27 Senate Documents, Number 242, 30 Congress, 1 Session,

28 Ibid., 58-59.

29 Ibid., 7-8.

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Senate Bill 338. The Westcott bill provided:

1. Commencement of drainage works construction before 1852, to be finished within ten years
2. All land sales proceeds to be appropriated to works of reclamation, if the lands were granted under this bill
3. No land to be sold within the ceded area for less than \$1.25 an acre until drainage work completed
4. No encroachment on Seminole Indian reservations
5. One thirty-sixty of all lands granted to be reserved for the support of the common schools
6. One-half of the lands already surveyed to be reserved in alternate sections for the federal government
7. Proceeds of land sales, within this area, above the costs of drainage works to be devoted to the purposes of education
8. No tolls on United States government commerce in any canals that might be excavated in the area
9. Survey of the lands to agree with the form and plans of existing United States government surveys

On August 9, 1848, on motion of Westcott, the Senate resolved that the Secretary of the Treasury send to that body any information in his department on the reclaiming of the Everglades, or the expediency of deeding them to Florida for that purpose, and the Secretary's opinions as to the best mode and manner for accomplishing those objects. 32

Secretary Walker complied with the resolution on the following day, transmitting the Buckingham Smith report, the appendix to the Smith report consisting of twenty-seven sun-

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30 Congressional Globe, 30 Congress, 1 Session, 723, 1025.

31 Senate Documents, Number 242, 30 Congress, 1 Session, 1-2.

32 Senate Journal, 30 Congress, 1 Session, 551.

dry documents, and a letter from the Commissioner of the General Land Office on the quantity and quality of the lands under consideration. Walker called attention to Smith's estimate that \$500,000 would be necessary for the drainage and to the divided opinions on the probable worth of these lands after their reclamation; he concluded that "The test of experience can alone solve the doubt."<sup>33</sup> The various papers submitted by the cabinet member were read and referred to the Committee on Public Lands.<sup>34</sup>

Senator Sidney Breese of Illinois, chairman of the Committee on Public Lands, made a report on the Everglades bill on August 12. Members of the committee showed considerable interest in the conditions which the bill imposed on Florida. The committee agreed with the Commissioner of the Land Office in that, although more than six-sevenths of the region was unsurveyed, the concession made by the bill of the alternate sections of the surveyed lands below the northern boundary of the proposed grant was a full consideration. The committee looked with favor on the fact that if the proposed improvements were carried out, the United States would derive pecuniary benefit, at no expenditure, in the bottom lands of the Kissimmee River and its tribu-

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<sup>33</sup> Senate Documents, Number 242, 30 Congress, 1 Session, 3-4.

<sup>34</sup> Senate Journal, 30 Congress, 1 Session, 557.



taries which were then valueless by reason of their annual overflowed condition. In addition, the committee reported:

The proposed canals being made the channels of communication by vessels across the peninsula from the Atlantic to the Gulf Waters, thus avoiding the perilous reefs further south, it is a consideration of no trifling moment to the navigating interests of the Union. 35

The committee reported the bill on August 12, without amendment, and recommended its passage. The special reports and accompanying documents were submitted at the same time. On a motion by Senator Westcott, the Senate ordered five thousand copies of the reports and documents printed for the use of the Senate. <sup>36</sup> Westcott had the large number of copies printed, it was reported, "for distribution where . . . it may be of service." <sup>37</sup>

The first session of the Thirtieth Congress adjourned on August 14, so the Florida drainage bill was forced to await action until the beginning of the second session the following December. On December 20, Senator Westcott moved that the Senate proceed to consider his bill, and appeared for favorable passage of his bill. Senator John M. Niles of Connecticut inquired as to the extent of the area conveyed by the grant. Westcott's answer came from the Commissioner of Lands' report, and was broken down into the

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2. 35 Senate Documents, Number 242, 30 Congress, 1 Session,  
 36 Senate Journal, 30 Congress, 1 Session, 580-581.  
 5. 37 Senate Documents, Number 89, 62 Congress, 1 Session,

following categories:

Swamps	4,300,000	Acres
Overflow	1,000,000	"
Pine Barren	1,000,000	"
Sand Barren	1,500,000	"
Total	<u>7,800,000</u>	"

Senator David L. Yulee [Levy], the junior senator from Florida, gained the floor stating that he understood that it was his colleague's intention to defer final action on the bill until the members had stated their objections. Yulee declared that he had not been consulted in relation to the bill and upon perusing it found it so objectionable that he doubted that he would give the bill his vote. A similar measure was proposed, Yulee continued, in relation to the wet lands of the state of Arkansas, and it was his opinion that the latter measure would grant all of the overflowed or wet lands to the States within the limits of which they happened to be located. Yulee concluded:

If my colleague would reduce his bill to a single section-the first-making an unconditional cession to the State of Florida of these unreclaimed lands, I would very readily vote for it. 39

The Everglades bill was debated by the Senate again on December 22 and 29, but the differences of opinion of the Florida colleagues as expressed in the senatorial chamber were enough to prevent its final passage.<sup>40</sup>

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38 Congressional Globe, 30 Congress, 2 Session, 69-70.

39 Ibid., 70.

40 Ibid., 87, 120.

In a speech to the General Assembly on November 24, 1848, Governor William D. Moseley called the attention of that body to the effort the Senators and Representative had made on the subject of the Everglades in Congress.<sup>41</sup> On January 9, 1849, the Senate Committee on Internal Improvements, to whom was referred so much of the governor's message as related to the drainage of the Everglades, made a report. The committee expressed the belief that from all opinion available, there appeared to be little doubt that the Everglades could be drained. This drainage would render the region valuable, but the committee favored the introduction of private enterprise, and could not consent to involve the state in the expense, especially when there was some uncertainty of the success of the undertaking.

On September 28, 1850, President Millard Fillmore signed, "An Act to enable the State of Arkansas and other States to reclaim the swamp and overflowed lands within their limits."<sup>42</sup> This act gave the Everglades area to the state of Florida and its destiny passed from federal into state hands. The swamp lands act required the Secretary of Interior to make accurate lists and plats of swamp and overflowed lands unfit for cultivation remaining unsold at

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<sup>41</sup> Journal of the Proceedings of the Senate of the General Assembly of Florida, 4 Session, 1848, 11.

<sup>42</sup> Journal of the Senate of the United States of America, 31 Congress, 1 Session, 695; also 9 United States Statutes at Large, 519-520.

the time of the passage of the act. At the request of the governors of the several states for lands covered by this act, the Secretary would cause a patent to be issued to the state. On that patent the fee simple to such lands would be vested in the state, with the provision that the proceeds of the sale of those lands be applied exclusively to the purposes of reclaiming the lands.

#### 4. Creation of the Internal Improvement Fund

The Florida legislature, in session the following January, 1851, accepted the grant from the nation. The legislature instructed the governor to secure the necessary plats and deliver them to the Register of Public Lands, said lands ". . . to be subject to sale under the same rules, regulations, and restrictions as are now, or may hereafter be imposed upon the sale of Seminary Lands." <sup>43</sup> By its action the legislature created and constituted a Board of Internal Improvement for the state, the ex-officio members of which included the governor, attorney-general, treasurer, comptroller, and the register of public lands. The elective members included one member from each of the judicial districts of the state, to be elected by the General Assembly for two year terms. The treasurer was instructed to keep separate records of all moneys from sale of these lands, making an annual report to the governor, who in turn would

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43 Acts and Resolutions of the General Assembly of the State of Florida, Passed at its Fifth Session, 1851, 93.

lay the report before the General Assembly at its regular sessions. In 1854, the Board of Internal Improvement

. . . prepared a report setting forth the reasons why the board found itself unable to handle the fund and their efforts and views, accompanied by a bill, which it recommended the legislature pass. . . . 44

Governor James E. Broome, on January 6, 1855, approved an act passed by the legislature creating the Board of Trustees of the Internal Improvement Fund of Florida. This act consolidated the grants made to the state by Congress in 1845 with those secured under the swamp and overflowed lands act of 1850, together with all proceeds that had accrued from their sale, in a separate and distinct classification from other state lands. The lands and funds from their sale were irrevocably vested in five trustees: the governor, comptroller, treasurer, attorney-general, and register of state lands and their successors. With regard to the investment of surplus moneys, the act directed the trustees to invest such funds in stocks of the United States, the several states, or the Internal Improvement bonds issued by the trustees under the provisions of this law. In providing for aid to railroads built under the auspices of this act, the trustees were empowered to guarantee interest of the bonds of the carriers, receiving securities and half the receipts of the corporations for a mortgage.

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44 Senate Documents, Number 89, 62 Congress, 1 Session, 8.

The trustees were given authority, in the sixteenth section of the act, to fix the price of these swamp and overflowed lands, and to make such arrangements for draining them as in their judgment appeared most advantageous to the Internal Improvement Fund and to the settlement and cultivation of the lands. They were further instructed to encourage the settlement and cultivation of such lands by allowing the preemption of a section of land to any one settler. Section twenty-nine of the act allowed the General Assembly to grant "the alternate sections of swamp and overflowed lands, for six miles on each side . . ."<sup>45</sup> of the right-of-way to railroad and canal companies incorporating under the laws of Florida whose work of construction was approved by the trustees. It will be seen that the trusts to which the lands were devoted by the federal swamp land act of 1850 were

. . . in the direction of drainage and reclamation of the lands, but may be divided as to the means by which that end is to be accomplished into three parts . . . 1. Internal Improvement by railroads and canals; 2. drainage devoted immediately to that purpose; 3. encouragement of actual settlement . . . by allowing preemptions. 46

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<sup>45</sup> Laws of Florida, Number 1, Chapter 610, 1855; Minutes of the Proceedings of the Board of Trustees of the Internal Improvement Fund of the State of Florida, I, xv-xxi. Hereinafter cited as I.I.B. Minutes.

<sup>46</sup> Letter of the Trustees of the Internal Improvement Fund to the United States Senate Sub-Committee of the Committee on Public Lands, I.I.B. Minutes, III, 508.

The foundation for internal improvements in Florida was laid on the grant of the swamp and overflowed lands. On this foundation the General Assembly built the 1855 internal improvement act, ". . . the product of the brain of Hon. David Yulee, he [sic] consulting with the Hon. James T. Archer and Governor James E. Broome."<sup>47</sup>

The Trustees of the Internal Improvement Fund held their first meeting on January 18, 1855, and proceeded to organize as a Board. The members of the original board included Governor James E. Broome, State Register of Lands David S. Walker, Attorney-General Mariano D. Papy, Comptroller Theodore W. Brevard, and Treasurer Charles H. Austin. Governor Broome was elected president and Attorney-General Papy was chosen secretary. As its first official act the board ordered the payment of \$16,000 to the selecting agents of the Board. From the inception of the first improvement board in 1851, swamp and overflowed lands had been selected by agents who submitted their proof to the Secretary of Interior in Washington, who, in turn, caused the lands in question to be examined by federal agents. Lands found to qualify as swamp and overflowed were then patented to the state on the request of the governor, who

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<sup>47</sup> Report of the Joint Commission Created by the Legislature of 1907 to Investigate the Acts and Doings of the Trustees of the Internal Improvement Fund, 33. Hereinafter cited as 1907 Commission Report.

vested them in the Improvement Fund upon the receipt of the patent from the Interior Department.



## CHAPTER IV

### PRIVATE ATTEMPTS AT RECLAMATION OF THE EVERGLADES

#### 1. Receivership of the Internal Improvement Fund

In the decade before the Civil War the main concern for internal improvements in Florida was the development of overland transportation, with waterways and harbors assuming a secondary position, and land reclamation purely incidental. The reason for this is found in the fact that the settlement of the state had extended only to a little below Ocala, whereas the largest part of the swamp lands were south of that point. Interest in the Everglades remained latent from 1850 to 1860 and during the war which followed. There were, however, sporadic bursts of publicity about the state's swamp and overflowed lands.

A series of articles had appeared in DeBow's Review during the 1840's and 1850's dealing at length with the Everglades. An unsigned article, "Florida--Its Climate, Soil, Products, Temperature, Health, Etc., Sea Island Cotton, Sugar, Etc.," appearing in 1847 quoted figures to show that Florida was tropical only below the twenty-seventh parallel. The writer cited John Lee Williams' books on Florida to show that the Everglades area was a vast basin filled with marshes.

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It can be seen by a glance at the maps that the quantity of cultivable land below the limit of black frost is small indeed. It is said that the Everglades can be drained. It matters not; for if they are, they will be as worthless as before on account of their insalubrity. 1

In 1851, J. P. Baldwin and G. W. Ferguson enumerated the advantages of the Miami area, and declared that the bloody Indian war and massacres explained why that section was so sparsely settled. These writers referred to the Everglades

. . . as that extensive region of swamp land [which] is now the property of the state, it is confidently hoped that measures will soon be taken to redeem from overflow so valuable a portion of tropical territory. . . . 2

An anonymous writer, in 1853, urged Everglades drainage works as part of national waterways improvements to aid in the navigation of Southern coastal waters. By deepening the natural outlets of the Everglades on the Atlantic and Gulf coasts, the writer believed a means of passage across the peninsula of Florida would be provided which would enable small steamers and coasting vessels to avoid the perilous Florida reefs. At the same time, in effecting such an aid to navigation, vast sugar lands would be reclaimed for the

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1 DeBow's Review, IV (October, 1847), 247-248.

2 J. P. Baldwin and G. W. Ferguson, "Florida--Inter-communication, Climate, Coasts, Everglades, Productions, Tropical Fruits, Sugar Lands, as compared with Louisiana, Timber, General Advantages, Etc., Etc.," ibid., X (April, 1851), 404-412.

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benefit of the nation.

After the Seminole War, Indian troubles in Florida were negligible, and the small remnant of red men remaining in Florida took to swamp and glade for habitation. In 1851 Governor Thomas Brown requested the Secretary of War to remove the Indians from the Everglades, for

. . . the most interesting and valuable part of our state . . . is cut off from any benefit to the citizens and sealed to the knowledge of the world, to be used as a hunting ground for a few roving savages. 4

Despite the threat of occasional Indian forays gradual settlement took place along the coasts and in the interior of Florida, and was accompanied by military operations of surveying and exploring the southern part of the state. Military posts at Ft. Brooke on Tampa Bay, at Ft. Myers on the Caloosahatchee, at Ft. Lauderdale on the New River, and at Ft. Dallas on the Miami River gave protection to the pioneers who were making their home on this southernmost frontier. The War Department maintained garrison forces at these posts, and at the same time employed the soldiers in surveying operations. In 1854, a detachment of eleven men under Lt. George L. Hartsuff was ordered to survey a part

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3 "Florida, Its Position, Resources and Destiny," DeBow's Review, XIV (April, 1853), 312-336.

4 Journal of the Proceedings of the House of Representatives of the General Assembly of Florida, 1851, 27.

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of the swamp regions southeast of Ft. Myers. The Hartsuff command was ambushed and four of its number were killed. This incident renewed actual warfare with the Seminoles. Most of the action was of a desultory nature, resulting in the capture and shipment of a majority of the remaining Seminoles to join their brethren west of the Mississippi River. Opinions differed as to the federal government's policy of attempting to rid south Florida of the red men by offering rewards for the capture of the elusive Seminoles. Prices on captured Indians ran from \$500 for warriors, \$250 for squaws, to \$100 for children. One of the soldiers who took part in the campaign felt that there was

. . . something remarkable about moving the Seminole Indians from the Everglades, as they are not suitable for the white man. The Indians want them and should be allowed to remain. 6

In order to carry the war to the foe, calls for volunteers were made. Andrew P. Canova, a native of Florida, joined the armed forces and was assigned to a boat company which made several Indian hunting expeditions through the Everglades area. On one of these forays the company of boatmen was outfitted with nine metal boats at Ft. Brooke. The boats were hauled by wagon to Ft. Kissimmee where a

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5 Francis C. M. Bogges, A Veteran of Four Wars, 43; Andrew P. Canova, Life and Adventure in South Florida, 5; Thomas A. Gonzalez (editor), The Caloosahatchee: Miscellaneous Writing Concerning the History of the Caloosahatchee River and the City of Fort Myers, Florida, 32. Hereinafter cited as The Caloosahatchee.

6 Francis C. M. Bogges, A Veteran of Four Wars, 63.

launching was made, roughly half way from Lake Kissimmee to Lake Okeechobee. The big lake was eighty-five miles south from Ft. Kissimmee which was on the river of the same name. The party set off down the river in the afternoon and covered twenty-five miles before landing at Ft. Bassinger for the night. The party made its supper on black bass caught in the river and papayas and rubber-tree fruit. It reached Lake Okeechobee on the following day, going along the west shore until darkness forced it to make camp on the shore line. On the third day, thirty men and six boats were selected to run down several Indians on one of the small islands in the nearby glades.

The saw grass was much higher than our heads, and the ground was boggy; we had to step from one "tussock" to another to keep above water; and any one failing to gain a foothold, was precipitated up to his waist in the mud. 7

After cautiously stalking the Indians, the party captured six squaws and eight children on the island. The captives were taken to Ft. Centre, situated on Fish Eating Creek, on the west shore of the lake the following day, from where they were transferred by wagon to Ft. Myers. Similar expeditions rounded up a hundred and fifty of the diminishing tribe in three years. Estimates of the number left at large in the state ran as high as one hundred. 8

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7 Andrew P. Canova, Life and Adventure in South Florida, 10.

8 Caroline Mays Brevard, The History of Florida from 1763, II, 38.

Canova described the island on which his party captured the Indians as circular in shape, containing about an acre of ground, and surrounded with a belt of timber which hid the occupants. Within the circle all the timber, with the exception of a few large live oaks and cabbage palms, was cleared away. The ground in the clearing was in a high state of cultivation with corn, beans, and pumpkins growing like wild. The pumpkin vines had climbed the trees, and immense pumpkins hanging from the limbs presented a strange sight to the soldiers.

Economic activity in southwest Florida before the Civil War was limited, in the main, to the cattle industry. During the ante-bellum period many families settled in the Manatee-Caloosahatchee river valleys and devoted their energy to cattle grazing.

Until the rebellion of the slave States, south Florida supplied the Havana market with beef at the rate of one thousand head per month; besides considerable quantities were shipped to the Bahamas, Key West and Tortugas. 10

In the drier months of the year the cattle could be kept on the flats bordering the Everglades, where the lush grass added pounds to the beeves that were shipped to the Cuban

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9 A. P. Canova, Life and Adventure in South Florida, 15.

10 L. D. Stickney, "Tropical Florida," Report of the Commissioner of Patents for the Year 1861 on Agriculture, Senate Documents, Executive Documents, Number 39, 37 Congress, 2 Session, 404.

markets from the docks along these two rivers.<sup>11</sup> In the years of Reconstruction the older settlers were joined by many immigrants who sought their fortunes in the Florida cattle trade.

The Civil War temporarily ended state plans for internal improvements in the southern end of the state. But with the end of the conflict, the Trustees of the Internal Improvement Fund received many proposals to ditch and drain land in or near the Everglades.<sup>12</sup> On April 6, 1866, William H. Gleason addressed the Board in regard to draining certain portions of the swamp and overflowed lands. The Board approved Gleason's proposition and offered to sell him tracts of 640 acres at \$40 each for every 50,000 cubic feet of ditch or drain excavated.<sup>13</sup> These tracts were located

South of Township 37 East of Lake Okeechobee, and South and East of the Everglades and also one tier of Townships bordering upon the South side of the Caloosahatchee River and adjacent thereto. <sup>14</sup>

In the same year the trustees contracted with Silas L. Hiblack and others to drain and reclaim lands adjacent to the Caloosahatchee and Kissimmee rivers as well as Lake

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<sup>11</sup> Lillie B. McDuffee, The Lures of Manatee, 197-200; T. A. Gonzalez (editor), The Caloosahatchee, 28-30; James A. Henshall, Camping and Cruising in Florida, 198-199.

<sup>12</sup> The first recorded proposal from private enterprise to drain lands in Florida was a letter from Duff Green, dated May 5, 1857, to the Trustees which proposed a canal from the St. Johns to the Indian River and drainage of swamp lands in East Florida, I.I.B. Minutes, I, 51.

<sup>13</sup> Ibid., 276-277.

<sup>14</sup> Ibid.

Okeechobee and any or all tributary areas. These contractors were to receive one-half of all the lands reclaimed if the work was begun within one year and completed in seven years.

The internal improvement act of 1855 not only gave form to the plans for settlement and reclamation but it also set up machinery for state sponsorship of a transportation system. The Boards of Trustees were much more concerned with railroads and canals than with drainage. In the years from 1855 to 1875, a major share of the available lands was ear-marked for these two types of quasi-public works. About four hundred miles of railroad had been built in Florida prior to the Civil War, most of which had been constructed under the benefits of the law of 1855. During the Civil War and Reconstruction interest coupons on these bonds were in default and the railroad properties passed into the hands of the Internal Improvement Board. Commenting on this, one of Florida's recent writers said:

In no phase of Florida's life does there appear to have been any greater collapse and disorganization brought by the War between the States than in its program of internal improvement. 16

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15 I.I.B. Minutes, I, 361-364.

16 Kathryn Trimmer Abbey, Florida, Land of Change, 346. For further discussion of this phase of Florida history see Abbey, op. cit., 322-324, 342-352; William Watson Davis, Civil War and Reconstruction in Florida, 650-680.



The bankrupt railroads were put on the auction block and sold to promoters at a fraction of their first cost. The Improvement Board was still responsible for interest payments on the railroad bonds, and many bondholders protested the sacrifice of their investments. Furthermore, the new owners of the railroads were slow in settling their debts with the state, and the Internal Improvement Board became saddled with additional debt.<sup>17</sup> The railroad promoters issued more bonds, which were traded for securities of the Improvement Board, and these in turn were sold for the supposed rehabilitation of the common carriers. The Board was a victim of wild-cat promotion, with its resources in land being made to guarantee the deflated railroads. It was later reported that

During the period from 1868 to 1876, there was a wild run for all that was in sight, and while they did not grant outright any but the alternate sections . . . the Trustees entered into numerous contracts to sell the State's interest, within certain limits, to the promoters [sic] of railroads, canals, or drainage schemes, at a normal price, ranging from two to ten (2 to 10¢) per acre. 18

The transactions involving the lands of the Board included two sales of over a million acres each, one for ten cents an acre, the other for one dollar (\$1.00) "and no other

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<sup>17</sup> William Watson Davis, Civil War and Reconstruction in Florida, 656-663.

<sup>18</sup> 1907 Commission Report, 331.

considerations."<sup>19</sup> Accurate accounting of the Fund to reveal mismanagement was impossible as all records were lost or destroyed from 1870 to 1874, and no original records are in existence concerning financial transactions of the Board of Internal Improvements prior to 1881.<sup>20</sup>

The submission of papers in the case of Francis Vose against the Board on June 9, 1869, fired the first gun in a battle of litigation to put a halt to the raids on Florida's lands and other public resources.<sup>21</sup> Francis Vose, a member of the New York firm of Vose and Livingston, had furnished rails and other iron for a state-subsidized railroad for which he had received payment in bonds of the railroad at par. He refused to sell the bonds at a reduction and sought to force the Board to pay the interest on the bonds as required by law. In the following January, former Governor David S. Walker appeared before the Board as attorney for Vose and argued the settlement of the claim of his client. The Board offered Walker twenty cents on the dollar for the railroad bonds, and evinced a willingness to receive Vose's interest coupons as payment for lands he might wish to buy from those held by the Board.<sup>22</sup> Vose refused and

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<sup>19</sup> W. W. Davis, op. cit., 671. See also 1907 Commission Report, 279-280.

<sup>20</sup> State Auditor's Report on Receipts and Disbursements By the Trustees of the Internal Improvement Fund of the State of Florida, 1855 to 1906, Inclusive, 3.

<sup>21</sup> I.I.B. Minutes, I, 380.

<sup>22</sup> Ibid., 401-403.

began suit against the Board in the State Supreme Court of New York in 1870. When the Board realized the seriousness of the plaintiff's zeal, it became alarmed and arranged for a meeting with the Vose attorneys in the spring of 1871, the results of which came to naught.<sup>23</sup>

Vose, not having made much headway, moved his case to the United States Circuit Court for the Northern District of Florida, Judge W. B. Woods presiding, at Pensacola. In late December, 1871, a decree was entered against the Board prohibiting the sale of any lands held by the Board for scrip or state warrant. The Court instructed the Board to accept only legal tender of the United States for any further land sales. Vose had argued that the value of his railroad bonds was endangered by the refusal of the Board to pay the legal interest, and that the Board was juggling funds and transferring lands by illegal means. Meeting in March, 1872, the Board resolved not to recognize Judge Woods' decree and proceeded to transfer certain lands in exchange for interest coupons of one of the railroads in the state.<sup>24</sup>

This action of the Board, as well as the one transferring a million acres of land for a dollar and other considerations, resulted in Judge Woods appointing Aristides Doggett

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<sup>23</sup> I.I.B. Minutes, I, 442, 449, 464.

<sup>24</sup> Ibid., 466, 476.

of Jacksonville as receiver of the Board and all its assets on May 16, 1872.<sup>25</sup> Placing the Board in receivership under the guardianship of the Federal court saved what public lands were left to the Board for another generation.

With the revival of interest in swamp and overflowed lands after the Civil War, the Board received numerous propositions for the sale and entrance upon these public lands of the state's domain. Proposals ranged from one respecting the introduction of wild rice in the Everglades to a communication from Martin Klein of Detroit, Michigan, who requested thirty thousand acres of land for the settlement of a colony of Alsatians.<sup>26</sup> The Board was besieged with literally dozens of offers to assist in the disposal of wet lands, the majority of which were for the purchase of large tracts at low prices. When higher prices were offered, the prospective buyers desired a credit plan of purchase. Sales for credit or any part for credit had to be approved by both the Federal court and the claimants against the Board. Proceeds from any cash sales of lands of the Board, outside of moneys needed for actual expenses, went to the holders of

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<sup>25</sup> I.I.B. Minutes, I, 498, 504, 515. The major court decrees in the Vose litigation are Vose vs Reed, et. al. Trustees, 1 Woods, U. S. Circuit Court Report, 647; Vose vs Trustees Internal Improvement Fund, 2 Woods, U. S. Circuit Court Report, 647; Union Trust Company vs Southern Inland Navigation Company, 130 U. S. 565.

<sup>26</sup> I.I.B. Minutes, I, 297, II, 126.

the judgments.

The slow migration of settlers into south Florida revived with the closing years of Reconstruction. This movement into Florida was accelerated by such investments as those of W. M. Randolph and General Henry S. Sanford in Orange County. The development of the area, around the city which now bears Sanford's name, on Lake Monroe at the head of navigation on the St. Johns River was followed by the building of the South Florida Railroad. This road from Sanford to Orlando, later extended to Lake Tohopekaliga at the head of navigation on the Kissimmee River, provided the first real means of opening inland Florida to settlement.<sup>27</sup> Coinciding with the developments in central and south Florida was the revival of interest in the Everglades. The state, through its Commissioner of Lands and Immigration, was trying to interest people in other parts of the nation and even in foreign lands in the possibilities of Florida as a place for living and investment. Among others, Sidney Lanier had taken a hand at describing the state's scenery, soils, climate, and history. Numerous books were being published on the peninsular state, and some of the more remote portions of the state were partially explored.<sup>28</sup>

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<sup>27</sup> Will Wallace Harney, "The Drainage of the Everglades," Harper's, LXVIII (March, 1884), 598.

<sup>28</sup> Of interest on this part of the state's history are: Florida Commissioner of Lands and Immigration, The Florida Colonist or Settler's Guide; George M. Barbour, Florida for Tourists, Invalids, and Settlers; Sidney Lanier, Florida: Its Scenery, Climate, and History.

In his description of Lake Okeechobee, F. A. Ober noted that the great body of water was almost as little known as it had been a hundred years previously. Ober pointed out that

Fabulous stories of beautiful islands, picturesque ruins, and pirate haunted glens, have been much in vogue with writers upon Lake Okeechobee, and to lift the veil that has so long hung over it, and narrate the plain facts, is to deprive them of a seemingly inexhaustible fund of romance. I must confess that it pains me to do so, but fidelity to truth compels me to write of the lake as it is, not as it should be. The beautiful groves of tropical fruits, the monkeys, spiders of gigantic size and ancient ruins are among the things that were NOT. 29

Ober observed the western shore line was marshy, with an occasional drift of sand on which grew a thin belt of elms, maples, and elderberry, overgrown with grape vines. He saw countless alligators in one large lagoon, and myriads of snakes along the shore. The south shore he found was an unbroken marsh, deeply indented with sloughs or blind creeks. Ober decided the surplus water from the lake drained from the south end of the lake, but he could find no discernible streams leading out of the lake. He estimated the lake to be forty miles long and twenty-five miles wide, very shallow and nowhere more than twelve feet deep. At two abandoned Indian villages he saw bananas, paw-paws, sugar cane, and

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29 Fred Beverly /F. A. Ober/, Camplife in Florida; a Handbook for Sportsmen and Settlers, Charles Hallock, compiler, 246.

guavas growing in abundance.

Another party, whose travels were recorded by Charles J. Kenworthy, visited the edge of the Everglades by way of the Caloosahatchee River. The party left Ft. Myers and made their way up the river to the falls at Ft. Thompson, approximately fifty miles in a straight line from the Gulf of Mexico. At the old fort, Kenworthy determined the fall of the rapids to be about five feet in two hundred, with a fifteen foot width through this stretch.

We had barely proceeded three miles <sup>above</sup> Ft. Thompson when we found the channel to end in a broad expanse of saw grass. A careful examination revealed about two inches of water and three of tenacious black mud overlaying the horizontal layer of limestone rock. 30

Kenworthy was told that they had arrived at a period of low water, so they did not attempt to push on to Lake Okeechobee through the broad expanse of saw grass. He was convinced that the Caloosahatchee was the main outlet for Lake Okeechobee.

A third traveler entered the Everglades in the late 1870's from the Miami River. James A. Henshall, dispelling what he called the popular supposition about the Everglades, wrote that

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30 Charles J. Kenworthy, Camplife in Florida; a Handbook for Sportsmen and Settlers, Charles Hallock, compiler, 298-299.

. . . the Everglades is not an impenetrable swamp, exhaling an atmosphere of poisonous gasses and deadly miasma, but a charming, shallow lake of great extent, with pure and limpid waters from a few inches to several feet in depth, which grow curious water grasses and beautiful aquatic plants; while thousands of small islands, from a few rods to a hundred acres in extent, rise from the clear waters, clothed with never-ending verdure and flowers; while cypress and crab-wood, sweet-bay and palmetto, cocoa-plum, water and live oaks, grow in tropical profusion, and rear aloft their emerald banners, from which depend garlands and festoons of innumerable vines and air plants, gorgeous with blooms of every hue, and exhaling the sweetest of fragrance. 31

Henshall observed a strip of very rich prairie between the water line of the glades and the elevated shore ridge, a half-mile in extent; this area was dry during a portion of the year and afforded good pasturage for cattle. On leaving Miami the party went up the south branch of the river of the same name, thence some twenty miles into the Everglades to visit a Seminole Indian village on one of the islands. After describing in detail the gardens, houses, dress, and customs of the natives, Henshall concluded:

These Indians lead a quiet, peaceable, and semi-pastoral life, cultivating fields of corn, pumpkins, sweet potatoes, beans, bananas, etc., in the rich hamaks [sic] on the adjacent islands. . . . 32

## 2. The Disston Drainage Contracts

The legislature of Florida, seeking to aid in the settle-

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31 James A. Henshall, Camping and Cruising in Florida, 106.

32 Ibid.



ment of the state, passed an act in 1872 to secure homesteads to settlers on the swamp and overflowed lands. Any citizen was entitled to enter a quarter section of any of the unsold lands granted the state in the 1850 swamp land act. Homesteaders could secure a deed after five years upon proof of two credible witnesses that the land had been reclaimed by means of levees or drains, had been cultivated, and had been resided upon for that length of time.<sup>33</sup> The Board of Internal Improvement hired agents or salesmen to handle the details of the land sales; these agents in the years from 1872 to 1880 traveled over the United States and Europe in search of land buyers. But ordinary sales did not suffice to keep the debts of the receivership from increasing.

The fund was being eaten up by compound interest, costs, receiver's allowances, and other expenses of litigation, and it was obvious that only by a sale of considerable quantity of the lands at one time could it be saved. 34

Former Governor James E. Broome, addressing the Board in 1875, expressed the belief that he could sell from one to two million acres of land to an English buyer for twenty-eight cents an acre, part cash and part credit. The Board replied that it could make sales for cash only because of

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33 Chapter 1868, Laws of Florida (1872), 16-18.

34 1907 Commission Report, 37.

the receivership. <sup>35</sup> Williams, Swann, and Corley, agents of the Board in 1875, at the request of W. H. Ludlow asked for prices of from one to five million acres. The Board, having decided to sell swamp and overflowed lands, fixed a price of twenty-eight cents per acre for tracts of one hundred thousand acres and twenty-five cents per acre for two to five million acre tracts. <sup>36</sup> In April, 1877, the Board appointed Samuel A. Swann a special agent to travel in Europe and seek large land buyers. Swann submitted several propositions for the sale of one to three million acre tracts, but none for outright cash sales, which the Board could accept without going through the red tape of securing assent from the court and its creditors. <sup>37</sup>

To expedite drainage of the swamp and overflowed lands the legislature of 1879 enacted a bill to encourage the construction of canals for the reclamation, settlement, and cultivation of the public lands in the so-called wet classifications. Payment for construction and excavation of any such canal was to be made in land certificates for the odd numbered sections along the canal banks. These certificates would be taken in exchange at the rate of \$1.00 per acre at the state land office for vacant lands of a more desirable

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35 I.I.B. Minutes, II, 67-68.

36 Ibid., 91.

37 Ibid., 189, 380, 390, 476, 506.

nature in St. Johns, Volusia, Brevard, or Dade counties. The final section of the act contained an ironic twist, stipulating that whenever any canal that should have been constructed by the national government was completed under the provisions of this act, the Florida congressional delegation should request further grants from Congress to compensate the state for its expenditure.<sup>38</sup>

When William D. Bloxham became governor of Florida in January, 1881, the Internal Improvement Board had been in receivership for nine years. The state lands then under court decree were being sold for the benefit of the receiver, and the proceeds credited on the judgments, warrants, or certificates issued by the creditors. This paper was negotiable and was being sold for as little as forty per cent of its face value. To complete the vicious circle, the devalued paper could then be used as cash at par value<sup>39</sup> in the purchase of state lands.

Hamilton Disston, of Philadelphia, Pennsylvania, had become interested in Florida lands and submitted a proposal to the Board relating to the drainage of some of the swamp and overflowed area of the state soon after Bloxham

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<sup>38</sup> Chapter 3153, Laws of Florida, Legislative Session of 1879, 90-94.

<sup>39</sup> Rufus E. Rose, The Swamp and Overflowed Lands of Florida: The Disston Contract and Sale, 90-94. Hereinafter cited as The Swamp and Overflowed Lands of Florida.

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took office. The following month articles of agreement were drawn up providing for the drainage and reclamation of all overflowed lands south of Township 23 East and east of Peace Creek. Briefly, the articles provided that Disston and his associates would drain lands overflowed by the waters of the Kissimmee River and its tributaries and in the vicinity of Lake Okeechobee. The lands were to be drained and rendered fit for cultivation by permanently lowering and keeping reduced the waters of Lake Okeechobee and contiguous areas. Disston posted a \$5,000 bond with the Board to show his good faith in beginning the work within six months. With the reclamation of each two hundred thousand acres, a division of the drained lands would be made. The odd numbered sections would be deeded to the contractors and the even numbered sections would be subject to sale by the Board.<sup>41</sup> This contract was revised later to include the lands south of Township 24, rather than Township 23, because of a mistake in the original location of the northern boundary.

The Trustees discovered that under the court decree, which permitted sale of the Board's lands but applied the proceeds to payments of judgments of the creditors, no binding contract could be made by the Board without the consent

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40 I.I.B. Minutes, II, 433.

41 Ibid., 473, 480, 503.

of the creditors. Bloxham induced Disston and his associates to purchase outright four million acres for one million dollars.<sup>42</sup> Disston made a preliminary agreement with the Board on May 31, 1881, and the papers were signed the following day. The completion of the deal with Disston enabled the Board to satisfy its creditors and to place the Fund in an independent position with regard to further land disposition. The four million acres which were sold outright to Disston placed under his control a large addition to the nine million acres under contract for drainage in the Kissimmee River, Lake Okeechobee, and Everglades watersheds.

In order to consolidate and incorporate their holdings, the Disston interests secured a charter from the state legislature, and by virtue of this act transferred their holdings to the Atlantic and Gulf Coast Canal and Okeechobee Land Company.<sup>43</sup> The charter empowered the corporation to buy and sell lands, goods, and property; to operate canals; to hold and to improve lands; to engage in agriculture, to erect mills, and to manufacture sugar; and to accept and receive by transfer and assignment all the rights, privileges, and immunities of any such company or individual possessing any rights to construct canals, operate steamboats, or engage in the works of drainage and reclamation. The Atlantic and

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<sup>42</sup> R. E. Rose, The Swamp and Overflowed Lands of Florida, 3-4.

<sup>43</sup> Chapter 3343, Laws of Florida, Legislative Session of 1881, 172-174.

Gulf Coast Canal and Okeechobee Land Company received the contract for drainage and reclamation of lands with the approval of the Board on September 1, 1881.<sup>44</sup>

In order to prosecute the work of the drainage contract, the Atlantic and Gulf Coast Canal and Okeechobee Land Company was capitalized at \$10,000,000 and offered the public an issue of \$1,000,000 worth of stock in 100,000 shares of \$10 each. The company also offered a bonus of \$1,000,000 in land certificates, bearing six per cent interest, redeemable from the proceeds of land sales, or convertible into land from the company's holdings. Each subscriber for stock received a Land Certificate of the same amount as his subscription of stock.<sup>45</sup> The lands of the purchase were handed over to several smaller companies for purposes of sales promotion. The Florida Land and Improvement Company, the Disston Land Company, and the Lake Butler Villa Company were among these organizations that advertised acreage sales varying from a simple homestead to tracts of hundreds of thousands of acres for colonization schemes.<sup>46</sup> Selected lands in forty acre plots were offered at \$225, payable in ten quarterly installments without interest.

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<sup>44</sup> I.I.B. Minutes, III, 33-45.

<sup>45</sup> Florida Land and Improvement Company, Disston's Purchase, inside back cover.

<sup>46</sup> Disston Land Company, Florida, 13-14.

Novel features of the Florida Land and Improvement Company sales plans included a guarantee to repurchase the contract at any time within three years, and the cancellation and return of previous payments to the purchaser on the lapse of an installment when due. The same company also offered to build houses and make other improvements for purchasers when their contract for the land was paid up; for these advances the client could arrange a further system of con-<sup>47</sup>tracts and installment payments.

In June, 1881, the Atlantic and Gulf Coast Canal and Land Company began operations with the employment of James M. Kreamer as chief engineer and Rufus E. Rose as superintendent of drainage operations. Rose, later Florida State Chemist, built the first dredge at Cedar Key, Florida, and assembled it at Ft. Myers. The dredge was completed in January, 1882, but the task of moving it to the rapids of the Caloosahatchee at Ft. Thompson required three months because of the trees, snags, and logs in and over the<sup>48</sup> river. Rose found the height of the fall across the rapids to be two feet, and a total of fourteen feet to Bonnet Lake, some ten miles distant. The low stage of the water forced a wait in Bonnet Lake for the spring rains to

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<sup>47</sup> Florida Land and Improvement Company, Disston's Purchase, back cover.

<sup>48</sup> 1907 Commission Report, 319.

raise the water level. By July, 1882, the water rose fifteen feet and the dredging outfit was moved across Bonnet to Lake Flirt. Twelve miles of canal, connecting Lake Flirt to Lake Hicpochee and to Lake Okeechobee, were completed in January, 1883. Disston and a party of his associates made the first steamboat trip from Ft. Myers to Kissimmee in the following month.<sup>49</sup> Hamilton Disston had posted \$5,000 with the Board on February 26, 1881, as evidence of his intentions to carry out the provisions of the agreement. On January 3, 1882, the drainage company requested the return of this forfeit money, citing as evidence of accomplishment the \$20,000 expended on the first dredge, and the preparations then being made at Kissimmee for the building of a second dredge and a supply steamboat. The Board declined to return the money, pointing out that the drainage work<sup>50</sup> had not progressed beyond the planning stages. At the same time Disston notified the Board that he had transferred two million acres of his purchase to Sir Edward Reed, of County Kent, England, for the sum of \$500,000.

The appeals of the drainage company to the Board for the advancement of lands resulted in the appointment of Silas L. Niblack on March 16, 1882, as an agent to make

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49 Letter of Rufus E. Rose, Everglades News (Canal Point, Florida), May 9, 1924.

50 I.I.B. Minutes, III, 94, 101, 103.



certain inspections in the interests of the Board. Niblack was instructed to make an examination of the swamp and overflowed lands embraced in the contract for drainage with the Atlantic and Gulf Coast Canal and Okeechobee Land Company. He was to examine the lands with respect to their liability to overflow and to estimate what proportion of the lands would be reclaimed by the works of drainage under the contract, and what proportion of the lands were dry enough for cultivation without the benefits of works of drainage.<sup>51</sup>

Niblack's report, based upon five weeks spent in examining lands subject to overflow in Dade, Brevard, Orange, Polk, and Manatee counties, stated that to survey the amount of land not subject to overflow would not be justifiable on account of the costs involved. On the subject of the complete reclamation of the area, Niblack informed the Board that it would

. . . be necessary . . . to cut three and more than probable [sic] four large canals, one to connect Lake Okeechobee with the Caloosahatchie [sic] river, one to enlarge and straighten the Kissimmee river, one to connect the Lake with St. Lucie river on the east and more than probable [sic] one further south to connect the Lake with New or Hillsboro river and again to drain that large portion of country subject to inundation by rainfall will require quite a number of large ditches of various lengths and in different directions to some source where the water will be carried either to the Atlantic or to the Gulf. 52

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51 I.I.B. Minutes, III, 125, 126.

52 Ibid., 194.

James M. Kreamer, chief engineer of the drainage company, appeared before the Board in July, 1882, asking the state officials to advance 150,000 acres of the land which would be allotted his company under the contract in view of the progress, magnitude, and great expense of the work. The Board resolved to convey the lands requested on condition that the company post a bond that the proceeds arising from the sale or pledge of the lands be expended for additional drainage works, and that the Board have the right to employ an agent to inspect the work with the power to reject any improper charge. The Board agreed to convey an additional six sections on the same condition for every mile of canal completed to a width of twenty feet and depth of five feet.<sup>53</sup> On November 20, 1882, the Board modified its resolution of July 20 to the extent of allowing the company to use and expend \$37,500 which it could procure on the conveyance of the requested 150,000 acres of land.<sup>54</sup>

On New Year's Day, 1883, the Atlantic and Gulf Coast Canal and Okeechobee Land Company gave bond, executed in pursuance of the two resolutions, and received an advance of 150,000 acres in the contracted area.<sup>55</sup> The following June the Board employed James M. Dancy, a civil engineer, to

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53 I.I.B. Minutes, III, 163.

54 Ibid., 185-186.

55 Ibid., 270.

examine thoroughly the works and the results of the works accomplished by the drainage company. Dancy proceeded to Kissimmee, where he found an outlet canal from Lake Tohopekaliga, the headwaters of the Kissimmee River, three and a half miles long, forty feet wide, with four feet of water flowing at a four mile per hour current into Lake Cypress. This canal, excavated by the drainage company, had reduced Tohopekaliga's waters to a level four and a half feet lower than ever before known. R. E. Rose, the drainage superintendent, pointed out to Dancy the several cuts made in straightening the channel of the Kissimmee River. Dancy believed these cuts were responsible for the

. . . Prairies of large extent perfectly dry and cattle feeding where water usually stands to the depth of several feet, here are the finest grass pastures I ever saw. 56

Dancy made trips to the east and the west of the Kissimmee River and reported that 535,285 acres had been drained in thirty-one townships. He noted that the drainage works then being carried out constituted improvements in canal channels at Lake Tohopekaliga, Lake Kissimmee, and Lake Okeechobee to the Caloosahatchee River. Dancy was satisfied that the drainage work was a success, for after rains on twenty-four consecutive days, a guage stick in Lake Tohopekaliga at

Kissimmee showed a rise of only two inches.

On December 1, 1883, Kreamer met with the Board and again applied for lands due under the drainage contract. The Board conveyed one-half of the lands reclaimed by the company as shown in the Dancy Report, cancelled the bond given the previous New Year's Day, and brought the land accounts up to date as of June 30, 1883. In June, 1884, Kreamer appeared once more before the Board and requested an inspection of the drainage system by an agent of the Board. Accordingly, the Board appointed H. S. Duval, State Engineer, to ascertain the extent of the drainage works in the Kissimmee-Okeechobee-Caloosahatchee areas and the effect of the works upon the adjoining lands. In a statement dated August 19, 1884, Duval outlined the amount of work done by the Atlantic and Gulf Coast Canal and Okeechobee Land Company. This work included: (1) a canal in process of construction between Lake Tohopekaliga and East Lake Tohopekaliga at Kissimmee; (2) a canal from Lake Tohopekaliga to Cypress Lake; (3) canals between Lakes Cypress, Hatchineha, Kissimmee, Tiger, Rosalie, and Walk-in-Water; (4) a canal from Lake Okeechobee to Lake Hicpochee; and (5) a canal from Lake Hicpochee to Lake Flirt. Duval found that the level of Lake Okeechobee had been lowered a foot and a half,

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57 I.I.B. Minutes, III, 246.

58 Ibid., 309-310.

and that of the other lakes in the Kissimmee River chain from three to four feet. He reported that the company had four dredges in service, all at work on the various projects in the area under contract. Concluding his report he declared:

The territory over which the examination extended, embraced in the appended list of Townships, which in my judgment, based on the evidences developed in my investigation, are permanently reclaimed . . . and will . . . continue to improve as the canals are increased in width and depth, provided the waterways are kept free and unmolested. 59

Duval observed that the inhabitants of the Caloosahatchee valley were showing their faith in the results of the work of the drainage company by placing their buildings near the ground, rather than building on stilts as had been the previous practice. The State Engineer listed a total of 2,182,412.27 acres in fifty-three townships as being completely reclaimed since the beginning of the operations under the contract. On the basis of this report the Board instructed its salesmen to prepare deeds for the drainage company to one-half of the lands embraced in the lists submitted by Duval.<sup>60</sup>

Questions were raised in the legislature in the fall of 1884 as to the amount of lands actually reclaimed by the Disston company. Protests against illegal practices in land

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59 I.I.B. Minutes, III, 320.

60 Ibid., 332.

transfers, dissent over haphazard methods of land selections, and the cries of dispossessed squatters were heard by the legislators. Those who argued that the lands were not reclaimed maintained that the company was not entitled to the lands deeded to them. The accusations of haphazard methods of land selections were made with some foundation, for large tracts were included that were not swamp or overflowed land. Some squatters had been forced off certain lands, but only after they had been given ample opportunity to buy their plots at the usual state prices and on easy terms.

Governor Bloxham devoted a large part of his message to the legislature in January, 1885, to the subject of land reclamation. He traced the work done by the Atlantic and Gulf Coast Canal and Okeechobee Land Company from 1881 to 1885.

Over forty miles of canal and river improvements have been made, besides the removal of numerous obstructions to navigation and drainage. The expenditure in legitimate work has aggregated over two hundred and fifty thousand dollars. . . . The reclamation of many millions of acres, containing some of the most valuable sugar lands in the United States with suitable climatic conditions for the successful growth

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61 For a fuller discussion, see, T. Frederick Davis, "The Disston Land Purchase," Florida Historical Quarterly, XVIII (January, 1939), 200-210.

of all tropical fruits, is the harbinger of an era of population, wealth and prosperity unthought of in our past history. 62

The governor transmitted the biennial report of the Commissioner of Lands and Immigration which showed that 1,174,583 acres of swamp and overflowed lands had been deeded to the Atlantic and Gulf Coast Canal and Okeechobee Land Company in 1883 and 1884.<sup>63</sup> The legislature authorized the governor to appoint a committee, "in no wise connected with any company," to examine the number of canals dug, their width and depth from Kissimmee to Lake Okeechobee and through the Caloosahatchee River to Ft. Myers.<sup>64</sup> The committee was also to examine the canals for capacity, their influence on the adjacent lands and waters, and to determine if the lands had been reclaimed permanently.

Governor Edward A. Perry, who succeeded Bloxham in 1885, appointed J. J. Daniels of Duval County, John Bradford of Leon County, and W. H. Davidson of Escambia County to perform the duties indicated in the February act of the legislature. The committee transmitted its report to the governor on February 4, 1887. The three men had reached the conclusion that the Atlantic and Gulf Coast Canal and

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62 Journal of the Proceedings of the Senate of the General Assembly of the State of Florida (1885), 29.

63 Report of the Commissioner of Lands and Immigration of the State of Florida, 1883-1884, 24.

64 Chapter 3639, Laws of Florida (1885), 72.

Okeechobee Land Company had permanently reclaimed 80,000 acres of the wet lands in the contracted area for which the company had received payments of land aggregating a million and a quarter acres for drainage services.<sup>65</sup> The only lands the committee considered fully reclaimed were those adjacent to Lake Tohopekaliga and East Lake Tohopekaliga in the immediate vicinity of Kissimmee. The three investigators commented that even those lands could not be considered permanently drained until relief was given to the rivers and lakes further south. From Cypress Lake, immediately below Lake Tohopekaliga, southward the committee found that the waters of the lakes and rivers were at or near their normal levels, and that neither Lake Okeechobee nor the lakes and river in the Kissimmee chain had been permanently or sensibly lowered by the thirty-six miles of canals. From their examinations these men felt that without the permanent lowering of Okeechobee there could be no permanent reclamation in the watershed above the big lake. The permanent lowering of Lake Okeechobee, they pointed out, was the primal factor in the entire plan, and by the terms of the drainage contract the company was bound to adhere to such a basic plan. It was suggested that the state employ a competent, reliable, and

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65 "Abstract of the Report of the Committee Appointed by The Governor on November 17, 1885," Senate Documents, Number 89, 62 Congress, 1 Session, 21-24; 1907 Commission Report, 344-345.



skilled engineer to see that the interests of the commonwealth be protected under the terms of the contract. The investigators did not believe the situation was hopeless.

We feel assured that the problem is capable of solution with an expenditure of money, time, and labor not disproportionate to the results. . . . The reduction of the waters is simply a question of sufficient capacity in the canals which may be dug for their relief. 66

After the publication of the committee's findings, a reaction on the part of the officials of the drainage company quickly set in. On March 25, Governor Perry laid before the Board a letter from Hamilton Disston which complained that the report of the legislative committee had insinuated that the Okeechobee Company had received a large body of land through misrepresentation.

My reply is that the Okeechobee Company demands no more than justice and would be unwilling to accept or retain one acre of land which they thought had not been fairly earned. 67

Disston suggested the appointment of an impartial board to look into the case; he said that the company would abide by the decision of such a board. In closing, he offered to open the books of the company to prove that several hundred thousand dollars had been spent on drainage operations beyond the requirements of the contract.

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66 "Abstract of the Report of the Committee Appointed by the Governor on November 17, 1885," Senate Documents, number 89, 62 Congress, 1 Session, 23.

67 I.I.B. Minutes, III, 448.

The Board considered this letter and resolved on March 25, 1887, that the Okeechobee Company should reconvey to the Improvement Fund certain lands. These lands would include those naturally high and dry tracts which lay outside the district reported on by the legislative committee. This resolution was submitted to the drainage company. The Board did not hear from the Okeechobee Company and on August 18, 1887, it instructed its secretary to send another copy of the March resolution to the contractors. At the same time the Board requested the drainage company to submit a proposition for continuing the work of drainage and reclamation.<sup>68</sup>

The Board invited the officials of the drainage company to attend a meeting to determine if an amicable settlement of the disagreement over reclamation could be reached. Hamilton Disston and several other officials of the Okeechobee Company came to Tallahassee in the summer of 1888 and, after several conferences with the Board, signed a revised contract on August 17, 1888.<sup>69</sup> This contract reduced the drainage reserve to a total acreage of 2,000,000 acres, including the lands which had already been deeded to the company. The Atlantic and Gulf Coast Canal and Okeechobee Land Company agreed to expend \$70,000 in drainage and reclamation operations in the next two years on the 1,200,000

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68 I.I.B. Minutes, III, 468.

69 Ibid., 501-505.

previously conveyed, and an additional sum of twenty-five cents an acre on the remaining 800,000 acres in order to secure titles in fee simple. Work under the revised contract continued at a moderate pace for the four succeeding years; most of the moneys expended, however, were used for the upkeep of channels dug under the 1881 contract. The drainage functions of the Atlantic and Gulf Coast Canal and Okeechobee Land Company ceased on January 10, 1894, when the Board decided the provisions of the 1888 contract had been fulfilled.<sup>70</sup>

The efforts of the Disston company to drain the Everglades ended in failure. The legislative commission which investigated the acts and doings of the Trustees of the Internal Improvement Fund in 1907-1909 concluded that the work performed by the Disston company should have been continued; but it pointed out that there was no provision in the second contract

. . . to permanently lower and keep reduced the waters of Lake Okeechobee, and thereby permanently lowering and keeping reduced the high water level of the Kissimmee River--a provision that was in the first contract, but omitted in the second. 71

The commission was unable to find a satisfactory explanation for this omission and it concluded that the transfer

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70 I.I.B. Minutes, IV, 26, 225, 228, 260-261.  
71 1907 Commission Report, 324.

of 1,652,711 acres, finally deeded to the Disston drainage company, was too great a price to pay for demonstrating the feasibility of drainage.

The long-range value of the Disston works in the development of the southern part of the state of Florida, however, should not be underestimated. Had the interests represented by Francis Vose forced a liquidation of the millions of acres held in the Improvement Fund in 1880, the results would have been disastrous in many respects. The Disston efforts proved that the waters of this part of the state could be lowered, but that drainage works would have to be maintained if they were to remain of any value. The simple statement that "The reduction of the waters is simply a question of sufficient capacity in the canals which may be dug for their relief," made by the governor's committee in 1885, was perhaps, lost to view in the plans and works of the four decades that followed.<sup>72</sup>

The Disston company's efforts were concentrated in the area around the Tohopekaliga lakes at the headwaters of the Kissimmee River. Here extensive drainage works were installed and the production of various crops was well underway by

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<sup>72</sup> "Abstract of the Report of the Governor's Committee Appointed November 17, 1885," Senate Documents, Number 89, 62 Congress, 1 Session, 23. For the overall picture of the statewide effects of the Disston purchase, see K. T. Abbey, Florida, Land of Change, 350-353, 365-366.

1885.<sup>73</sup> Sugar cane production was undertaken on the prairie between the Tohopekaliga lakes, beginning with the planting of twenty acres in 1885, and was increased to ninety acres in 1886. From the experimental start made by Rufus E. Rose the sugar plantation, which he named St. Cloud, grew to a hundred acres the following year.<sup>74</sup> The harvest of that year averaged thirty-five tons of cane per acre with a sugar extraction of eight percent, or almost five thousand pounds of granulated sugar for each acre of cane. This was a record that had not been surpassed in the United States up to that date.<sup>75</sup> With the passage of a two cent per pound sugar bounty by the national Congress in 1890, Hamilton Disston decided to try his hand at expanding the St. Cloud plantation. Disston had backed Rose in the early plantings, and with the added incentive of the bounty organized the Florida Sugar Manufacturing Company. The new corporation was capitalized at \$1,000,000. In the latter part of 1890, the cane acreage was expanded and the construction of a sugar factory capable of processing a thirty-five hundred acre crop was begun. Claus Spreckels, a prominent figure in world sugar production, visited the St. Cloud

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<sup>73</sup> I.I.B. Minutes, VII, 419-421.

<sup>74</sup> R. E. Rose, The Disston Sugar Plantation--Its Success and Failure, 34-35.

<sup>75</sup> C. Lyman Spencer, The Sugar Situation, 88.

plantings in 1890. Spreckels wrote that the soil was "as rich as any I have ever seen, and with proper cultivation, the yield should be equal to that of any other country on the face of the globe."<sup>76</sup>

The repeal of the sugar bounty in 1894 was sufficient to close the sugar operations at St. Cloud. Poor management by promoters, inexperienced in the control of cane field economy and sugar manufacturing methods, combined with the death of Hamilton Disston in 1896, was sufficient to force a shutdown. The sugar mill was sold and moved to the west coast of Mexico.<sup>77</sup> The results of the sugar experiments, however, had proved what could be done with good management, and these lessons were not totally lost to the next generation.

The activities in the growing of sugar cane on drained Florida lands attracted the attention of the United States Department of Agriculture. In 1891, Dr. Harvey W. Wiley, head of the Chemistry Bureau of the Department of Agriculture, visited the area.<sup>78</sup> His observations covered the state from the Tohopekaligas, down the Kissimmee River

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<sup>76</sup> Senate Documents, Number 89, 62 Congress, 1 Session, 106.

<sup>77</sup> F. D. Stevens, (MSS), "History of Florida Sugar Operations," 20. This manuscript was used through the courtesy of the author, Mr. F. D. Stevens of Belle Glade, Florida.

<sup>78</sup> Harvey W. Wiley, "The Muck Lands of the Florida Peninsula," Report of the Secretary of Agriculture, 1891, House Executive Documents, Number 1, Part 6, 52 Congress, 1 Session, 163-171.

through Lake Okeechobee, and the Caloosahatchee valley. Along the Kissimmee River he observed rich deposits of muck on a level with the water line which suggested artificial drainage through levees and pumps, much like the plantations on the Mississippi below New Orleans. On the southern border of Okeechobee, Wiley saw what he called the largest body of muck lands in the world. Two methods were proposed for their drainage: the first, by a canal three hundred feet wide and twelve feet deep eastward from the lake to the Atlantic Ocean; and second, to recover a portion at a time by use of canals and levees.

"It is . . . seen [that] there is abundant natural fall to carry off the whole of the water, provided a canal of sufficient size can be constructed."<sup>79</sup> Wiley noted that these muck lands were sixteen feet deep underlaid with limestone of a high phosphoric content, wholly organic in composition, and markedly deficient in mineral constituents. He also noted that muck lands under cultivation in the St. Cloud area for eight years had been depressed several inches, and "If the organic matter which they contain should decay<sup>80</sup> there would, of course be a marked depression." Wiley pointed out the advantages of seasonal rains from May to

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<sup>79</sup> H. W. Wiley, "The Muck Lands of the Florida Peninsula," *loc. cit.*, 166.

<sup>80</sup> *Ibid.*, 167.

October, and a dry season from October to June as particularly desirable for the growing and harvesting of sugar cane and rice. Disadvantages of a dry winter and spring could be overcome, he felt, through artificial irrigation.

Wiley found several thousand acres of swamp lands freed of water by the Disston drainage operations. Of these two thousand acres were planted in sugar cane, five thousand acres in rice, and a large area was in commercial vegetable gardens. Wiley wrote:

In no instance has cane been known to freeze in the Florida peninsula, during the period over which these observations extend. . . . It may be said, then, with confidence that in the region of Okeechobee Lake the lands which may be recovered for sugar making purposes have all the advantages of the climate of Cuba. . . .

There is practically no other body of land in the world which presents such remarkable possibilities of development as the muck lands bordering the southern shores of Lake Okeechobee. With a depth of soil averaging, perhaps 8 feet, and an extent of nearly half a million acres, with a surface almost level, it affords promise of development which reaches beyond the limits of prophecy. 81

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81 H. W. Wiley, "The Muck Lands of the Florida Peninsula," loc. cit., 168-170.



## CHAPTER V

### LATTER-DAY EXPLORERS AND THE NATIVES

#### 1. The Explorers

After crossing the lower Everglades in 1897 Hugh Willoughby commented:

It may seem strange, in our day of Arctic and African exploration, for the general public to learn that in our very midst, as it were, in one of our Atlantic Coast States, we have a tract of land one hundred and thirty miles long and seventy miles wide that is as much unknown to the white man as the heart of Africa. 1

These words ably describe the veil of obscurity which covered the interior of Florida below the twenty-seventh parallel from the state's discovery by Ponce de Leon in the early part of the sixteenth century through most of the nineteenth century. It seems almost incredulous that Lake Okeechobee (the second largest fresh water lake wholly within the United States) and the Everglades should be the objects of exploring expeditions in the years from 1885 to 1900. The military records of the two Seminole Wars, the Buckingham Smith reports published in 1848, and the exploits of the Disston enterprises all failed in large measure to dispel the mythical fancies popularly ascribed to the region. Little accurate information could be disseminated about this terra incognita until articulate travelers produced

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1 Hugh L. Willoughby, Across the Everglades, 13.

some accounts.

Angelo Heilprin was the first of three South Florida explorers to preserve a record of explorations in the 1880-1890's. Heilprin's approach was that of the scientist and nature lover. James E. Ingraham, a businessman and the president of a railroad, was the second explorer. Hugh Willoughby, a winter visitor in Florida, pursuing a quest to satisfy his own curiosity, was the third explorer.

In 1886 Heilprin led a party of five persons down the west coast of Florida to the Caloosahatchee River, where the course was turned eastward into what he termed "the Okeechobee wilderness."<sup>2</sup> The ostensible purpose of this excursion was to make researches of a zoological nature in the Okeechobee region. Heilprin's schooner easily passed from the headwaters of the Caloosahatchee at Ft. Thompson into the canals connecting the river with Lakes Flirt, Hicpochee, and Okeechobee.

The voyage up the Caloosahatchee was made in leisurely fashion, with numerous landings to examine the flora and fauna along the river banks. For four days the party followed the tortuous stream from the Gulf of Mexico to the headwaters, an airline distance of fifty miles,

but measured along the sinuosities of the channel, which are especially well-marked in the upper course, and more particularly in the

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<sup>2</sup> Angelo Heilprin, Okeechobee Wilderness, 1.

reach of the last few miles below the rapids, the distance is very nearly twice as great. <sup>3</sup>

The clearings at Thorpe's landing attracted the attention of the scientist. He commented on the large tracts developed for the cultivation and production of pineapples, bananas, and sugar cane and the considerable industry derived from the growth of the cane, which yielded a sugar of fine quality.

Within ten miles of Ft. Thompson, Heilprin located

. . . without question the most remarkable fossiliferous deposit that has as yet been discovered in the state, and from a purely paleontological standpoint, perhaps the most significant in the entire United States east of the Mississippi River. <sup>4</sup>

The river banks, for some miles, resembled a fossil shell-beach composed of countless numbers of at least ninety-six varieties of shells of large size and in a beautiful state of preservation.

From Ft. Thompson the group entered the first of the drainage company's canals, where Heilprin observed the canal banks and spoil dumps. His examination led him to form the opinion that fresh water limestone formed the bed-rock underlying the Okeechobee-Everglades waters and soil. He believed that the whole area of ponds and swamps marked the site of a vast shallow lake whose origin could be

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<sup>3</sup> Angelo Heilprin, Okeechobee Wilderness, iv.

<sup>4</sup> Ibid., 28.

traced to the period when the land emerged from the sea, and that the union of waters had been scattered by the growth of vegetable life in combination with dessication.<sup>5</sup> In the passage through the canals the party found a virtual paradise for birds including red-winged starlings, crow-blackbirds, herons, egrets, ibises, limpkins, and roseate spoon-bills. The animal life along the canals consisted of countless alligators, turtles, black bass, and gar fish. The flow of the water in the various cuts was estimated at three miles per hour.

The party cruised along the shores of Lake Okeechobee for six days, investigating the bayous, streams, and creeks which entered the lake. Previous reports of the lake had stated it to be a swampy lagoon or mud-flat whose miasmatic emanations rendered access a matter of risk. Such reports were found to be grossly untrue. The members of the party were pleased with the clear waters, which were much more agreeable than the barrel of water carried on the schooner. From the many soundings taken, Heilprin judged the great body of water to be resting in a shallow pan, whose surface became a mass of majestic billows with steady winds. First-hand evidence of this nature was furnished when the schooner was forced to lie to, at anchor, a full day while the waves

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<sup>5</sup> Angelo Heilprin, Okeechobee Wilderness, 33.

beat the boat unmercifully. The shore line of the lake on the south and southeast was not absolutely defined, owing to the continuous passage of open waters into the glades. The delimitation at this shore was irregularly marked, however, by the growth of saw grass interspersed with flag weeds. The northeastern and eastern shores were marked by a beach line of sand, rising five feet above the surface of the lake, and covered with a dense growth of oak, maple, and palmetto. This sand ridge supporting a hardwood border was observed to be but a fringe to the saw grass and cypress swamp at a moderate distance to the rear.

Heilprin could find only one dry island in the lake. This island, in the southwest corner of the lake, measured approximately two miles long and three-quarters of a mile wide. It was covered with a growth of small cypress and custard apple, and supported a continuous rookery from one end to the other.<sup>6</sup>

The party spent two days investigating the shore line and the numerous accessions, especially Taylor's Creek, which entered the lake at the northern shore. The banks of Taylor's Creek were well-defined with massive cypress towering one hundred and twenty-five to one hundred and fifty feet into the air and six feet in diameter at their

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<sup>6</sup> Angelo Heilprin, Okeechobee Wilderness, 43.

base. Great masses of water lettuce, a floating surface growth, made the forest almost impenetrable. Several flocks of parakeets, frequenting the highest branches of the cypress, were noticed here for the first time, and the members of the party were able to catch one of the little birds. The waters of the creek teemed with alligators, the largest specimen seen measured fifteen feet in length. Black bass and catfish were plentiful. Few mosquitoes were noticed throughout the trip, a fact Heilprin attributed to the season of the year. The scientist found the Taylor's Creek locality intriguing.

It would be vain to attempt to depict by word the solemn grandeur of these untrodden wilds, the dark recesses, almost untouched by the light of day, that peer forbiddingly into a wealth of boundless green--or to convey to the mind a true conception of the exuberance of vegetable life that is presented. At no time before our visit had I been so thoroughly impressed with the wild grandeur of an untrodden wilderness--nowhere have I so keenly appreciated the insignificance of my own humble being in the sea of life by which I was surrounded. 7

The project of draining the Everglades attracted the attention of Henry B. Plant in the last decade of the nineteenth century. At a director's meeting of the Plant controlled South Florida Railroad in Tampa, Florida, in February, 1892, the subject of vegetable developments was being discussed. Among the directors present were Plant, Henry M. Flagler of the Florida East Coast Railroad, and

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7 Angelo Heilprin, Okeechobee Wilderness, 45.

James E. Ingraham, of the South Florida line. Plant was leading the discussion

. . . over a map which was spread on the table, and he said to me, "Mr. Ingraham, could we build a line from here to here?" being from Fort Myers to Miami. I said in reply, "Mr. Plant, that is right across the Everglades of Florida." "Well, he said, "What of it?" I said, "So far as I know only two white men ever made that trip and they were accompanied by Indians, and I doubt if there is any record of their experience but I would be very glad to run a line [of levels] across there and go in person." 8

"The Everglades Exploring Expedition" was organized as a result of this Tampa meeting. On March 12, 1892, a party of twenty white and two colored men boarded a South Florida Railroad train at Sanford for Port Tampa, where they embarked on the Plant System steamer Tarpon for Ft. Myers. James E. Ingraham, leader and organizer, appointed Wallace R. Moses secretary of the expedition. Arriving at Ft. Myers on March 14, the group camped a mile southeast of the town. John W. Newman, engineer in charge of the line of levels which was to run from the western edge of the glades to its eastern edge, was appointed officer in charge of the expedition. Word was passed to all hands that

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8 James E. Ingraham letter, Ft. Lauderdale (Florida) Tropical Sun, January 1, 1922; David G. Fairchild, The World Was My Garden, 111; John C. Gifford, The Everglades and Other Essays Relating to Southern Florida, 19-20.

9 Wallace R. Moses, "The Everglades Exploring Expedition," 1.

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. 10

On March 15, two cypress skiffs and two canvas boats were sent ahead by ox team to the site of old Ft. Shackelford at the western edge of the glades. The following day the men broke camp in Ft. Myers and began their march to Ft. Shackelford, some fifty-five miles away. On the eighteenth they crossed Ocaloacoochee Slough and the northern end of the Big Cypress using the old government causeway<sup>11</sup> built during the Seminole War.

On March 21, the expedition left Ft. Shackelford, the surveyors starting their chaining and leveling from the position of the old fort. The average depth of the water was six inches, the current of the water sluggish and in a southerly direction. Rock outcroppings, many of them in the form of small pinnacles, made walking precarious. The camp that night was pitched on a slight elevation, covered with a few small cypress and various bushes. After making five miles the following day, camp was set up on an island a quarter of an acre in extent. On this island the growth consisted of grape vines, wild fig, elder bushes,

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10 Wallace R. Moses, "The Everglades Exploring Expedition," 2.

11 Ibid., 5-8.



briers, and pumpkin vines. The average depth of the water was a foot with a change to a foot and a half in the latter part of the day.

On March twenty-third the surveyors set out at two in the morning, while the rest of the party moved off at seven. Camp that night was made on an island that had been the site of a former Indian habitation. The island was off the route of the survey and the food and bedding had to be packed two miles to camp. Wood for the camp fires was taken from a stock pile laid up by the Indians, who cut their fuel in advance in order to have a dry supply on revisiting the spot. Soundings for the day had averaged two to five feet of mud over the bed rock. "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 and small islands here and there."<sup>12</sup>

The group traveled only two and a half miles on the twenty-fourth, having had to make several portages dragging the boats through the grass. "All hands extremely tired and whiskey was served out from the medicine stores."<sup>13</sup> A number of turtles, marsh hens, and limpkins were taken during the day; they made a welcome addition to the bill of

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12 W. R. Moses, "The Everglades Exploring Expedition," 16.

13 Ibid., 17.

fare. The next day proved the hardest traveling up to that date, and the expedition abandoned the smaller wooden boat, as well as some of the other equipment on a portage of 2,000 feet. The twenty-sixth proved to be a good day, with not quite so much saw grass encountered, and the group made five miles. The supply of flour ran out, but a good breakfast of hominy, rice, and beans was provided for the men.<sup>14</sup>

Sunday, March 27, proved a discouraging day for the men of the expedition. Traveling a little over two miles through large bodies of saw grass, they found the water insufficient to float the boats. In order to move through the grass it was necessary for two men to pull and two to push each of the boats through the mass of vegetation. The tendency of the growth of the grass was south and west, while the course to Miami was due southeast. Camp that night was made in the open glades, the party having had to retrace their steps for a mile and a half to avoid a particularly heavy patch of grass.

The following day the party made almost three miles, but two of the men became exhausted and had to be carried in one of the boats. Camp that night was again made in the open grass. Supper had to be cooked over a fire made from grass, supplemented by splinters from the false bottom of

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<sup>14</sup> W. R. Moses, "The Everglades Exploring Expedition," 21-22.

one of the canvas boats. Soundings found the basal rock four to six feet below the top of the muck covering, and Moses logged the fact that the saw grass was quite heavy, indicating very rich land.<sup>15</sup> The group broke camp at seven on the morning of the twenty-ninth, each man carrying a pack.

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 embedded in the same hole in the mud, and to extricate ones-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.<sup>16</sup>

The stopping place for the twelfth night out from Ft. Myers was taken from a flock of white herons who had a rookery on the island. Fifteen of the young birds were killed and cooked up into a dish the marchers thought much better than the average Florida chicken. The food had been rationed on the basis of moving five miles per day, whereas the party had averaged only three miles each day from Shackelford.<sup>17</sup> March 30 the expedition made four miles, but the labor occasioned by working through the high grass became

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22. 15 W. R. Moses, "The Everglades Exploring Expedition,"

16 Ibid.,

17 Ibid., 23.

too difficult for the chainmen and that phase of the work had to be given up. That night was spent on a quarter acre patch covered by a growth of stunted willows inhabited by turkey buzzards, which were "very odorous, but better than mud alone."<sup>18</sup>

On the last day of March the party found the glades bearing east of south with sufficient water to float the boats, necessitating only two short portages. With the depth of water averaging two to three feet, the expedition moved four miles a day on the first two days of April. The food stores had been reduced until all that remained was hominy, which the men supplemented with such animal life as they were able to procure on the march from day to day. The bag of game for the second of April consisted of seven terrapins, three blue herons, several water turkeys, and a forty pound alligator. The party saw a great many Indian signs, notably large burned over areas where the red men had sought game with fire hunting. On the second of April the survey was given up because of physical in-<sup>19</sup>capacity of the men.

The depth of the muck increased as the expedition moved eastward. Soundings to the bed rock now reached six to seven feet below the surface of the soil. During

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24. 18 W. R. Moses, "The Everglades Exploring Expedition,"

19 Ibid., 28.

the day of April third over a dozen fish, including one weighing four pounds, jumped into the boats as the party passed through the narrow and tortuous channels of the saw grass. The group rested that night on an island covered with hackberry trees; from the top of one of the trees the timber line to the east could be seen, some five miles away. Constant wading in water and bog had weakened all the party and considerable lassitude prevailed.<sup>20</sup> A chance meeting with a Seminole, Billy Harney, resulted in his engagement to guide four of the group into Miami to secure provisions. Ingraham and Moses left with Harney on the afternoon of the fourth, riding in the native's dugout. Newman and another man followed in one of the canvas boats. The two boats reached the falls of the Miami River about nine the next morning, and were in the village of the same name at noon on April fifth.

Ingraham was able to hire another Indian to return with Harney and himself to guide the remaining members into the village. After a few days of sightseeing around the village the party left on a steamer for Titusville. There the group boarded a special train for Sanford, and completed its journey on April 16.<sup>21</sup> This voyage of discovery by Ingraham and his party gave information that

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20 W. R. Moses, "The Everglades Exploring Expedition," 32.

21 Ibid., 52.

was valuable when drainage was begun in later years. The question which prompted the expedition, namely the feasibility of building a railroad from Tampa to Miami, was<sup>22</sup> answered in the negative.

A third explorer, Hugh L. Willoughby, a former lieutenant commander in the Rhode Island Naval Reserve and gentleman traveler, visited Florida during the winter of 1896 and made the usual trip up the Miami River to the rap-<sup>23</sup>ids and into the glades. He met J. E. Ingraham and, after hearing the story of the latter's expedition, Willoughby made the boast that he would see if the passage across the Everglades could be made without having to sleep in wet clothes. Intrigued with his first view of the Everglades, Willoughby resolved to return the next year and undertake a journey from the headwaters of the Shark River to the headwaters of the Miami River. He stated that he wanted to examine the plant and animal life of the region and to

. . . show that the word swamp, as we understand it, has no application whatever to the Everglades; that it is a country of pure water; that this water is moving in one direction or another, depending on the natural topography of the country; that the air is wholesome, pure, and free from disease germs; that near the coast

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22 J. E. Ingraham letter, Ft. Lauderdale (Florida) Tropical Sun, January 1, 1922.

23 Hugh L. Willoughby, Across the Everglades, 1-8.

and mangroves the mosquitoes thrive; but deep in the Everglades, in the winter time at least, you can sleep comfortably without a net. 24

Willoughby returned to the North for the summer of 1896 and assembled equipment for his trip the following winter. He secured two canoes of thirty inch beam, one fourteen and the other sixteen feet in length, equipped with single rig sails measuring forty square feet. For navigational aids he procured a case in which were carried an octant, aneroid barometer, thermometer, artificial horizon, zenith compass, and two chronometers with waterproof cases. <sup>25</sup> For propelling the canoes Willoughby selected long poles similar to those used by the Seminoles. As a traveling companion Willoughby hired Ed Brewer, a guide and huntsman living near Miami with whom he had hunted the previous season.

Willoughby decided to make the passage from the lower southwest coast of Florida through the Everglades because there was no record of a previous passage along that line, and because he would be able to locate positions along the east coast railroad whenever he should emerge from the glades. <sup>26</sup> The canoes and other gear were loaded on the sloop Cupid on December 29, 1896, and on the following day Willoughby shoved off and got underway for Cape Sable by

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24 Hugh L. Willoughby, Across the Everglades, 14.

25 Ibid., 49-57.

26 Ibid., 59.

way of Key Largo. The little vessel reached Cape Sable on the morning of January 6 and moved into the Ten Thousand Islands area. Leaving the sloop about six miles from the mouth of Harney River, Willoughby and Brewer paddled their canoes to that stream. Entering Harney River they made their way upstream, stopping within a mile of its source<sup>27</sup> for the night.

The next morning the men set out up stream. The mangrove lined banks crowded the fifty foot width of the channel until after three quarters of a mile the foliage met overhead and the canoes were barely able to find a passage. Here the men believed they were on an Indian route, as the branches of the mangrove jungle had been cut, some rather recently.

A little way farther on . . . an opening appeared letting in a flood of daylight and we suddenly burst into the pathless Everglades. Here was the source of the Harney River very closely defined. We were standing on the rim that dams up that great basin of shoal water, with so few outlets that except in very dry seasons it cannot drain itself. 28

On the first day in the glades Willoughby noted that they had traveled nineteen miles by canoe but only eight miles as the crow flew. The water leads through the saw grass had been good, on the whole, though the grass tended to be heavy in spots. The current of the water was

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27 Hugh L. Willoughby, Across the Everglades, 102.  
28 Ibid., 104.



about a mile and a half per hour, setting to the southwest over a rocky bottom, but now and again covered up to a foot with mud. The water was pure and fresh, and Willoughby did not hesitate to drink it.

The next two days were discouraging. The two men met quite heavy grass at latitude  $25^{\circ} 36''$  north. Ingraham had told Willoughby that he had crossed the heavy grass at  $26^{\circ} 10''$ . "That there is a break about latitude  $25^{\circ} 50''$  known only to the Indians I have little doubt, else how could they travel from the edge of the Big Cypress to Miami with such rapidity." <sup>29</sup> Finding their course blocked to the northeast by the heavy sawgrass, and believing it almost fatal to attempt the crossing, the explorers returned to their station of the third night. In the morning they took a more northerly course. At noon they arrived at a heavily wooded island and, discovering it to be an old Indian camp cleared in the middle to an extent of some sixty feet, they decided to set up their camp for the night.

On the fifth day the men made less than three miles, and were stymied by a ten foot wall of sawgrass. The camp that night was made on a very small hummock after they had cleared off the snakes and piled up the brush for bedding

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29 Hugh L. Willoughby, Across the Everglades, 122.

down. The following day they observed Indian fires to the north and west and smoke on the east which they presumed to be Miami. Travel was so slow through the high grass and low water that they decided to retrace their steps to the first opening to the east. Close inspection showed the water to be running east of south, proving they had passed the dividing line of the watershed.

For the next four days the men made their way south and east, looking for a passage through the grass. Toward the end of the tenth day in the Everglades they reached the end of the heavy grass. Making their way four miles to the east on the eleventh and twelfth days they were still hindered by the low water and rock outcroppings.

The difficult wading, lifting of the feet out of the holes in the rock, the pulling, dragging and the extra care necessary to avoid tearing the loaded canoes to pieces exhausted us terribly. 30

Deeper water was reached the thirteenth day as they continued eastward. Making good time that day they reached an old camp which Brewer recognized. Turning their course northward, the men covered eleven miles the following day to end their second week in the Everglades. By Willoughby's estimate they were as far north as they had been on the sixth day and but seven miles further east. His figures led him to believe that they had made a fifty-five mile detour to avoid

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30 Hugh L. Willoughby, Across the Everglades, 157.

seven miles of heavy saw grass. In the afternoon of the fifteenth day they reached the head of the Miami River, and completed their trip into Miami the following day.<sup>31</sup>

Willoughby's expedition was made through the lower glades and the data he collected bear out the reports of the relative worthlessness of the southern part of the area insofar as soil depth and water levels are concerned. Ingraham, the railroad builder, crossed the Everglades seeking to determine their value for agriculture and as a bed for his railroad. He realized that in time they might become a land of promise. Heilprin, the scientist and nature lover, found more than he sought in the Caloosahatchee shell beds and the wild flora and fauna of Okeechobee. Each of these latter-day explorers left a permanent record to be used, in one way or another, in the development of the Everglades.

## 2. The Seminoles

When the Seminole War ended in 1842, an Indian reservation was provided which roughly embraced the lands of the interior of Florida south of Lake Istokpoga. At that time the Office of Indian Affairs estimated there were 300 Seminoles remaining in Florida, but after the Hartsuff ambush of 1854, 150 Seminoles were forced to migrate to the

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<sup>31</sup> Hugh L. Willoughby, Across the Everglades, 165-166.

western Indian lands. The few remaining red men, who had been hunted like animals, settled in the innermost recesses of the isolated Everglades and the adjoining Big Cypress. In order to make sure they stayed there the Florida legislature in December, 1862, enacted a law to regulate trade and intercourse with the Indians.<sup>32</sup>

Section one of the act authorized the governor to appoint a State Indian Agent, to hold office at the governor's pleasure, and to receive a stipend of \$1,500 a year. The agent was to seek by compact or agreement with the Indians for a settlement on a reservation south of a line running from the mouth of the Caloosahatchee to Lake Okeechobee and around the northern shore of that lake due east to the Atlantic Ocean. The agent was instructed to confer with the Indians, giving them assurance of the state's desire to protect them, and to manage and superintend all trade and intercourse with the Indians within their boundaries. The governor was allowed \$5,000 a year to carry out the act and was directed to appoint a merchant to handle the red men's trade, to prohibit all trespassing on the reservation, to forbid the sale of intoxicating liquors, and to enforce all of the laws of the state, except that criminal law was not to extend to crimes committed by one Indian against another

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32 Chapter 1363, Laws of Florida, 1862.

Indian within their reservation.

The 1862 act was significant in that it sought to reduce the size of the reservation that had been a part of the settlement of the Seminole Indian War in 1842. Further, this act was the first overt move on the part of the State of Florida to aid and protect the aborigines albeit the act was repealed within the year. Shortly after the close of the Civil War the legislature took action in regard to the Seminole. An act passed in 1866 abolished all boundary lines, legalized free trade, allowed the Indians to make their own civil laws and to be governed by them. The 1866 act outlawed maltreatment of the Indians and made punishable any incidents that would incite the red men to hostility. The act provided for an Indian agent, but at the more economical rate of \$500 per year.<sup>33</sup> This law, abolishing outright any degree of right of the red men to lands in the state, left the Indians mere squatters on the hunting and fishing grounds of their forefathers.

The Florida Constitution of 1868 sought to recognize the Indians' rights by making provision in article sixteen for the seating of one Indian member in each house of the General Assembly. The Indian representative and senator were to have all the rights and pay of other members.

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33 Chapter 1482, Laws of Florida, 1866.

F. Trench Townshend, an English tourist who stopped in the Miami area in 1874, found a small store on the banks of the Miami River supplied with staples for the few settlers and the Everglades Seminoles. Townshend noted that the store did a considerable trade with the Indians who resorted there for whiskey and beads.

It is supposed there are not more than a hundred and fifty Indians now remaining in Florida. . . . The Red Skins down at Miami were tall well grown men, with the usual straight black hair and strongly marked features; their squaws were a hideous bundle of rags decorated with glass beads and a few old coins. . . . The Indians complain that their lodges on the islands in the Everglades are so unhealthy that they cannot raise their children, and there is no doubt that they are decreasing and will probably be extinct even before the game on which they exist. 34

James Henshall, in 1878, concluded that the Seminoles were very peaceable, seldom being seen in the white man's village. He described them as splendid specimens of the Indian race: tall, symmetrical, and very straight with clean, sinewy limbs and good features.

They shave their heads as high as the tops of the ears, and braid the top lock into a long plait which they coil around the crown. The head-dress is composed of a number of bright colored shawls wound around the head in the manner of a turban, looking for all the world like a gaily painted cheese with a hole in the center to fit the head. 35

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34 F. Trench Townshend, Wild Life in Florida and a Visit to Cuba, 240-241.

35 James A. Henshall, Camping and Cruising in Florida, 107-108

It was not until 1881 that a scientific study was made of the Seminoles of Florida. The Reverend Clay MacCauley was commissioned by the director of the United States Bureau of American Ethnology to inquire into the conditions and numbers of the Seminoles in Florida. MacCauley spent the months of January, February, and March of 1881 among the Seminoles. "Owing to the ignorance prevailing even in Florida of the locations of the homes of the Seminoles and also to the absence of routes of travel in Southern Florida much of my time at first was consumed in reaching the Indian country." <sup>36</sup> The inquiry was further hampered by the lack of an interpreter; MacCauley finally attempted to master the native language with the aid of one man who could speak some English.

MacCauley found a total of two hundred and eight Indians, constituting thirty-seven families, living in twenty-two camps gathered into five widely separated settlements. These settlements were located in the Big Cypress, roughly twenty miles southwest of Lake Okeechobee; on the Miami River, about ten miles north of old Ft. Dallas; on Cow Creek, fifteen miles northeast of the mouth of the Kissimmee River; on Fish Eating Creek, five miles from the

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<sup>36</sup> Clay MacCauley, "The Seminole Indians of Florida," United States Bureau of American Ethnology, Fifth Annual Report, 1883-1884, 475. Cited hereinafter as Clay MacCauley, "Report on the Seminole Indians."

western shore of Lake Okeechobee; and on Catfish Lake, a small lake midway between Lakes Pierce and Rosalie, towards the headwaters of the Kissimmee River.

The settlements are from forty to seventy miles apart, in an otherwise almost uninhabited region, which is in area about sixty by one hundred and eighty miles. The camps of which each settlement is composed lie at distances from one another varying from a half mile to two or more miles. 37

A breakdown by age and sex discloses several curious facts about the Indians. An overall excess of sixteen males was difficult to explain in the face of polygamous marriage. There were thirty-eight males between ages twenty and sixty, and fifty-six women between ages fifteen and sixty. Almost all these latter were the wives of the former. Of the fifty-four boys between ages five and twenty, and thirty-one girls under fifteen, there existed an excess of twenty-three boys. The excess in the number of young males presented a puzzling problem to MacCauley, who found the Seminoles were increasing in numbers but producing more men than women. He could see no reason why the tribe should not continue to increase unless it were checked by the non-birth of females. Further reasons for increase were the lack of wars from 1860 to 1880, the absence of epidemic disease for the same period, an abundance of animal and vegetable food easily obtained

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37 Clay MacCauley, "Report on the Seminole Indians," 478.



and prepared, equable climate, and the temperate and moral lives led by the Indians.

After observing the social life of the Seminoles, especially their associations with the white race, MacCauley wrote:

The white half-breed does not exist among the Seminole, and nowhere could I learn that the Seminole woman is other than virtuous. The birth of a white half-breed would be followed by the death of the Indian mother at the hands of her own people. 38

The only explanation MacCauley could offer for the small number of Indians in southern Florida was that a great many more had migrated to the West than had been popularly supposed.

The physical characteristics of the people of the tribe were described as excellent, the men attracting attention by their six foot height, well filled out and symmetrically developed frames, with agreeable, small, and well sculptured features. The women were observed to share largely the good qualities of the men, though they were under rather than over the average height of females in general. The women possessed regular and agreeable features, and shapely and well developed bodies.

Indeed, the only Indian women I have seen with attractive features and forms are among the Seminole. . . . Among American Indians I am

confident that the Seminole women are of the first rank. 39

MacCauley believed the Seminoles to be among the brightest of the American Indians. The Indians were antagonistic to the white man as a race, but MacCauley had no trouble making friends with them when his motives were made clear. Most of them were eager to talk and answered directly without equivocation. Though descended from Indian peoples of many nations, the Seminoles were found to have been so strongly moulded by their associations with the Creek nation that they had adopted the Creek language, customs, and regulations. In their family life, they combined affection and cheerfulness with cooperative industry, and all hands took part in household industry and duties.

Distinctive dwellings marked the Seminole settlements; permanent houses were erected at the main camps and temporary houses at the sugar cane hammock, the hunting areas, and the "coontie" ground. The houses, more like sheds, were usually nine by sixteen feet, built of palmetto logs, thatched with palmetto leaves, and fitted with a floor or platform about three feet from the ground. The ridge pole was set about twelve feet above the ground, with the eaves sloping away to seven feet. The space above the joists was partially planked and used for the storage of food and other commodities. The sides were open to the four winds,

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39 Clay MacCauley, "Report on the Seminole Indians," 482.

though some of the Indians had provided their houses with woven palmetto mats that could be hung from the eaves during periods of foul weather.

The society of the Seminoles, MacCauley discovered, was divided into nine gens or groups of relatives, tracing a common lineage. The gens divisions were also used to serve as a basis of very simple governmental organization. A man could not marry into his own gens; children belonged to the mother at birth, and were members of her gens.<sup>40</sup> The Florida Indians rejected the name of Seminole as a term of reproach or cowardice; they spoke of themselves as "point-of land" or peninsular Indians.

MacCauley found the Indians cultivating one hundred acres sown principally to corn, cane, melons, and beans. The cane averaged two inches in diameter and seventeen feet in length.

It was at "Old Tommy's" sugar field I met forty-eight of the people of the Big Cypress Swamp settlement. . . . They had left their homes for a few weeks together, "camping out" and making and eating syrup. 41

The Indians had over fifty head of cattle, one thousand hogs, five hundred chickens, and thirty-five horses. One of the principal items of their diet came from the "coontie" or

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40 Clay MacCauley, "Report on the Seminole Indians," 508.  
41 Ibid., 510.

Florida arrowroot. The Indians dug the roots from the wild growth in the woods and were adept in their primitive methods of producing flour through a series of poundings and washings. The Indians did no weaving; their cloth came from trading posts, similar to the one at Miami where MacCauley was told the value of Indian purchases ran to \$2,000 a year.

MacCauley pointed out the ease with which the natives lived off the bounty of nature as contrasted with the great moral strength which the tribe had gained from centuries of conflict with the white man. These conflicts, MacCauley believed, had made this little group of Seminoles a brave and a proud people. He pointed out the moving lines of population closing in on the lands of the Florida Indian, and the inherent dangers to the very life of the natives in the efforts then being directed toward the drainage of the Everglades.

But now that new factors are beginning to direct his career, now that he can no longer retreat, now that he can no longer successfully contend, now that he is to be forced into close, unavoidable contact with men he has known only as enemies, what will he become? If we anger him, he can still do much harm before we can conquer him; but if we seek, by a proper policy to do him justice, he may yet be our friend and ally. 42

Even before MacCauley's paper on the Seminoles appeared

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42 Clay MacCauley, "Report on the Seminole Indians," 531.

under the auspices of the Smithsonian Institution in Washington, a petition was laid before the Board of Trustees of the Internal Improvement Fund of Florida asking that reservations of land be made for the Indians to protect them in their homes and on their hunting grounds.<sup>43</sup> The Board, on March 12, 1883, ordered the secretary to correspond with Frank A. Hendry and E. R. Trafford, pioneer residents of the Ft. Myers area, relative to the possible location and quantity of lands needed for the benefit of the Seminoles.

In 1893 the Women's National Indian Association began a movement to assist the Florida Indians by procuring eighty acres of land in the Immokalee settlement, southwest of the Big Cypress. Several buildings were erected on this acreage, including a saw mill, school, and a residence for an agent. The distance of this reservation from the Indian camps combined with the reticence of the Seminoles to deal with the white man were among the factors which contributed to the closing of the agency shortly after the turn of the century.<sup>44</sup>

Cornelius N. Bliss, United States Secretary of the Interior, devoted several paragraphs in the section on Indian Affairs of his Annual Report for 1896 to a resume

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43 I.I.B. Minutes, III, 211.

44 Roy Nash, "Survey of the Seminole Indians of Florida," Senate Documents, Number 314, 71 Congress, 3 Session, 54.

of the status of the Seminoles of Florida.<sup>45</sup> Noting that the Seminoles had no legal rights in the state, he pointed out that attempts to locate them in 1888 under the provisions of the homestead act had failed. The failure was due, surprisingly enough, to the fact that no lands could be found for the purpose.

Under the swamp and overflowed land grant act of 1850, Florida had received by 1898, 16,734,852<sup>46</sup> of the 35,000,000 acres of land in the state. The area known as the Everglades, some 2,225,000 acres, was approved by the Secretary of Interior without exception on February 13, 1897, for transfer to the state as "swamp land list number eighty-seven." The Office of Indian Affairs requested the Secretary of the Interior to protect the interests of the surviving Indians of the state, and Secretary Bliss directed that an inspection be made of the territory involved. Colonel A. J. Duncan, brother-in-law of President William McKinley, was instructed to proceed to Florida in February, 1898, for the dual purpose of checking on land list eighty-seven and to recommend a reservation for the Indians. Legal opinion of the Interior Department was that the Seminoles' only claim to lands in the state was by right of occupancy,

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45 Report of the Secretary of Interior, 1898, House Documents, Number 5, 55 Congress, 3 Session, LV-LVI.

46 Ibid., CCV.

but that any lands which were not of the wet variety might be excluded from the list on a revision of the grant in question.<sup>47</sup>

Duncan's examination, covering a period of seven weeks, encompassed all the Indian settlements in and around the Everglades. At the conclusion of his tour of the Seminole camps, he wrote:

From time to time they have been driven within the Everglades and hammocks, and within a short time they have been dispossessed of a part of these, and unless protected the remaining hammocks on which they live will be seized by the irrepressible land grabber. 48

Duncan found three instances where the island settlements of the Indians on the eastern side of the Everglades had been expropriated by white squatters. He recommended that a list of lands and hammocks which he had located be surveyed and held for the Seminoles' occupancy. The locations, not to exceed 350,000 acres, were within or contiguous to the Everglades. He further recommended that the Indian agency situated at Immokalee be removed to a point near the camps of the natives, and that proper measures should be instituted immediately to carry out these proposals.<sup>49</sup>

The Indian appropriation act of 1894, continued each

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47 Appendix G, Report of the Secretary of Interior, 1898, House Documents, Number 5, 55 Congress, 3 Session, CCI.

48 Ibid., CCXI.

49 Ibid., CCXX-CCXI.

succeeding year, set aside \$6,000, one-half of which was to be used in the purchase of lands for the Seminoles. By June, 1898, 10,000 acres had been secured for a reservation in what is now Hendry County and by June, 1911, a total of 26,781 acres comprised federal reservations for the tribe. Dr. James E. Brecht, Florida agent of the Indian Service, expressed the hope in 1899 that "renewed effort may be made by the Government for work among them in their camps by a sufficient force of helpers."<sup>50</sup>

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<sup>50</sup> Roy Nash, "Survey of the Seminole Indians of Florida," Senate Documents, Number 314, 71 Congress, 3 Session, 62.



## CHAPTER VI

### ORIGIN OF THE EVERGLADES DRAINAGE DISTRICT

#### 1. Years of Indecision

"No one part of Florida has been so much written of and so little understood as the Everglades."<sup>1</sup> These words are among the truest ever written about the area, but the closing years of the last century witnessed a curious series of events directed toward the eventual reclamation of the region. The partial success of the Disston enterprises reacted to the advantage of southern Florida's growth, especially in the construction of canals and railroads. The Disston purchase, providing the means whereby the lands of the Internal Improvement Fund were again made available for bestowal to land grant corporations, furnished the impulse for the development of the peninsula's latest frontier, an old story under a new name.<sup>2</sup>

During Governor Bloxham's first term of office, 1881-84, not only were new railway companies chartered, but old charters were re-issued; with 17,000,000 lien-free acres under the control of the trustees, the legislature made generous grants to companies seeking aid. In disregard of the limit specified by law--3,849 acres per mile--8,000 to 20,000 acres per mile were allotted to various corporations.<sup>3</sup>

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1 Frederick W. Dau, Florida Old and New, 289.

2 K. T. Abbey, Florida, Land of Change, 350-353.

3 Fritzie P. Manuel, "Land Development in the Everglades," Hearings Before the Select Committee Investigating National Defense Migration, House of Representatives, 77 Congress, 2 Session, 12868.

Prior to Bloxham's governorship the Board of Trustees of the Internal Improvement Fund, by its interpretation of Chapter 610, Acts of 1855, had refused to recognize any rights of the legislature to make grants of land other than of the alternate sections of swamp and overflowed lands for six miles on each side of a properly incorporated railroad or canal.<sup>4</sup> The legislature in 1879 passed several acts granting lands beyond the six mile limit, "without any regard to the liabilities of the Trust Fund, or the provisions of Chapter 610, which placed these lands in the hands of the Trustees."<sup>5</sup> Governor George F. Drew vetoed these acts on the ground that they were in violation of the 1855 act creating the Trust and the subsequent contracts made by the Board of Trustees. The legislature managed to circumvent Drew's veto by making additional land grants subject to the trust set up in the 1855 act.<sup>6</sup> From the first administration of Bloxham in 1881, through his second administration in 1900, the Board honored the legislative

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<sup>4</sup> 1907 Commission Report, 296.

<sup>5</sup> Ibid., 331.

<sup>6</sup> R. E. Rose, The Swamp and Overflowed Lands of Florida: The Disston Drainage Company and the Disston Purchase, 4; Chapter 3167, Laws of Florida, 1879. The subject provision reads to the effect, "Provided, However, That the grant of lands made by this section is made subject to the rights of all creditors of the Internal Improvement Fund and to the trusts to which said Fund is applicable and subject," under the Internal Improvement act of 1855. This provision was enacted into a general law as Chapter 3226, Laws of Florida, 1881.

grants of the swamp and overflowed lands of the Fund by executing deeds to the grantees.

The Joint Commission, elected by the legislature of 1907 to investigate the acts and doings of the Board of Internal Improvement, found that during the period from 1879 to 1899 ninety-two acts were passed by the various legislatures granting lands to corporations which "would require more than three million acres of land over and above what the State owns, to satisfy these grants in full."<sup>7</sup> The Commission noted that all of these grants had been made subject to the provisions of the Improvement Act of 1855. Railroad companies had received 8,266,020 acres, and canal and drainage companies had benefited by 2,710,953 acres in direct grants. Including the Disston sale and smaller transactions the land grant corporations had received 15,000,000 of the 20,000,000 acres of swamp and overflowed lands conveyed to Florida by the United States to 1900.<sup>8</sup> According to Rufus E. Rose the period from 1885 to 1897, the twelve years between Bloxham's two terms, were years of extravagant legislative grants;

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<sup>7</sup> 1907 Commission Report, 341.

<sup>8</sup> Ibid. ". . . a close examination of the various acts of the legislature, beginning in 1879 . . . attempting to grant swamp and overflowed lands [shows] . . . that only a residuary interest therein was attempted to be granted by the legislature." Senate Documents, Number 89, 62 Congress, 1 Session, 8.

litigation subsequently arose over them. Some of the grants, Rose believed, were secured honestly, others were not.<sup>9</sup>

For several years the Board had been receiving proposals from other parties relative to the reclamation of the public lands of the wet classifications. In May, 1889, Dr. J. V. Harris of Key West, Florida, wrote the Board asking permission to enter, drain, and cultivate two thousand acres lying between the Everglades and the salt water sounds to the south in the vicinity of Township 60 South, Range 36 East. Harris believed the lands could be "diked and drained, but will not be surveyed for half a century, as they appear to be valueless," and he asked for the privilege of buying the acreage at 1889 prices.<sup>10</sup> The Board replied in the affirmative to this request. Three years later Harris again wrote the Board asking for a body of land in the same locality at fifty cents an acre. Again the Board gave him an affirmative answer, but added that a bond in the same amount as the purchase price would have to be posted, assuring the Board that the land would be drained in two years.<sup>11</sup>

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9 R. E. Rose, The Swamp and Overflowed Lands of Florida: The Disston Drainage Company and the Disston Purchase, 5.

10 I.I.B. Minutes, IV, 42.

11 Ibid., 204. For other propositions submitted to the I. I. B. Trustees relative to Everglades drainage see I. I. B. Minutes, IV, 189-190, 199-200.

However, there seems to have been in the minds of the Trustees beginning with the first administration of Wm. D. Bloxham, and when Legislative land grants were first recognized, the idea that the Fund belonged to the railroads under these grants, and this idea, which seems to have possessed the Trustees at that time, found expression during the administration of Governor F. P. Fleming [1889-1893] . . . . 12

On May 10, 1892, the Board notified various railroad companies whose land grants had been earned but not fulfilled to attend a meeting on the following June 10 to show cause why contracts proposing to drain a million or more acres in the Everglades should not be consummated.<sup>13</sup> The representatives of six railroads met with the Trustees on that date, all of whom protested the sale or pledge of any state lands until the land grants due their companies were satisfied. After hearing propositions to drain and reclaim the Everglades made by J. E. Ingraham, and the statements of the railroad agents

. . . the Board took the matters into consideration, and it was decided that in view of the fact that there was hardly a sufficient quantity of lands patented or to be patented to the State to satisfy the land grants of Rail Road Companies earned but not yet satisfied, that the Board could not accept any of the propositions to drain or purchase any of the unpatented State lands. 14

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12 1907 Commission Report, 292.

13 I.I.B. Minutes, IV, 205-206; 1907 Commission Report, 292-293.

14 I.I.B. Minutes, IV, 202.

The digging of the Okeechobee-Calooosahatchee canal in 1883 had resulted in a set of mixed blessings. The lowering of the water levels of the big lake and its surrounding territory and the consequent lowering of the Calooosahatchee waters had resulted in the settlement of the rich lands along the river. With the shift of operations from Okeechobee to the Kissimmee-St. Cloud area, maintenance of the Caloosa canal stopped and flooding of bottom lands became an issue before the Board of Trustees of the Improvement Fund.<sup>15</sup>

A petition, signed by roughly one hundred residents of Lee and De Soto counties, protesting the use of the Caloosahatchee River for the release of the excess waters of Lake Okeechobee, was read before the Board on May 8, 1890. The petitioners pointed to the results of making the valley the main outlet for Okeechobee's waters which were "tending to endanger the bordering lands along the river during and subsequent to the rainy season. . . ."<sup>16</sup> The board was urgently requested to bring about the closing of the Okeechobee-Calooosahatchee canal and the constructing of embankments to prevent the waters of the big lake from causing further damage below the mouth of the canal. The Board moved that Governor Fleming furnish the drainage company a copy of the petition, "and ask said company to inform the Board . . .

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15 I.I.B. Minutes, IV, 87-88.

16 Ibid., 87.

if any reasons exist why the request of the petitioners cannot be granted."<sup>17</sup>

On May 23, 1890, the Board received an answer from the Atlantic and Gulf Coast Canal and Okeechobee Land Company regarding the petition of the Calcosahatchee Valley residents. J. H. Creamer appeared before the Board in the interest of the Disston Company and stated that the organization would be willing to close the canal and construct levees "if such changes would be regarded by the Board as work under and in accordance with its contracts. . . ."<sup>18</sup> After listening to Creamer's proposed changes the Board agreed that the costs would be considered proper expenditures under the drainage contracts.

In compliance with the 1899 Rivers and Harbors Act which made provision for an examination and survey of the Kissimmee-Okeechobee-Caloosahatchee waterway "with a view to improving the navigation of the channels therein," the Chief of Engineers of the United States Army submitted a report on January 2, 1902.<sup>19</sup> The report recommended an

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17 I.I.B. Minutes, IV, 89.

18 Ibid., IV, 97.

19 House Reports, Number 176, 57 Congress, 1 Session, 1. "A voyage, unique in every respect, may be made by steamer from Punta Rassa, following the river, the lakes or the canal as far inland as Kissimmee, where one sees the spreading cane fields redeemed by drainage at St. Cloud." John N. MacGonigle, "The Geography of the Southern Peninsula of the United States," National Geographic, VII (December, 1896), 384.

expenditure of approximately \$25,000 for the development of the Kissimmee River channel thirty feet wide and three feet deep between Kissimmee and Ft. Bassinger, twenty miles from Lake Okeechobee. The engineer noted that the waterway from Ft. Bassinger to Ft. Thompson, on the Caloosahatchee, was not used for carrying trade, nor was there any demand for channel improvement since the country was an uninhabited swamp. The survey party found no landings or settlements on Lake Okeechobee. On Taylor's Creek at the northeastern corner of the lake were several young orange groves. There were also several groves being set out and clearings under way for more. The post office at Ft. Thompson, at the head of navigation on the Caloosahatchee and twenty-three miles from Lake Okeechobee, was the last settlement before reaching the big lake from the west.

Interest continued to develop in the lands about Okeechobee despite its wilderness setting. Francis A. Hendry

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20 House Reports, Number 176, 57 Congress, 1 Session, 3-9.

21 Francis Ashbury Hendry, 1833-1919, born in Thomas County, Georgia, came to Florida at the age of eighteen. One of three brothers who settled in Florida, F. A. Hendry moved to the Alafia River in Hillsboro County. He served in the 1850 Seminole War and the Confederate army in 1861-64. After the Civil War he engaged in cattle ranching and served as a state legislator from Brevard, Polk, Manatee, and Monroe counties. In 1868 he moved to Ft. Myers, where he lived until his death in 1919. Taking an active part in the public affairs of southern Florida, he was honored by having his name given to one of the newer Everglades counties. F. A. Gonzalez, compiler, The Caloosahatchee, 28-30.



of Ft. Myers wrote the Board in May, 1893, outlining the request of several citizens of Lee County who desired

. . . to enter upon and cultivate a tract of unsurveyed swamp and overflowed land, situated at or near Rita river, bordering Lake Okeechobee. Their object is to raise winter and early spring vegetables. . . . If you will kindly grant this request it will doubtless prove of great advantage in the way of showing the great value of those waste lands, and prove to be of great interest to the State. 22

The Board granted the request with the proviso that the prospective cultivators occupy the land until it should be in a condition to be conveyed through a survey; and it fixed the price at the 1893 level for wet lands.<sup>23</sup> No reference can be found to the success or failure of the settlement.

The Okeechobee-Calcoosahatchee Canal, locally known as the Hicpochee Canal since it passed through the lake of the same name, became somewhat of a bugaboo to the Board after 1890. The promise of the drainage company cited above to close the canal and construct dikes was never fulfilled. In 1895, F. A. Hendry sought the aid of the Board<sup>24</sup> to close the Hicpochee Canal during the rainy season. The Board again contacted the Okeechobee Land Company about closing the canal and received a reply from Hamilton Disston

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22 I.I.B. Minutes, IV, 239-240.

23 Ibid., 240.

24 Ibid., 312-313.

stating that closing the canal would undo all the previous work of reclamation in central and south Florida.<sup>25</sup>

The discussion of the benefits of the Hicpochee canal continued through the intervening years until April, 1902, when the Board granted permission to a committee of Lee County citizens to close the eastern end of the canal into

Hicpochee.<sup>26</sup> In June, 1903, Hendry was paid the sum of \$3,325.53 as agent for the Board in closing the Hicpochee

Canal.<sup>27</sup> The final paragraph on the Hicpochee Canal argument was written by the Board under the leadership of Governor William S. Jennings on November 22, 1904. The Board resolved to withhold 347,288.20 acres claimed by the assignees of the Okeechobee Land Company. The Board stated that

. . . from time to time the attention of the Atlantic and Gulf Coast Canal and Okeechobee Land Company was called to the serious damage resulting from the opening of the canal from

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25 I.I.B. Minutes, IV, 331-337. Concerning developments in the Okeechobee area Disston wrote on May 1, 1895: ". . . we constructed a canal southwest from Okeechobee and established a route for an outlet to the Atlantic Ocean on the East in order to afford all the relief possible; and in addition to this we set about organizing a large Company to convert the lands near Hicpochee and Okeechobee into extensive sugar and rice plantations . . . but every condition for the past several years has had a tendency to repel capital from sugar and rice ventures. . . ." I.I.B. Minutes, IV, 332.

26 Ibid., V, 110.

27 Ibid., 191.

Lake Okeechobee to Lake Hicpochee; and that said Company agreed to close said canal, but failed to do so. . . . 28

Consequently the Board considered the remaining land claims forfeited.

Through the last quarter of the nineteenth century the lower east coast of Florida, and especially the Biscayne Bay area around Miami, showed a slow but steady growth. From the four houses and one store noted by a traveler in 1874, the settlement at the site of old Ft. Dallas had grown to a community of two thousand inhabitants in 1897.<sup>29</sup> W. R. Moses commented in 1892 on the guests of the Coconut Hotel in Miami, whose thirty rooms were "well filled with people from New York and Boston."<sup>30</sup> Moses described pineapple, cocoanut, and "compte" plantings in the Dade County area as well as a sisal hemp factory nearby. He observed that the stores of Miami held their prices twenty to forty per cent higher than those on the South Florida Railroad on the other side of the state.<sup>31</sup>

With a guide and a boat furnished by Mrs. J. D. Tuttle, a pioneer resident of Miami, a winter visitor of 1894 made the usual excursion up the Miami River to the Everglades.

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28 I.I.B. Minutes, V, 272.

29 F. T. Townshend, Wild Life in Florida, With a Visit to Cuba, 234; H. T. Willoughby, Across the Everglades, 62.

30 W. R. Moses, "Everglades Exploring Expedition," 40.

31 Ibid., 42.

He reported that the river "tumbles over the coral rock near its source in splendid rapids against which a boat is dragged, not rowed, with difficulty."<sup>32</sup> After maneuvering the boat over the point where the stream made its first plunge the sight-seer was able to row the skiff in smooth waters. The visitor recorded that he had always associated the Everglades with a swampy morass.

But instead I found an inland lake, of drinkable water, lying high up in the sunshine, while stretching away toward sunset as far as eye could reach was only a vision of blue waters, green isles, and vast areas of sedge-grass or reeds, moving in the balmy breeze like ocean billows.<sup>33</sup>

An article on the geography of southern Florida, published in 1896, added to the growing mass of reports on the Everglades.<sup>34</sup> The writer believed the volume of water in the Everglades could be attributed to precipitation and underground springs, citing as evidence a large spring below the falls of the Miami whose issue was clear and uncolored, whereas the glades waters were very black. "The fertility of the southeastern coast region is really beyond

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<sup>32</sup> Charles Richards Dodge, "Sub-Tropical Florida," Scribner's, XV (March, 1894), 361.

<sup>33</sup> Ibid. Dodge makes the amusing observation that unquestionably "the Seminole is a very decent Indian--save when he has been drinking 'cider with a little Jamaica ginger in it'--(a trader told me that was the formula)."

<sup>34</sup> John H. MacGonigle, "The Geography of the Southern Peninsula of the United States," National Geographic, VII (December, 1896), 381-394.

description. . . ."<sup>35</sup>

The same writer declared that the eastern edge of the Everglades furnished every condition of soil and climate necessary to the growth of the India-rubber tree, and if ever drained would afford a soil of incalculable richness and fertility. ". . . whether the glades are ever drained or not, the islands of their eastern edge will furnish the rubber of future commerce."<sup>36</sup>

The inauguration of William D. Bloxham as governor for his second term in 1897 marked the beginning of positive state interest in the reclamation of swamp and overflowed lands. During this administration, "the Trustees made special effort to drain and reclaim, . . . to secure settlement of the lands, and to bring immigration to the State."<sup>37</sup> Rufus E. Rose, representing James E. Ingraham, J. R. Parrott, and other officials of the Florida East Coast Railway, in 1898 sought a drainage contract for the development and sale of Everglades lands.<sup>38</sup> The Board, under the leadership of Bloxham, replied that it was willing to enter such a contract

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<sup>35</sup> J. N. MacGonigle, "The Geography of the Southern Peninsula of the United States," loc. cit., 394. MacGonigle listed plantings of the citrus family, pineapple, mango, guava, avacado pear, sapodilla, sugar apple, Japanese plum, persimmon, vanilla, camphor, "kola," "chincona," cinnamon, and coffee whose culture had started with great promise of success.

<sup>36</sup> Ibid., 394.

<sup>37</sup> 1907 Commission Report, 292.

<sup>38</sup> Ibid., 293; I.I.B. Minutes, IV, 432.

for lands south and east of Lake Okeechobee on the basis of 20,000 acres of land for each 200,000 cubic yards of excavation for drainage purposes. The Board required that the work be done "in a scientific and proper manner looking to the drainage of the . . . land in connection with the general drainage scheme to be provided for in the contract."<sup>39</sup> In addition the Board demanded twenty-five cents for each acre conveyed. Operations were to be commenced within one year from the date of contract with not less than a hundred thousand cubic yards of excavation per year.

On June 29, 1898, the Board signed a contract with Rose, Ingraham, Parrott, and others on the basis outlined above.<sup>40</sup> These men and others became associated as stockholders in the Florida East Coast Drainage and Sugar Company and subsequently transferred their rights under the contract to that corporation, which in turn became a subsidiary of<sup>41</sup> the Henry M. Flagler-controlled Florida East Coast Railway.

In the latter part of December, Rufus E. Rose, secretary and superintendent of the Florida East Coast Drainage

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<sup>39</sup> I.I.B. Minutes, IV, 433.

<sup>40</sup> Ibid., 437-442; 1907 Commission Report, 294. The lands covered in the contract lay south of township 46 south and east of range 36 east, as far south as township 59 and as far east as range 42, ibid., 345.

<sup>41</sup> I.I.B. Minutes, IV, 446-450, V, 31.

and Sugar Company, transmitted to the Board a report, with accompanying maps and profiles. The report stated that three survey parties had been employed during the summer of 1898 to run lines into the Everglades from the eastern boundary west of Miami, Biscayne, and Modelo between townships 50 and 54. The area examined comprised some 180 square miles in which soundings were taken of the soil and notes made of its depth and character. Rose further reported that it would not be "necessary or advisable to undertake the drainage of the entire area immediately" but by enclosing portions of it with dikes and canals in accordance with the progress of the work and the demand for land, "the whole can eventually be put into shape for agriculture."<sup>42</sup>

The mean of the three surveys showed a seven foot fall from the head of the Miami River to tide-water, and a gradient of approximately four inches per mile on the open glades from the interior to the eastern edge.

From a practical standpoint . . . the fall is ample to drain perfectly, a territory of not less than thirty (30) miles broad, west of the head waters of these streams, always provided a sufficient number of canals, of a total cross section, equal to the aggregate cross section of the streams flowing out of this territory be provided. If this territory be diked on its northern and western boundaries, the enclosed area will be more quickly drained, and the water level maintained lower

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42 I.I.B. Minutes, IV, 453.

than if the "spill" from Lake Okeechobee be allowed to pass through the interior drainage canals.

I suggest the cutting out and draining of sections of 100,000 acres each--4 to 6 townships--as distinct operations, beginning on the East and extending the drained territory westward. 43

In his biennial message to the legislature in 1899

Governor Bloxham declared that:

The great value of the partially submerged lands in the Everglades, the practicability of their drainage, and the steady march of improvement looking to the utilization of those lands, bring forcibly to the front the necessity of some action by both the General and State Governments, if homes are to be secured for the Seminole Indians remaining in this State. 44

Governor Bloxham pointed out that the Secretary of the Interior had declared that certain United States lands in Florida might be assigned to the Seminoles. Should such action be taken by the federal government, the governor

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43 I.I.B. Minutes, IV, 456-457. In testifying before the legislative commission which investigated the Internal Improvement Fund in 1907, Rose declared: "The Trustees are following the lines and methods suggested by the Florida East Coast Drainage and Sugar Company. . . . I was superintendent and general manager of the . . . Company and took part in the actual surveys . . . and a plan or scheme practically the same as now being followed out by the Board of Drainage Commissioners, was presented and approved by that Board. . . . The drainage of the Everglades . . . is simply a matter of a sufficient number of drains of sufficient capacity to carry the water off." 1907 Commission Report, 319-320.

44 Message and Documents, Florida, 1899, 26.



recommended that the legislature authorize the Board to reserve for the Indians all requested lands held by the Board in the proposed territory.<sup>45</sup>

The governor also cited the contract made by the Board with the Florida East Coast Drainage and Sugar Company as proof of the march of improvement in Florida. Bloxham stated that there was no doubt that it would result profitably to the capital invested and would develop the region to the incalculable benefit of the entire state.<sup>46</sup> He took a very optimistic view of the situation and expressed the view that the region was ". . . capable, with small reclamation and intelligent cultivation, of furnishing the million and a quarter tons of sugar that are annually brought into this country."<sup>47</sup>

The contract between the Board of Trustees and the Florida East Coast Drainage and Sugar Company made in June, 1898, had stipulated that commencement of actual drainage work begin within a year from its adoption. In December, 1900, G. R. Pride and R. E. Rose appeared before the Board and requested an extension of the contract for a period of two years. After considering the request for an extension, the Board renewed the time limit for two years from December

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45 Message and Documents, Florida, 1899, 28.

46 Ibid., 29.

47 Ibid., 38.

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18, 1900.

The interest of the Florida East Coast Drainage and Sugar Company in the proposed operations in the Everglades was marked by the appearance of a prospectus of the corporation in 1902. The company proposed to drain 800,000 acres in the south Florida glades by removing the rock barriers at the head of the Hillsboro, Miami, Cypress, Middle, Little, New, Arch Creek, and Snake rivers, all of which crossed the natural coast ridge in the territory under contract. The impounded water was to be removed by twelve canals fifty feet wide and twelve feet deep as well as by numerous smaller laterals. The proposed work would require five dredges to complete the job in five years at a cost of \$845,000. The promotion pamphlet claimed that sugar cane yields on other Florida locations of similar soils varied from forty-<sup>49</sup>seven and a half to sixty-five tons per acre. The promoters set a value of \$5 per acre on lands where reclamation had reduced the water levels five feet below the surface of the soil. The company offered 50,000 shares of stock at \$100 each to the public.<sup>50</sup>

The release of the lands of the Internal Improvement Fund by the Disston sale in 1881 had paved the way for

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48 I.I.B. Minutes, V, 31-32.

49 Prospectus of Florida East Coast Drainage and Sugar Company, 11.

50 Ibid., 1-3.

succeeding legislatures to deplete those resources. The only appreciable amount of swamp and overflowed lands left in the hands of the Board when Bloxham returned to the executive chair in 1897 were those south and east of Lake Okechobee, and the title to those lands was in doubt. R. E. Rose recalled in 1916 that Governor Bloxham had managed to transmit the fund to his successor, William Sherman Jennings, "still intact, though involved in litigation and hampered by injunctions tying up all of their resources, both lands and money."<sup>51</sup>

During the campaign of 1896, Bloxham was accused of courting the interests of capitalists and corporations who had received grants of public land during his first term.<sup>52</sup> The Populist reaction to "vested interests and special privilege" resulted in the election of William Sherman Jennings as governor of Florida in 1900. The state then "entered upon a trust-busting anti-corporation era, marked by long and bitter suits with railway and canal companies."<sup>53</sup>

One of the difficulties in the way of the reclamation of the Everglades had been the uncertainty of the title to

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51 Rufus E. Rose, "The Disston Drainage Company and the Disston Purchase, A Reminiscence," Florida Quarterly Bulletin of the Department of Agriculture, XXVI (July, 1916), 122.

52 K. T. Abbey, Florida, Land of Change, 353.

53 F. P. Manuel, "Land Development in the Everglades," loc. cit., 12869; K. T. Abbey, op. cit., 334, 337, 366.

the area. In 1897 the Swamp Land Bureau of the Interior Department submitted list number 87 affecting 2,942,000 acres to the Florida Land Office, but revoked it in May, 1898, "because it was thought to impinge upon the rights and interests of the Seminole Tribes."<sup>54</sup> "With a view to perfecting the State's title to these lands," Governor Jennings proceeded to Washington on March 21, 1903, and a new patent was obtained for lands "aggregating 2,862,280 acres."<sup>55</sup> Patent number 137, known as the "Everglades Patent," was signed by the Secretary of Interior on April 29, 1903, and delivered shortly thereafter to the State of Florida.<sup>56</sup>

A motion adopted by the Board of Improvement in July of 1902 on the powers involved in the trusts imposed on the Fund's officials gave a definite indication of the stand of these state officers in regard to reclamation.

. . . It is the duty of the Trustees of the Internal Improvement Fund under the act creating them to "make such arrangements for the drainage of swamp and overflowed lands as in their judgment may be most advantageous to the fund and the settlement and cultivation of

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<sup>54</sup> F. P. Manuel, "Land Development in the Everglades," loc. cit., 12869.

<sup>55</sup> Message of W. S. Jennings, Governor of Florida to the Legislature, Regular Session of 1903 With Accompanying Documents, 69. Hereinafter cited as W. S. Jennings, Message 1903; I.I.B. Minutes, V, 172.

<sup>56</sup> Senate Documents, Number 89, 62 Congress, 1 Session, 91-93.

the lands."

. . . In the judgment of the Trustees . . . the drainage, settlement, and cultivation of the swamp and overflowed lands remaining undisposed . . . can best be accomplished by a sale of a portion of said lands. . . . 57

With the adoption of the above resolution the Board proceeded to sell 103,000 acres of "swamp and overflowed lands" in the north Florida counties of Taylor, Jefferson, Lafayette, Madison, and Leon to Neil G. Wade for \$223,824.<sup>58</sup> In July, 1903, the Board consummated a sale of 100,000 acres in the Everglades counties of Lee and Monroe at thirty cents an<sup>59</sup> acre.

The sale of these two large tracts by Governor Jennings and the Board was the first step in the state plan to carry out a general program of drainage. Money derived from these sales was used to pay the various expenses of administration<sup>60</sup> in preparation for the concrete beginnings. The sale of wet lands in the northwestern section of the state to Neil G. Wade became the source of considerable criticism. The commission investigating the Improvement Fund in 1907 found that "The evidence shows that effort after effort by competent salesmen had been made to sell this land at a price

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57 I.I.B. Minutes, V, 118-119.

58 Ibid.

59 Ibid., 62-67, 197-198.

60 1907 Commission Report, 302-304, 346.

much below what was obtained, but without success." <sup>61</sup>

On October 11, 1902, the president and secretary of the Florida East Coast Drainage and Sugar Company requested the Board to extend its contract with the state for two more years. The Company officials stated that negotiations were pending by which they expected to obtain \$1,000,000 to begin their operations. The Board declined to extend the contract, "it being the judgment that the lands embraced . . . should not be disposed of on terms less favorable" than those for which similar lands were then being sold. <sup>62</sup> The Company officials, on December 8, 1902, offered to pay thirty cents an acre within fifteen months for the Everglades lands under contract, as well as to carry out the agreed works of reclamation. To this offer the Board replied that future sales of swamp and overflowed lands in large tracts would be on a cash basis to parties actually undertaking drainage. <sup>63</sup>

In the latter part of 1902 Gov. Jennings took up the question of draining the Everglades and had much data compiled touching the feasibility

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61 1907 Commission Report, 355.

62 I.I.B. Minutes, V, 128-129.

63 Ibid., 136-137; 1907 Commission Report, 294. Henry M. Flagler, the east coast railroad builder, ". . . had at one time hoped to get possession of the Everglades, partly as a grant for building the Florida East Coast Railroad and partly by purchase, and he had a company all formed to undertake their reclamation. It may be safely set down as the luckiest day in Mr. Flagler's life when he was thwarted by the action of Governor Jennings and they became the property of the state. They probably would have bankrupted him." Frederick W. Dau, Florida Old and New, 297.

and practicability of draining the Everglades, the topography, rainfall, watershed, altitude above sea level, outlets, etc. . . . 64

The Governor collected this information in preparation for the biennial meeting of the legislature. In his message to the legislature in 1903 Governor Jennings traced the history of the area from 1835, and emphasized the fact that the lands had not been salable because they were undrained and that they could not be drained because they could not be sold. He placed the state in the position of the man who undertook to lift himself by his own bootstraps, and, "so far, has been almost as helpless in accomplishing the task."<sup>65</sup>

In order to illustrate his points on the probable benefits of the reclamation of the area Governor Jennings quoted extracts from the Buckingham Smith report and its accompanying documents, and from the more recent investigations of the Disston engineers, federal survey groups, and private investigators. He submitted a number of charts, maps, and profile drawings showing the height of the Kissimmee River, Lake Okeechobee, and the Everglades. Jennings suggested that the drainage problem could be solved by cutting the rock rim and sand dune barriers on the edges of the Everglades at the heads of all the streams from the

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10. 64 Senate Documents, Number 89, 62 Congress, 1 Session,

65 W. S. Jennings, Message 1903, 67.

Halpatiokee to the Caloosahatchee.

Jennings closed his message pertaining to the Everglades by pointing out the reported crop destruction by high water on the elevated spots where individuals had undertaken reclamation in a small way. The 1903 loss, amounting to more than a half million dollars, would justify the expenditure to complete reclamation and protect the small acreage under cultivation; consequently, Governor Jennings recommended ". . . that the Congress of the United States be memorialized for an appropriation of a million dollars to this end."<sup>67</sup>

The sale of 103,000 acres of lands to Neil G. Wade in 1902 inaugurated a lengthy litigation against the Board. The previous year several claimants for lands of the Improvement Fund had asked the Board to make some disposition "of the claims and to determine matters of priority."<sup>68</sup> Several railroad companies and grantees protested the Wade sale and, led by the Louisville and Nashville Railroad, brought suit against the Trustees to retrieve the lands or monies from their sale.<sup>69</sup>

As early as 1885, in the administration of Governor

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66 W. S. Jennings, Message 1903, 64.

67 Ibid., 78.

68 I.I.B. Minutes, VII, 533-534.

69 Senate Documents, Number 89, 62 Congress, 1 Session, 10-13; I.I.B. Minutes, V, 118-119, VII, 534-535.



Edward A. Perry, the Trustees of the Improvement Fund had issued certificates to various railroads for the lands embraced in their legislative grants. The Trustees under Jennings refused to issue any certificates for land or to honor those of previous Boards. <sup>70</sup> As a result of the Wade sale and the refusal to honor certificates the Trustees were challenged in various suits as to their right to sell land for any other purpose than to adjust the claims of <sup>71</sup> the grantees.

This led to the investigation of the whole subject matter by the incoming Trustees, to the publication of the minutes in book form, the employment of counsel to advise the Trustees on the question of their powers and duties relating to the Fund, and the disposition of the lands thereof. <sup>72</sup>

The result of the investigation of the Trustees, supported by favorable counsel from several of the state's outstanding lawyers, brought about the adoption by Jennings and his board of a resolution to

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<sup>70</sup> 1907 Commission Report, 283; I.I.B. Minutes, VII, 535-536.

<sup>71</sup> 1907 Commission Report, 301. A history of the litigation that has grown out of the administration of the Internal Improvement Fund from its creation through 1907, including briefs of forty cases in which the Trustees were a party, is given, ibid., 273-289.

<sup>72</sup> "Annual Report of General Counsel Trustees Internal Improvement Fund, 1908," I.I.B. Minutes, VII, 534. W. S. Jennings, Governor 1901-1905, was then counsel of the Trustees and prepared the report.

. . . adhere strictly to the provisions of the act of January 6, 1855, Chapter 610, Laws of Florida, as to their powers and duties and the purposes for which said trust was granted, and that they will assert their rights and defend the title to the lands granted and irrevocably vested in them for the purposes therein set forth of reclaiming said lands by means of levees and drains. 73

In addition to asserting a superior title to the lands in the Fund, proclaimed on November 24, 1904, over the railroad land grant claimants, the Board further resolved that swamp and overflowed lands granted for utilization other than reclamation were not legally deeded; that the State of Florida had no title to the lands except through the Trustees of the Fund created in 1855; and that lands included in the Everglades patent of April of 1903 had remained in the offices of the United States until their transfer. Hence such obligations as were made with regard to them prior to that date by any agency of Florida were nonexistent.

During the administration of Governor Jennings, ending January 1, 1905, no deeds were made by the Trustees for any of the land grant claimants. The contention of the Board was attacked by several grantees and the whole subject matter was resolved in the case of the Southern States Land and Timber Company versus the Trustees of the Improvement Fund in the United States Circuit Court, Northern District of

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73 I.I.B. Minutes, V, 267; Senate Documents, Number 289, 62 Congress, 1 Session, 11-12, 24.

Florida, Judge Charles Swayne presiding.<sup>74</sup> The land company sought to enjoin the Board from the exercise of any power over the fund or the disposition of any lands other than to deed them to the various holders of legislative grants.<sup>75</sup>

"This proposition involved the entire Fund. It was a test case, tacitly agreed upon by all of the railroad companies and so presented."<sup>76</sup> In two orders handed down by Judge Swayne on May 2 and May 20, 1907, the court authorized the Board to sell or dispose of the swamp and overflow lands patented to the State of Florida by the Act of Congress of September 28, 1850, for the purposes of drainage and reclamation.<sup>77</sup> This decision of the federal court cleared the way for the Trustees to manage the wet lands of the Everglades as they saw fit toward the ends of reclamation and drainage.

The swamp and overflowed lands patented to Florida at the end of Governor Jennings' administration amounted to 20,133,837.42 acres out of the 35,072,640 acres which comprised the land surface of the state.<sup>78</sup>

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74 I.I.B. Minutes, VII, 537; 1907 Commission Report, 286; Senate Documents, Number 89, 62 Congress, 1 Session, 12.  
75 Senate Documents, Number 89, 62 Congress, 1 Session, 12.

76 I.I.B. Minutes, VII, 537.

77 Senate Documents, Number 89, 62 Congress, 1 Session, 12; I.I.B. Minutes, VII, 537-538.

78 I.I.B. Minutes, VII, 532.

In 1904 engineers of the United States Department of Agriculture made a preliminary examination of a portion of the Everglades along the eastern border in Dade County. Charles G. Elliott, Engineer in Charge of Irrigation and Drainage Investigations of the Office of Experiment Stations conducted the investigation and concluded that the soil could be profitably utilized for the growth of subtropical fruits if it could be sufficiently drained. "In view of the interest taken in growing fruit and vegetables in southern Florida for the northern winter markets, the reclamation of the Everglades merits further attention."<sup>79</sup>

Elliott made a "reconnaissance" of a belt of land bordering the Everglades in the vicinity of Miami with the idea of securing a plot of Everglades land and reclaiming it for experimental use.<sup>80</sup>

After observing the operations of the East Coast railroad in the opening and enlarging of the natural streams in order to lower the waters in the various arms of the Everglades for the production of vegetables for the winter markets, Elliott concluded that "a great deal of money has

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<sup>79</sup> Drainage Investigations, Office of Experiment Stations, Report of the Secretary, Yearbook of the United States Department of Agriculture, 1904, House Documents, Number 424, 58 Congress, 3 Session, 109.

<sup>80</sup> Senate Documents, Number 89, 62 Congress, 1 Session, 94.

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been expended in drainage works. . . ." These private works had enabled fruit growers on detached tracts of muck land to drain them and to husband thriving plantings of trees.

The drainage of the Everglades proper, Elliott believed, would necessitate dredging a channel to a grade of from three-tenths to four-tenths of a foot per mile to their center. One channel would afford only flood relief, since the area was too level and the waterflow too slow for good drainage. The use of such a plan would necessitate the deepening of the beds of the natural streams into the Everglades to the natural divide. All of the work would have to be done before the Everglades would be suitable for year-round culture. Elliott advocated an experimental plan of enclosing small areas with dikes and using inside pumping to control water levels.

The problem which confronts the investor and cultivator is not so much the possibility of draining the tract as a whole as what may be done in this direction within the limit of individual means to fit portions of this land for the production of crops. 82

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81 Senate Documents, Number 89, 62 Congress, 1 Session, 95. This brief investigation by Elliott, accompanied by Peter H. Rolfs, Director of the Miami Pathological Station for the Bureau of Plant Industry, covered lands near Miami, Cutler, Dania, and Boynton beginning in August, 1904. Hearings before the House Committee on Expenditures in the Department of Agriculture, Everglades of Florida, Number 5, 208.

82 Senate Documents, Number 89, 62 Congress, 1 Session, 96.

William S. Jennings deserves the credit for inaugurating the development of the wastelands at the southern end of the state. He collected data on the possibilities of drainage plans and it was through his patient efforts that the tangled web was unwound.<sup>83</sup> Jennings' desire to begin actual drainage culminated in the preparation of a comprehensive plan which was presented to the directors of the Southern States Land and Timber Company, the Consolidated Land Company, and other companies who were large landholders in the Everglades. Although Jennings' plans did not materialize before he vacated the governor's chair in January, 1905, they were "merged in the subsequent settlements and plans for drainage followed by the subsequent administrations."<sup>84</sup>

The clearest statement of Jennings' policy in regard to drainage and reclamation of the swamp and overflowed lands was his testimony in the suit of the Louisville and Nashville Railroad Company against the Board in federal court at Tallahassee on November 28, 1904. The governor testified that the purpose of the 1850 land grant act of Congress was to have wet lands drained and reclaimed, and that he had acted upon that policy.<sup>85</sup>

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83 K. T. Abbey, Florida, Land of Change, 366.

84 Senate Documents, Number 89, 69 Congress, 1 Session, 13.

85 Ibid., 13, 24-25. The Louisville and Nashville Railroad Company suit against the Trustees was instituted in 1902

3. The People Choose: 86  
 Napoleon Bonaparte Broward and Reclamation

As the Florida constitution prohibited Jennings from seeking a second term, the cause of Everglades reclamation was carried into the governor's race of 1904 by one of the most picturesque characters in the long history of the state--Napoleon Bonaparte Broward. Born on a farm in Duval County, Florida, in 1857, Broward had been left an orphan at the age of 12.<sup>87</sup> With little time for formal schooling Broward worked as a log rafter, steamboat roustabout, merchant seaman, harbor pilot, and by 1887 he was a partner in one of the St. Johns River boat lines. He was sheriff of Duval County from 1887 to 1900, and in 1901 represented that political unit in the state legislature. During his last four years as sheriff Broward found time to make several filibustering runs to Cuba on his tug the Three

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and finally decided against the Trustees for \$251,102.25 and interest. A second suit brought by the railroad to secure deeds to 1,447,000 acres of lands granted the company or its predecessor was pending in 1908 when the Trustees compromised both suits with a cash settlement of \$113,936.95 and 374,834 acres of state lands. I.I.B. Minutes, VII, 49, 53, 121, 125 et passim.

86 On May 25, 1905, the First Everglades drainage bill passed the Florida House of Representatives by a vote of forty-three to two. Representative S. H. Melton of Duval County objected, saying that the bill should go to the people for a referendum. Representative J. W. Knight of Citrus County retorted that Broward's election had settled that question. Florida Times-Union (Jacksonville), May 25, 1905.

87 Napoleon B. Broward, Napoleon B. Broward, Candidate for Governor of Florida, 2.

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Friends. From 1902 until his campaign for governor he lived in Key West where he was engaged in a coastwise towing and wrecking business.

. . . I decided . . . to become a candidate and give the people an opportunity to elect a Governor who has never allowed himself to be put under obligations to the land grant corporations of this State, and who will not be hampered, as Chairman of the Board of Trustees of the Internal Improvement Fund, in voting against giving away the State's lands, or in adjusting their claims to the money now in the State Treasury. 89

Broward did not at first intend to enter the 1904 gubernatorial race but, after a futile search for a candidate "who would publicly pledge himself to deed no more trust lands . . . and do everything in his power to reclaim the Everglades," the former filibusterer qualified for the primary elections. <sup>90</sup> With a portable screen and a colored map of the state Broward made the campaign a veritable referendum on the Everglades proposition. At Tampa, on February 26,

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88 Napoleon B. Broward, Napoleon B. Broward, Candidate for Governor of Florida, 24-27. "The source of Broward's strength lay in the man's personality. He saw with unusual clarity the needs of the state and straightforwardly set about their accomplishment. Seldom did he sidetrack issues, or submit to the dubious doctrine of political expediency. . . . he believed throughout his career on [sic] the value of the common people, with the result that his most constant support came from the rural sections of the state." K. T. Abbey, Florida, Land of Change, 339-340.

89 N. B. Broward, Napoleon B. Broward, Candidate for Governor, 16.

90 Daniel A. Simmons, "The Florida Everglades: How They Happened; What They Are; What They Will Be," The World To-Day, XVI (May, 1909), 535.



He read from books, pamphlets, and documents a mass of statistics relative to marsh lands in the Everglades and elsewhere, and their probable worth if properly drained. In conclusion he asserted that the railroads were draining the people instead of the swamps. . . . 91

In a later speech Broward declared that the Everglades area "could be drained so as to make it worth a hundred dollars an acre by the cutting of a canal eleven hundred feet long."<sup>92</sup> In an article Broward published in 1908, he wrote: "When I was nominated for Governor in 1905 I pledged myself to drain the Everglades and make this the main issue of the campaign."<sup>93</sup>

On January 3, 1905, Broward was inaugurated Governor of Florida and turned his attention to the Everglades drainage problem within ten days by approving the employment of his predecessor, W. S. Jennings, as general counsel for the Trustees of the Internal Improvement Fund.<sup>94</sup> Shortly thereafter Jennings addressed a letter to Broward in which the former governor pointed out his testimony in the Louisville and Nashville Railroad-Improvement Fund litigation in

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91 Florida Times-Union (Jacksonville), February 27, 1904.

92 Ibid., April 8, 1904. Broward's campaign was also highlighted by his attack on large corporations and the railroads. Fritzie P. Manuel, "Land Development in the Everglades," loc. cit., 12870.

93 Napoleon Bonaparte Broward, "Draining the Everglades," The Independent, LXIV (June 25, 1908), 1448.

94 I.I.B. Minutes, VI, 10.

regard to the Trustees' duty to drain lands granted the state under the 1850 act. Jennings wrote that he believed the railroad companies would find evidence to sustain them in their contention that the Trustees were not fulfilling their commitments to reclaim the granted lands unless  
 ". . . some work shall be begun to meet the allegations . . . to the effect that the Trustees are not performing any of the trusts required of them under the law."<sup>95</sup>

Governor Broward delivered a special message to the legislature on May 3, 1905, on the subject of reclamation in the Everglades.<sup>96</sup> Tracing the history of the Internal Improvement Fund from its creation under the 1855 law and the policies of the succeeding administrators of the trust, the executive called attention to the fact that the legislature had granted more than 12,000,000 acres from 1879 to 1905 which left but 3,000,000 acres on hand and that this remaining acreage was the subject of six suits then being brought by railroads and corporations. Broward stated it was his firm belief that it was the duty and within the powers of the Trustees to drain and reclaim the swamp and

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<sup>95</sup> Senate Documents, Number 89, 62 Congress, 1 Session, 25. Jennings was reported to have possessed a large acreage in the Everglades. Hearings Before the Committee on Expenditures in the House of Representatives, Everglades of Florida, Number 7, 260-261. Hereinafter cited as 1912 Everglades Hearings.

<sup>96</sup> Message and Documents of Florida (1905), I, 1-36.

overflowed lands of the state.

Citing the several lines of levels which had been run over the Everglades and Lake Okeechobee, the governor expressed the view that it was feasible to lower the lake level and consequently drain the Everglades, a feat which would eventually bring 6,000,000 acres into a profitable condition for agriculture.<sup>97</sup> As a basis for his drainage proposals Broward submitted extracts from the engineering report made in 1886 by James M. Kreamer to the Disston Drainage Company. The Disston engineer had arrived at the conclusion that a four foot reduction in Okeechobee's surface would be sufficient to bring a major share of the area south and east of the lake into production. Kreamer had stated that ". . . canal /s/ 1,100 feet long would be entirely feasible to cut the rim /of the Everglades/ at frequent intervals and permit the impounded waters to flow into the Gulf or Atlantic."<sup>98</sup>

As a beginning Broward suggested the cutting of a canal from the big lake into the St. Lucie River, a distance of twenty-four miles, in order to lower the surface of Okeechobee from four to six feet. The proposed canal, two hundred feet wide and fifteen feet deep, could be constructed in

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<sup>97</sup> Message and Documents of Florida (1905), I, 20.

<sup>98</sup> "Report of Colonel James M. Kreamer, chief engineer of the Atlantic and Gulf Coast Canal and Okeechobee Land Company, 1886," quoted in Broward's May 3, 1905, message to the legislature of Florida, Message and Documents of Florida (1905), I, 23.

eighteen months at a cost of \$250,000. The governor declared that the work could be underway in six months after the contract was signed. The area drained would ". . . be capable of producing the entire tonnage of cane sugar used in this country, a crop which alone would be of untold value to the State."<sup>99</sup>

Broward closed his message on the reclamation question with several recommendations. Noting that 3,000,000 of the 6,000,000 acres of swamp and overflowed lands in the Kissimmee Valley, Lake Okeechobee, and Everglades territory had been deeded to railroad, canal, and other corporations and would be benefited by the successful drainage and reclamation of the 3,000,000 acres held by the Trustees, the governor asked the legislature to propose a constitutional amendment which would require cooperation from the private owners in proportion to the suggested improvement. Specifically, he recommended that the amendment create a drainage district embracing the Everglades, adjacent lands, and the Kissimmee Valley, and the right to establish other drainage districts and authorize the levy and collection of an acreage tax for drainage and reclamation of such lands. Pending the adoption of the amendment, he asked for the enactment of a statute authorizing the formation of drainage districts by

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<sup>99</sup> Message and Documents of Florida (1905), I, 34.

the Trustees of the Internal Improvement Fund.<sup>100</sup>

The state legislature responded to Broward's request and in late May, 1905, passed an act that created a Board of Drainage Commissioners to consist of the governor, comptroller, treasurer, attorney-general, and commissioner of agriculture; a group of state officials identical to the membership of the Internal Improvement Fund Trustees.<sup>101</sup> This act empowered the board to establish a system of canals and dikes to drain and reclaim the swamp and overflowed lands of Florida. The act further empowered the commissioners to levy yearly drainage taxes up to ten cents an acre. Such taxes were to be assessed by the Board in districts of their creation. The Board was also given the authority to exercise the right of eminent domain.<sup>102</sup>

The legislature submitted the 1905 drainage law, with the exception of the amount of the tax, to the electors of

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<sup>100</sup> Message and Documents of Florida (1905), I, 36.

<sup>101</sup> Chapter 5377, Laws of Florida, 1905. "Pending the litigation referred to between the railroad land grant claimants against the Trustees . . . at the beginning of Gov. Broward's administration . . . former Gov. Jennings designed and prepared a drainage tax law . . ." which became Chapter 5377. Senate Documents, Number 89, 62 Congress, 1 Session, 15.

<sup>102</sup> Chapter 5377, Laws of Florida, 1905. At the 1905 session the legislature memorialized Congress for a \$25,000 appropriation to open the 300 miles of navigable waterways in the Caloosahatchee-Okeechobee-Kissimmee river and lake system. Acts and Resolutions Adopted by the Legislature of Florida at the Tenth Regular Session under the Constitution of 1885, 1905, 449-450.

Florida at the general election of 1906 as a proposed amendment to article sixteen of the state constitution. <sup>103</sup> The proposed amendment was defeated at the polls

. . . because as is generally understood, the people believed the amendment, if adopted would confer power upon the Board to declare the whole State a "Drainage District" and thus subject the whole State to the drainage tax to be fixed by the Board. 104

In accordance with the 1905 drainage law the Board of Commissioners proceeded to set up an Everglades Drainage District, sixty miles wide and a hundred and fifty miles long, comprising 4,300,000 acres which included all of the glades, adjoining prairie, and adjacent timber lands. A uniform drainage tax of five cents an acre was levied over <sup>105</sup> the entire zone.

Two months after the passage of the drainage act, which seemed to assure the necessary funds, the commissioners engaged J. O. Fries, the Brevard County surveyor, to run a line of levels from the south fork of the St. Lucie River to Chancy Bay on the eastern shore of Lake Okechobee. <sup>106</sup> The Board wanted this survey made as a preliminary step in

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<sup>103</sup> Journal of the House of Representatives (1905), 1565-1567; Florida Times-Union (Jacksonville), May 12, 1905.

<sup>104</sup> 1907 Commission Report, 308; also see testimony of Congressman Frank Clark, 1912 Everglades Hearings, Number 4, 133-134.

<sup>105</sup> F. P. Manuel, "Land Development in the Everglades," loc. cit., 12870.

<sup>106</sup> I.I.B. Minutes, VI, 52-53.

securing information on the topography and geological formations to be encountered in the cutting of a canal on this shortest route from Okeechobee to tide-water. On September 21, 1905, Fries appeared before the Board and presented the results of his labors along with a bill for \$652.50.<sup>107</sup>

On August 1, Governor Broward submitted to the Board the matter of dredges, to be used in cutting canals in the Everglades. A representative of a Chicago foundry and machine company presented plans to the officials, and the chief executive explained several other propositions from machinery companies. After discussion, the Trustees decided to send the governor and William H. Ellis, the attorney-general, to Chicago to contract for the necessary machinery for two dredges.<sup>108</sup> Within two weeks Governor Broward and his fellow official arranged for the purchase of \$42,000 worth of machinery for two dredges to be delivered within from three to four months.<sup>109</sup>

The Trustees were not satisfied with the findings of the survey from Okeechobee to the St. Lucie River, and on November 9, 1905, employed John W. Newman to make a hydrographic and topographical survey of the New River from Ft. Lauderdale, including both branches, to a point in the Everglades where the altitude approximated the mean low water

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107 I.I.B. Minutes, VI, 70.

108 Ibid., 57-58.

109 Ibid., 67-78.

level of Lake Okeechobee. Newman's instructions directed him to conduct his survey with a view to constructing a canal one hundred fifty feet wide and ten feet deep from a location on the New River to Lake Okeechobee.<sup>110</sup> The Trustees later directed Newman to take charge of the construction of the two dredges when the machinery should arrive at Ft. Lauderdale.<sup>111</sup>

The material was assembled at Ft. Lauderdale, and in the winter of 1906 two dredges were built and launched in the New River. On July 8, 1906, the first dredge, christened the Everglades, began the job of cutting a canal to Lake Okeechobee from the north fork of the river.<sup>112</sup> Newman's survey from the New River to Lake Okeechobee had been adopted for the first canal project on December 12, 1905. This first state drainage canal was fifty feet wide and varied in depth from ten to fourteen and six-tenths feet. When finished it became the present North New River Canal.<sup>113</sup> The second dredge, christened the Okeechobee, began cutting the rock rim from the south fork of the New River in April, 1907.

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110 I.I.B. Minutes, VI, 91. Newman had been earlier employed as chief engineer of the Ingraham expedition in 1892, and had also made surveys for the Florida East Coast Drainage and Sugar Company in 1902. Florida East Coast Drainage and Sugar Company, Prospectus, 30.

111 Ibid., 92.

112 1907 Commission Report, 311. The cost of the first two dredges to the Fund was \$134,000.

113 I.I.B. Minutes, VI, 96.



in the canal which became the present South New River Canal. <sup>114</sup>

Broward's plan for the engineering design of the Everglades drainage scheme was very simple, especially in regard to the necessary canals, for his idea was to "out and try." <sup>115</sup>

When it was insinuated that it would take fifteen years of rainfall observations, careful topographical surveys, and expert engineering reports to determine the practicability of the project he was abashed, but replied:

I will be dead by that time. The State will be poor and the money thus expended would buy a couple of dredges. We can sell some land to build dredges and if my friends will hold the knockers in check, we can soon make a convincing ocular demonstration. 116

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114 1907 Commission Report, 312.

115 Thomas E. Will, "The Everglades of Florida," Review of Reviews, XLVI (October, 1912), 453.

116 John C. Gifford, The Everglades and Other Essays Relating to Southern Florida, 98-99.

## CHAPTER VII

### EARLY OPERATIONS IN THE DISTRICT

#### 1. "The Drainage Administration"<sup>1</sup>

The establishment of a Bureau of Irrigation and Drainage Investigations in the Office of Experiment Stations of the United States Department of Agriculture in 1903 opened the way for federal aid to Florida in securing information on the Everglades problem. The first move toward securing such help came in a voluntary offer from Charles G. Elliott, engineer in charge of the Agricultural Department drainage investigations, to Governor Broward on February 28, 1905. Elliott had made some examinations in 1904 in the Dade County area. He wrote:

Florida is a most interesting field for the development of unknown agricultural industries. We notice that the reclamation of Florida swamp-land is enlisting the favorable attention of the people of that State. . . . We shall be pleased to cooperate with you [in] determining the practicability of draining and otherwise improving the hidden resources of the wet lands of Florida. 2

Replying on March 3, Governor Broward thanked Elliott for his offer and assured him that the office of drainage investigations could be of great assistance "in reclaiming

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1 "Drainage activity became so extended during Broward's time that his term was dubbed the 'Drainage Administration.'" K. T. Abbey, Florida, Land of Change, 366.

2 1912 Everglades Hearings, Number 25, 1259; see also Number 1, 22.

the overflowed lands of south Florida."<sup>3</sup> The governor wrote Elliott that he desired to reclaim the land at the expense of the land itself and asked the engineer to suggest laws of other states on this subject which might be adapted for use in the peninsular state. Replying to the request for pointers on drainage laws, Elliott singled out those of California and Louisiana, and added that nearly all of the northern states provided for the "organization of drainage districts and for the assessment of the cost to be distributed over the area as it is benefited."<sup>4</sup>

The litigation which followed the passage of the Florida drainage law posed a difficult problem for the Board of Drainage Commissioners in trying to answer the allegations that the state officials did not have sufficient technical knowledge on the engineering phases of the reclamation job. The railroads and allied timber interests of the state again joined forces and sought to enjoin the state officials, this time to prevent the collection of the tax and to have the law declared unconstitutional on the plea that the commissioners' haphazard drainage policy did not sustain the special assessment and consequent expenditure of tax monies.<sup>5</sup>

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<sup>3</sup> 1912 Everglades Hearings, Number 25, 1259-1260.

<sup>4</sup> Ibid., 1260.

<sup>5</sup> Senate Documents, Number 89, 62 Congress, 1 Session, 15. "The opposition to the drainage of the Everglades here in Florida is chiefly that of landholders of very large holdings who object on the ground that should this vast area

Following up his correspondence and a personal visit with Elliott, Governor Broward, on January 16, 1906, wrote Secretary James Wilson of the United States Department of Agriculture to secure the cooperation of the federal drainage engineers. The knowledge possessed in the drainage division, Broward wrote, "could aid us very materially. . . ." <sup>6</sup> The governor closed his letter by stating his appreciation of the fact that monies for drainage investigations were limited; he planned to write each member of the Florida congressional delegation and show him how Wilson could aid the state in engineering experimentation and the encouragement of immigration.

Secretary Wilson responded to the request of Broward on January 26, stating that he would "be glad to detail the engineers of this department engaged in drainage investigation for a conference with your engineers from time to time for the purpose of determining the best plan and most practical methods for reclaiming the immense area of Everglade land." <sup>7</sup> Further investigation, Wilson believed, should also

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of rich land . . . be placed on the market the effect upon their holdings would be a reduction in price. From the State's standpoint we want settlers, and land must be sold at such prices that it can be purchased by the farmers." Letter of Governor N. B. Broward to Congressman S. M. Sparkman, May 23, 1906, 1912 Everglades Hearings, Number 5, 210.

<sup>6</sup> 1912 Everglades Hearings, Number 5, 208.

<sup>7</sup> Ibid., 209.

be made of the fertility of the land and its possibilities for the growth of crops adaptable to the subtropical climate.

A series of letters and subsequent conferences between Florida officials and representatives of the Department of Agriculture in the spring and summer of 1906 were climaxed by examinations by the drainage division engineers of the Everglades area, beginning in January, 1907.<sup>8</sup> Broward, an astute politician, was anxious to procure the assistance of the federal engineers for political reasons. Said he:

I don't care for the saving to the State. I could hire an engineer; but there is a fight on down here, a political one, in this matter. If I should hire personally an engineer for making this survey these people would say, "It is Broward's engineer and Broward's report," and for that reason I wanted to get the department, which I know is interested in the matter, to send a man down here to make an investigation.<sup>9</sup>

Led by the officials of the Southern States Land and Timber Company, land owners claiming to represent three million acres in the state filed suit in the District Court of the United States, Southern District of Florida, against the Board of Drainage Commissioners of the State of Florida and the several tax collectors of Dade, De Soto, and St. Lucie counties on January 11, 1906, seeking an injunction against the levy of an acreage tax for drainage purposes

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<sup>8</sup> Senate Documents, Number 89, 62 Congress, 1 Session, 16, 130, 140; 1912 Everglades Hearings, Number 5, 212 et passim.

<sup>9</sup> James O. Wright testimony, 1912 Everglades Hearings, Number 3, 77.

under the 1905 Act of the legislature (Chapter 5377).<sup>10</sup>  
 Almost a thousand pages of testimony and a large assortment of charts, maps, engineering data, and similar information were collected and the case was heard throughout 1906 and into 1907. On April 6, 1907, federal circuit Judge James W. Locke made permanent an injunction which prohibited the demand for and payment of such taxes.<sup>11</sup> Judge Locke, in his declaration that the law was unconstitutional, pointed out that it left to a delegated agent the power to levy taxes and that the legislature departed from its constitutional powers in authorizing an executive board to determine what lands were subject to assessment.<sup>12</sup>

While the litigation was in progress in 1906, the dredging was also under way in both branches of the New River, west of Ft. Lauderdale. In his message to the 1907 legislature on the condition of the state, Broward went into some detail on the work and plans of the drainage commissioners.<sup>13</sup> He informed the legislators that the plan had been to build six dredges and to place two in the New River and one each in the Miami, Caloosahatchee, and Kissimmee

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<sup>10</sup> 1907 Commission Report, 307.

<sup>11</sup> Journal of the House of Representatives of Florida (1907), 658.

<sup>12</sup> Florida Times-Union (Jacksonville), April 7, 1907; 1907 Commission Report, 307.

<sup>13</sup> Journal of the House of Representatives of Florida (1907), 15.

rivers and Lake Okeechobee. The latter dredge would work south to meet one of the New River machines. On completion of the Miami-Okeechobee Canal and the New River-Okeechobee Canal the dredges were to be engaged in cutting parallels and cross canals throughout the Everglades and Kissimmee Valley, reclaiming the lands near the northern boundary of the district. The governor stated that the Commissioners had expected the drainage taxes to be paid, but instead were being sued by the large land syndicates and the Florida East Coast Railway, which had enjoined tax collections.

Touching on a sore spot the chief executive asked the legislature to appoint a committee to investigate "the charges and innuendoes intended to reflect upon the present Trustees, and make a report of their findings at the earliest possible date. . . ."<sup>14</sup> Broward launched a general assault on those newspapers of Florida which, he said, had misinterpreted the truth and twisted the news, papers which attacked public officials because these officials did not serve the same "interests" as the publishers. Specifically singling out the campaign carried on against the drainage tax law of 1905, he pointed to deliberate falsifications by the Jasper News, Florida Times-Union, St. Augustine Record,

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<sup>14</sup> Journal of the House of Representatives of Florida (1907), 3.

Gainesville Sun, and Tampa Tribune. The governor recommended the passage of laws to control the publication of untruths, deceits, and slander; and he suggested that the several state's attorneys be empowered to file information against liar's, deceiver's, and slanderer's statements in the press.<sup>15</sup>

The request for a legislative committee to investigate "the Acts and Doings of the Trustees of the Internal Improvement Fund; Defining its Duties and Powers, and Making Appropriations for Carrying Out the Provisions" of the various improvement acts resulted in the passage of a law to this end on May 31, 1907.<sup>16</sup> The act, providing for a commission of three members of the Senate and four members of the House, to be elected by their colleagues, was to investigate the Internal Improvement Fund from its inception and was to be vested with the necessary power to summon witnesses and secure records. The commissioners organized on June 24 and remained in session through November 5, 1907. Conducting a minute search into transactions, accounts, and miscellaneous aspects of the Fund's history, the Commission published almost two hundred pages in its report of the activities of the several boards of trustees. In regard to the various

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<sup>15</sup> Journal of the House of Representatives of Florida (1907), 3, 64-70.

<sup>16</sup> Chapter 5632, Laws of Florida, 1907; Acts and Resolutions Adopted by the Legislature of Florida at the Eleventh Session under the Constitution of 1885, 117-119.



charges of malfeasance and misappropriation of the Fund's monies, which had drawn the ire of Governor Broward, the investigation was unable to locate a single editor or reporter who was able to prove his accusation. As for the drainage policy of the Trustees, the Commission arrived at the conclusion that the policy was feasible, and that it was

. . . the first duty owing to the Trustees of the Internal Improvement Fund to drain and reclaim this barren waste, that it may be made available for agriculture, and be added to the State's taxable property. 17

Shortly after the receipt of the verdict declaring the 1905 drainage law unconstitutional Broward sent a special message to the legislature asking that body to amend the 1905 act by legislative establishment of boundaries for the Everglades Drainage District, by a legislative declaration of the purposes and application of the proceeds of drainage taxes, and by a definition of the lands in the district as "swamp and overflowed lands patented to Florida under the 1850 Act of Congress."<sup>18</sup> W. S. Jennings, Counsel for the Trustee-Commissioners, who had drawn the 1905 law, also drew the specifications for the amended law.<sup>19</sup>

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17 1907 Commission Report, 281. Included among the seven members of the Commission were two future governors of Florida, Park Trammell and Fred P. Cone.

18 Journal of the House of Representatives of Florida (1907), 663.

19 Senate Documents, Number 89, 62 Congress, 1 Session, 15.

The legislature complied with Broward's wishes and passed an amended act defining the Glades District boundaries, encompassing most of the mainland area south and east of Lake Okeechobee, and the other recommendations which had been made.<sup>20</sup>

The trend of events in the Everglades may be gleaned from a resolution passed by the Trustees of the Internal Improvement Fund in February of 1907 to the effect that no swamp or overflowed land owned by that body in the newly created drainage district would be sold for less than five dollars an acre unless subject to salt water overflow or not susceptible of drainage.<sup>21</sup> Further evidence of the interest in the state operations in the New River was the appointment of a joint committee from the 1907 legislature to visit the lower east coast area and make a report on the work that had been done "by the Trustees in the matter of building dredges and digging canals in the neighborhood of

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<sup>20</sup> Chapter 5709, Laws of Florida, 1907. In a letter of January 21, 1905, W. S. Jennings had referred to W. F. Coachman of the Consolidated Land Company as "our president" who had expressed a willingness to finance the Trustees in drainage operations. Senate Documents, Number 89, 62 Congress, 1 Session, 26. This company had been a partner in the two suits instituted by the Southern States Land and Timber Company against the Trustees. Jennings as Counsel for Governor Broward's boards had framed both of the drainage laws which the land companies attacked as unconstitutional. See also 1912 Everglades Hearings, Number 18, 841; Number 26, 1325.

<sup>21</sup> I.I.B. Minutes, VII, 11-12.

New River, and to visit the Caloosahatchee River, and consider all the facts and data bearing on drainage and reclamation. . . ."<sup>22</sup>

The report of the Joint Committee on Drainage, spread on the pages of the Journal of the Senate on May 13, 1907, gave the status of the Drainage Commissioners' dredging operations to April first. The Everglades had dug a canal a little over a mile long, to a width of sixty feet and a depth of ten feet from the headwaters of the north fork of New River.<sup>23</sup> The Okeechobee was working in the south fork of the New River toward the rock rim from which point it was planned to dig westward into the glades. The legislators estimated that

. . . from evident effects of present work, complete drainage will result at an average of 906 acres per mile; or 6 miles will drain 5,440 acres, worth when drained \$163,200. 24

The Committee observed several truck farms along the canal banks and closely examined a crop of tomatoes growing on land which they were informed had been under twelve to eighteen inches of water before the canal had been cut. "The character of the crop was finer than anything of the kind ever seen by any member of this committee," and it was believed to be worth \$700 an acre.<sup>25</sup> The soil of the

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22 Journal of the State Senate of Florida of the Session of 1907, 1052.

23 Ibid., 1054.

24 Ibid.

25 Ibid., 1055.

reclaimed land was declared to be a very rich alluvial deposit. The Committee was especially interested in the comparison of the costs of excavating rock and soft material by the state dredges with the costs of excavating under the competitive bidding system of the United States Corps of Engineers. Reciting the amount of material moved over a period of six months and the total costs, not including original equipment or replacement costs, the Committee found the Florida drainage work was being handled for eight cents per cubic yard for rock and six and a third cents per cubic yard for mud, while the federal government paid up to a hundred per cent more for similar work about the state. <sup>26</sup>

W. S. Jennings, General Counsel, and Governor Broward made a "tour of inspection of the drainage canals" in November, 1907. <sup>27</sup> Jennings declared

To the point of view of a layman, the work done has been something marvelous, and the achievements far beyond the most sanguine or hopeful expectation of those in charge of its inauguration. . . . .

That the canals are a success and are reclaiming the land as the dredges progress, is thoroughly established. The canals reduce the water level from the surface to a point six feet below the surface of the ground as shown by the water in the canal, and the land for a mile on either side

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<sup>26</sup> Journal of the State Senate of Florida of the Session of 1907, 1057-1058.

<sup>27</sup> I.I.B. Minutes, VII, 122.

of the canal is entirely reclaimed, and is practically ready for cultivation, and the general influence of the drainage reaches to a much greater distance than one mile. 28

Referring to the price to be set on these newly reclaimed lands, regarded as a serious problem because of the many considerations in this experiment in the Everglades which would never enter into the ordinary conception of the utility of land, Jennings said:

The success of the development of that country will be dependent upon settlement as much as the soil. It appears to me that, notwithstanding the flattering opportunities offered for the accumulation of wealth, that it will not attract a man of family to move into that territory until the experimental period, both of the success of drainage operations and of sufficient settlement is assured, to establish some convenience of travel, schools, churches, etc. . . . it necessarily falls upon a few pioneers to enter this territory and develop it until the success of the drainage work and the profitable production of crops on the land is assured. . . . It is my opinion that a reasonable price for the land, one that will induce bona fide settlement, is of far more importance to the work than a policy of establishing a price that makes the undertaking more hazardous and lessens the real inducement for permanent development and settlement. 29

Jennings urged that the State reserve alternate lots from each sale so that tracts of private owners would be bound by state lands. The Fund would then obtain the benefit of the rise in prices which will inevitably follow the settlement in this district. <sup>30</sup> The former governor felt that the

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28 I.I.B. Minutes, VII, 122.

29 Ibid., 124.

30 Ibid., 125.

work in the Ft. Lauderdale area was a great success and that the opposition had been overcome by the results of the work.

The litigation relating to the title of the Everglades lands was settled in December, 1907, by a compromise with the Trustees and the Louisville and Nashville Railroad Company. The settlement was due, in part, to the work of the dredges

. . . which can only be kept in operation by the sales of unclaimed lands at a nominal value ranging below 33 1/3 per cent. <sup>[sic]</sup> average, the lands behind the dredges reclaimed by said operations selling readily at from fifteen dollars per acre. 31

The connection between Jennings' report on drainage and land policy and the desire of Trustees to quiet the title of the Everglades lands is obvious. Having succeeded in getting the federal courts to void the 1905 drainage law the various land companies, under the leadership of the Southern States Land and Timber Company, soon attacked the drainage tax law of 1907. Blocked in their efforts to finance the reclamation project through taxes the Trustee-Commissioners sought revenue through the sale of state lands. 32

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31 I. I. B. Minutes, VII, 134-135; see also 1907 Commission Report, 355-356 and Senate Documents, Number 89, 62 Congress, 1 Session, 15.

32 The total acreage assessed in the district was 4,229,526.50. The list of complainants who sought to enjoin the Board of Drainage Commissioners from collecting the drainage taxes, and the acres of land they claimed was

At the time the state dredges began work in 1906, Everglades lands had little or no market value. Rufus B. Rose was offered a million and a half acres at twelve and a half cents an acre shortly before Broward's inauguration.<sup>33</sup> In August, 1907, the Trustees had given a thirty day option on 25,000 acres back of Miami at \$1 an acre but the option was allowed to lapse.<sup>34</sup> The first large sale of Everglades land was made to R. P. Davie and associates of Colorado Springs, Colorado, on June 3, 1908. The sale comprised 27,500 acres at the rate of \$2 an acre in the area around Township 50, Range 41, South and East. According to the terms of the sale the tract was

. . . to be used for general farming and vegetable growing and the establishment of an

as follows:

Southern States Land and Timber Co.	1,070,257.20
Mississippi Valley Realty Co.	187,201.02
Empire Land Co.	748,251.24
Consolidated Land Co.	806,958.60
Frank Q. Brown	102,933.15
Florida Cypress Co.	83,840.00
Model Land Co.	127,939.00
Florida East Coast Railway	150,030.00
Boston and Florida Atlantic Coast Land Co.	58,050.30
Total Acreage Represented	<u>3,335,460.51</u>

Journal of the House of Representatives of Florida (1907), 103.  
33 R. E. Rose, The Swamp and Overflowed Lands of Florida,  
 8-9.  
 34 I.I.B. Minutes, VII, 89.

experimental cane farm for the growth and production of sugar cane on a large scale and for the purpose of establishing sugar mills. . . . 35

On October 12, 1908, Walter R. Comfort of New York City bought 6,422 acres for \$2 an acre in the vicinity of Township 53, Range 40, South and East; and, on November 14, J. H. Tatum and Company of Miami purchased 12,000 acres at prices from \$2 to \$3 an acre.<sup>36</sup> In early December the Trustees closed a sale for 80,000 acres in Dade County for \$100,000 with the Davie Realty Company through the agency of W. S. Jennings; the largest sale of 1908 was made in the very last week of Broward's administration when the Trustees contracted with Richard J. Bolles of New Mexico for the sale of 500,000 acres for \$1,000,000.<sup>37</sup>

The Bolles sale covered lands located in Dade and Lee counties and was made with the specifications of installment payments extending to 1916 or longer, depending on the completion of certain drainage canals. The articles of agreement which Bolles signed with the Trustees of the Internal Improvement Fund provided for five main canals: North and South New River, Miami, Hillsboro, and Caloosahatchee; and

35 I.I.B. Minutes, VII, 261.

36 Ibid., 438-440; 457-458.

37 Ibid., 471-475; 502-512. W. S. Jennings received \$3,390 for his services as the Trustees' agent in the Davie-Comfort sales and \$3,750 for his services as agent in the Davie Realty Company deal. Ibid., 446, 474.



if funds remained, two secondary canals: Cypress Creek and Arch Creek.<sup>38</sup> The Trustees were to expend half of the purchase price of each acre "solely and exclusively for drainage and reclamation purposes."<sup>39</sup> The Board of Trustees had bound themselves and their successors, in the Bolles deal, irrevocably, to a plan of reclamation. During the hearings before the Congressional Committee in 1912 it was disclosed that, in addition to the fifty per cent of the Bolles receipts being spent for drainage, fifty cents of each dollar paid on the land to the Trustees was likewise to be expended on drainage; thus Bolles actually secured his Everglades holdings for fifty cents an acre, the remaining dollar<sup>40</sup> and a half being used to reclaim his holdings.

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<sup>38</sup> I.I.B. Minutes, VII, 502-513.

<sup>39</sup> Ibid., 507. As in several of the previous sales W. S. Jennings, the Trustees' Counsel, had acted as the agent. When the Bolles proposition was presented to the Trustees by Jennings he requested them to provide other counsel to examine the contracts and deeds which would follow successful negotiation. Ibid., 490. Jennings appeared as a witness for both parties at the consumation of the articles of agreement. Ibid., 512-513. In the hearings before the Moss Committee in 1912 it was insinuated that Jennings received a gift of 27,000 acres of Everglades land from Bolles, but objection was made to the question before a definite answer could be given by the witness. 1912 Everglades Hearings, Number 7, 261. Jennings' earnings in 1907 and 1908 included \$5,000 yearly as counsel for the Trustees; \$10,000 for legal fees in representing the Trustees in the L. & N. Railroad and Wisner Land Company suits; and \$7,040 as a commission for the Davie land sales, a total of \$27,040. 1907 Commission Report, 288-289.

<sup>40</sup> 1912 Everglades Hearings, Number 4, 143-144.

Incident to the discussion and sale of the various tracts of lands in the summer of 1908 was the desire on the part of both vendor and purchasers to place more dredges in operation. In his testimony before the 1907 Joint Commission of the legislature investigating the Internal Improvement Fund, Broward said:

The project in [sic] the outset, contemplated six (6) dredges of the same capacity as these we now have, but we have been unable to obtain the six dredges for want of funds. . . . If we saw our way clear we would put on these dredges and complete the work within four years from the time we began--yes, the whole thing. 41

With the completion of the first Davie sale and the projected Comfort and Tatum sales, the Board of Drainage Commissioners was in a position to contract in August, 1908, for the machinery needed for two more dredges.<sup>42</sup> Machinery for the dredges was shipped to Tampa, where the dredges were built in the early winter of 1909. The first to be completed, christened the Caloosahatchee, began working in the upper channel of the river of the same name in April, while the other, the Miami, was towed to the headwaters of the Miami River and started working northwestward on the long trip to Lake Okeechobee.<sup>43</sup>

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41 1907 Commission Report, 322.

42 I.I.B. Minutes, VII, 277, 287-293, 302, 492.

43 Journal of the State Senate of Florida of the Session of 1909, 47.

If it can be said that Jennings set the policy of the Trustees of the Internal Improvement Fund to reclaim Florida's wet lands, it certainly follows that Broward determined the course and inaugurated the drainage program. In no uncertain words Broward maintained that it was the aim of the Trustees to lower Okeechobee's level by the means of several canals of sufficient size and, with the aid of numerous lateral canals, to carry off the rainfall from the Everglades lands through which they passed. He declared:

We are going on the theory that it is the duty of the Trustees to dig the canals the same as the water mains in a city, that are owned by the city, and laid by the city, and tapped by private individuals. 44

Broward believed fervently in the Everglades project and pushed it with veritable missionary zeal for, to him, "all doubt of ultimate success has been removed. . . . [It is] only a matter of time when most of this vast area will be made fit for cultivation."<sup>45</sup> He stated many times in

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44 1907 Commission Report, 322. Broward proposed the following arterial canals of sixty foot width: two from New River to Okeechobee, one from Okeechobee to St. Lucie River, one from Okeechobee to deep water in the Caloosahatchee River, and two down the western edge of the Everglades from Okeechobee to the Shark River Area. Broward also proposed dredging canals from the arterial cuts along the eastern border of the Everglades into the headwaters of both forks of Middle Creek, the two Cypress Creeks, and the Hillsborough River; and finally, to connect the main canals with laterals, "until all of the swamp and overflowed lands . . . are reclaimed, so far as it is practicable, meaning profitable to do so." Ibid., 321.

45 N. B. Broward, "Draining the Everglades," loc. cit., 1448.

his speeches and writings that the area would provide homes and occupations for millions in the cultivation and processing of the various crops that could be produced. Enumerating such advantages as fertile soil, subtropical climate, abundant rainfall, proximity to markets, ample transportation facilities, and healthful conditions, he felt that the Everglades were without peer among the lands of the world.<sup>46</sup> If sugar cane were relied on for a staple crop, scientists had assured him that half a million acres in the Everglades would make the United States independent of an annual expense of \$150,000,000 to foreign nations for sugar.<sup>47</sup>

When Broward left the governor's chair his dreams of Everglades drainage had been translated into partial accomplishment. He continued to fight for drainage and made it an issue in his last political battle for a seat in the United States Senate, which he won in the same spectacular manner that had characterized his election to the governorship. Death terminated his promising career before his official entrance could be made into the national arena.<sup>48</sup>

Opinion on the work of Broward in undertaking the

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46 H. B. Broward, "Homes for Millions: Draining the Everglades," Collier's, XLIV (January 22, 1910), 19.

47 Ibid., 19; H. B. Broward, "Draining the Everglades," loc. cit., 1449.

48 C. H. Brevard, A History of Florida From the Treaty of 1763 to Our Own Times, II, 208.

Everglades proposition has been divided. One of Miami's pioneer merchants wrote that the reclamation of the Everglades was a boon to that city from the wide publicity given the work and the consequent influx of people to southeastern Florida.<sup>49</sup> A more recent and somewhat extreme observer of Florida history remarked that the Broward administration marked the first activity in Everglades reclamation, and that from then

. . . until now the whole has been a political football of greater dimensions than anything yet invented and has furnished more sinecures for pets of subsequent administrations than any other one of the five departments of the State's activities. 50

## 2. The Wright Report

In his first message to the 1909 session of the legislature Governor Albert W. Gilchrist, Broward's successor, referred to the attack on the constitutionality of the 1907 drainage act in the United States Court for the Southern District of Florida. On June 27, 1908, the court had declared in favor of the constitutionality of the act, whereupon the case had been appealed to the United States Circuit Court at New Orleans. On February 23, 1909, the court again upheld the act, although one of the three judges rendered a

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<sup>49</sup> Isidor Cohen, Historical Sketches and Sidelights of Miami, Florida, 166-178. Hereinafter cited as Sidelights of Miami.

<sup>50</sup> F. W. Dau, Florida Old and New, 297.

dissenting opinion. Gilchrist declared that the appellants were endeavoring to carry the case to the United States Supreme Court, but that in the event the suit was settled out of court he recommended a reduction of the drainage tax from five to three cents an acre, "as such tax, with the amount of money derived from sales already made, would be amply sufficient to continue drainage operations."<sup>52</sup>

In that section of his message devoted to drainage, Gilchrist reported that the dredges Okeechobee and Everglades, in twenty-three and thirty-two months respectively, had dug fifteen miles of canal at an operating cost of \$7,591.36 per mile and a total outlay of \$377,642.22.<sup>53</sup> From a comparison of costs of the excavation of rock and dirt, Gilchrist inferred that the total costs would be lower as the dredges progressed into the muck soils though this would be offset somewhat by the lengthening lines of supply.

Following the precedent established by the previous legislature, the session of 1909 appointed a joint committee to visit, inspect, and report upon the progress and

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<sup>51</sup> Journal of the State Senate of Florida of the Session of 1909, Appendix, 15. The appeal of the suit from the United States Circuit Court of Appeals for the Fifth Circuit to the United States Supreme Court was dismissed on October 11, 1910, with each party paying its own costs. 218 United States Supreme Court Reports, 686.

<sup>52</sup> Ibid., Appendix, 14.

<sup>53</sup> Ibid., Appendix, 46.

conditions of the work being done by the Trustees of the Improvement Fund in the Everglades drainage program.<sup>54</sup> The committee visited the dredges working in the canals leading from the branches of the New River, at Ft. Lauderdale, in the headwaters of the Miami River, and below Lake Hicpochee in the Caloosahatchee River and described the progress in favorable terms. While at Miami the party visited the farm property of Walter Waldin at the edge of the 'Glades. Waldin was described as a "prosperous farmer, formerly of Iowa." He informed the members of the legislature that his "average on irrigated Glades land has been a trifle over \$800 per acre per year net for the first four years."<sup>55</sup>

The committee noted that the money to continue drainage would be derived from the balances due on the Bolles, Davie, and Tatum sales and the drainage tax levy. The withdrawal of Everglades lands from sale by the Trustees was praised by the legislators because increasing values would

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<sup>54</sup> Concurrent Resolution Number 9, Acts and Resolutions Adopted by the Legislature of Florida at the Twelfth Regular Session under the 1885 Constitution (1909), 685.

<sup>55</sup> Journal of the State Senate of Florida of the Session of 1909, 1591. Waldin thought "a net of \$300 to \$500 can be made per acre on drained Everglades land by intelligent culture and close application to the following crops: Tomatoes, beans, eggplants, cucumbers, Irish potatoes, mango peppers and squash." He believed one-half as much could be made in "many farm crops" such as sugar cane and bananas planted between the rows of young citrus trees. Ibid., 1591-1592.

accrue from their reclamation. The committee assured the legislature and the citizenry of the state that none of the general taxpayers' money had ever been used for drainage in the Everglades, nor could it be without an appropriation by the representative body. The committee declared:

No person owning land outside of the Everglades need have the slightest apprehension that any tax will ever be levied or collected on his land, or any of his property for the drainage of the Everglades. 57

Included in the committee's report to the legislature was an abstract of the drainage investigations which were being made by the engineers of the United States Department of Agriculture. The group fully endorsed the abstract and expressed the opinion that every means should be exerted to inform the people of the state in order to counteract the "misinformation and prejudice now existing with reference to the Everglades. . . ." 58 Recommending that the Trustees sell the lands in the district in small parcels to settlers only, that the Trustees push the works of reclamation with all possible dispatch by letting contracts to private bidders for dredging, and that the federal government be urged

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56 Journal of the State Senate of Florida of the Session of 1909, 1604. Land sales for cash in 1907 had come to \$35,659.70; in 1908, \$121,131.42. I.I.B. Minutes, VII, 53. The Trustees had resolved to sell land in the Everglades to settlers only after February 19, 1909. Ibid., VIII, 49.

57 Ibid.

58 Ibid., 1623.



to open a cross-state waterway through Lake Okeechobee, the committee closed its report by advising the Trustees to secure another dredge under the Bolles contract "as soon as is possible and practicable."<sup>59</sup>

The difficulty of running four dredges in the Everglades, some four hundred miles from Tallahassee, together with the demand for additional dredges, led the Drainage Board to advertise for bids in the late fall of 1909 for private contractors to undertake the canal excavations.<sup>60</sup> The advertisements called for bids on three hundred miles of canal from forty to sixty feet wide and six to ten feet deep.

Early in January, 1910, while the Trustee-Commissioners were investigating answers to their call for bids on excavation, the land companies seeking to enjoin the 1907 drainage tax law in the United States Supreme Court approached the state officials regarding a compromise of the pending suit.<sup>61</sup> W. S. Jennings, who had retained his position as counsel for the Board, conferred with representatives of the six land

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<sup>59</sup> Journal of the State Senate of Florida of the Session of 1909, 1624. Both houses of the legislature adopted resolutions in the 1909 session urging full prosecution of the drainage works in the Everglades and congratulated the Commissioners on the successful outcome of the litigation requiring all land holders to bear a proportionate share of the reclamation costs. Ibid., 2027-2028; Senate Documents, Number 89, 62 Congress, I Session, 139.

<sup>60</sup> I.I.B. Minutes, VIII, 237-238, 275-283.

<sup>61</sup> Ibid., 301-311.

corporations. A tentative agreement was reached under which the complainants would dismiss the suit and pay all drainage assessments on their lands from 1907 through 1912, provided such funds were applied to the excavation of specified canals, and provided 60,000 acres west of Homestead were detached from the drainage district and maintained as a watershed and reservoir for Key West.<sup>62</sup>

At a meeting of the Drainage Commissioners and land company officials, held in Tallahassee on January 12, 1910, a settlement was proposed. The settlement included the following points: (1) tax suits to be dismissed, each representative paying his own costs; (2) drainage taxes on all lands to be paid from 1907 through 1912; (3) contracts for 200 miles of canals to be completed in 3 years; (4) R. J. Bolles' contracts to be paid in six years and payment of Bolles' drainage taxes for the years 1907 to 1912; (5) elimination of Florida East Coast and Model Land Company land southwest of Miami from the drainage district; (6) preparation, adoption, and carrying out of adequate drainage plans to be supervised by a competent engineer.<sup>63</sup> Articles of

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<sup>62</sup> "Minutes of the Board of Commissioners of the Everglades Drainage District," I, 1. Hereinafter cited as E.D.D. "Minutes." The author used eight volumes, typed and bound manuscript. They are located in the office of the secretary of the Board, Miami, Florida.

<sup>63</sup> Ibid., 8-16.

agreement embodying these proposals were signed on January 31. The agreement stipulated that the tax suits would be withdrawn when the state officials accepted a bid for canal excavation.<sup>64</sup> With the settlement of the drainage tax question by the six large land holders the commissioners were assured of sufficient income to continue operations. In pursuance of the agreement a contract was let for the excavation of 235 miles of canals. On the recommendation of James O. Wright, whose employment fulfilled the sixth condition of the agreement, the Commissioners accepted the bid of the Furst-Clark Construction Company of Baltimore, Maryland. This contract called for the movement of 18,000,000 cubic yards of earth and 6,000,000 cubic yards of rock at eight and twenty cents a yard respectively.<sup>65</sup> Included in the negotiations was the transfer of the four state dredges to the Baltimore firm for \$145,000. Canals specified to be completed included the North and South New River, Miami, and Hillsborough; and one connecting the Miami with the

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64 E.D.D. "Minutes," I, 19; I.I.B. Minutes, VIII, 351-361, 1912 Everglades Hearings, Number 4, 126-127. The six large landholders at the conference were Pearl Wight, president of the Southern States Land and Timber Company, of New Orleans; W. S. Harvey, president of the Empire Land Company, of Philadelphia; Walter F. Coachman, president of the Consolidated Land Company; James E. Ingraham, vice-president of the Model Land Company, and of the Florida East Coast Railway; and Walter F. Coachman and Richard J. Bolles for the Florida Land and Timber Company of Chicago.

65 I.I.B. Minutes, VIII, 410-411.

Gulf Coast if there were sufficient funds.

In the winters of 1907 and 1908 the field examinations of the Office of Drainage Investigations of the Department of Agriculture were made in the Everglades as had been requested by Governor Broward and authorized by Secretary Wilson. During both years survey parties worked in and around the area checking land levels and soil depths. <sup>67</sup> James O. Wright, a supervising engineer of the Drainage Investigations Office, prepared a report on the basis of these studies and the information he had secured in Tallahassee and elsewhere. Wright's conclusions were questioned by his superior and by his associates in the department, and as a consequence the publication of the findings of the examinations was held up pending further study and revision. <sup>68</sup>

Meanwhile, the Trustees of the Improvement Fund and others interested in the Everglades had been anxious to secure the basic facts of the engineer's findings. In the early winter of 1909 an abstract of the forthcoming report was furnished to the Trustees and also to Henry Clay Hall, an attorney for an Everglades land syndicate of Colorado Springs, Colorado. <sup>69</sup>

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66 I.I.B. Minutes, VIII, 430-434.

67 1912 Everglades Hearings, Number 22, 1070-1080.

68 Ibid., Number 9, 337-387, Number 10, 409-410, Number 21, 1039-1040; letter of Arthur E. Morgan to the author, March 9, 1946.

69 Ibid., Number 21, 1039-1040, Number 26, 1328-1329.

In the 1912 Congressional hearings a conflict of testimony developed between J. O. Wright and C. G. Elliott; the latter declared the Trustees requested a copy for Hall and themselves, while the former stated that Secretary Wilson authorized a copy be given to Hall and that subsequently a copy was delivered to the Florida officials.<sup>70</sup> Instructions sent with both abstracts requested that the information be withheld until publication of the complete report, but in March, 1909, Governor Gilchrist secured permission from Secretary Wilson<sup>71</sup> to publish the extracts.

The extracts from the report related entirely to the plan proposed by Wright for draining the Everglades. After examining Lake Okeechobee and its watershed, and running lines across the Everglades from west to east and along the borders, Wright submitted two plans: first, construction of an eighty mile dike around the southern shores of the big lake with outlet canals for drainage and water control; and, second, construction of one or more canals from Lake

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<sup>70</sup> 1912 Everglades Hearings, Number 3, 108-109; James O. Wright, Why Was Wright's Report Supressed?, 6.

<sup>71</sup> Ibid., Number 12, 560. On the basis of a letter Elliott wrote to the Florida Trustees on March 6, 1909, internal evidence points to the credence of Wright's version over that of his superior. Elliott wrote: "In order that you may have the same information that has been given to Mr. Hall. . . who was recently furnished an extract from the forthcoming report on the Everglades." Ibid., Number 12, 559. The excerpt furnished the Trustees appeared with the report of the Joint Committee of the legislature of 1909, Journal of the State Senate of Florida of the Session of 1909, 1605-1623.

Okeechobee to tidewater. The first plan Wright rejected on account of the estimated expenditure of \$5,300,000 for construction plus the possibility of backing the waters on lands on the opposite sides of the lake. Wright's second plan advocated the construction of eight canals from Okeechobee: Caloosahatchee, Hillsboro, Palm Beach, North, Middle, and South New River, Miami, and West. His plan for West Canal proposed cutting this outlet from the present location of Clewiston to the vicinity of the Big Cypress Swamp. He sought a combined discharge of 4,000 cubic feet of water per second at the lake and 10,000 at the tidewater outlets to take care of both the lake discharge and the runoff along the canal banks as they passed through the 'Glades.<sup>72</sup>

Wright estimated the total cost of the canal excavations would amount to \$1,900,000 in

The upper Everglades <sup>[which]</sup> comprise an area of approximately 1,850,000 acres, lying south of Lake Okeechobee, and is the only part in which the depth of the muck will warrant the expense of reclaiming.<sup>73</sup>

Wright noted that as far as could be ascertained the fertility of the Everglades muck was the same as that of the Kissimmee River Valley at St. Cloud, where the Disston agricultural operations were carried on from 1888 to 1898. He stated that

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<sup>72</sup> Journal of the State Senate of Florida of the Session of 1909, 1605-1620.

<sup>73</sup> Senate Documents, Number 89, 62 Congress, 1 Session, 179.

the drainage and irrigation of the Everglades by gravity canals was well within the bounds of feasibility and recommended a plan for the main canals roughly eight miles apart leading south and southeast from Okeechobee to tidewater. Wright's design did not include the necessary secondary or lateral canals which he knew would be essential, but which he recommended be dug by the local districts or parties involved. Wright based his plan for controlling water levels in Okeechobee on the use of locks where the canals entered the lake, and his costs of excavation on the operating expenses of the state dredges.<sup>74</sup>

### 3. The First Land Boom

One of the conditions of the settlement between the Everglades land owners and the Trustees had been the employment by the board of a competent drainage engineer to plan and supervise the operations of reclamation.<sup>75</sup> Agreement prevailed among the two groups at the conference in

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<sup>74</sup> Senate Documents, Number 89, 62 Congress, 1 Session, 133. "From the work at Fort Lauderdale, it has been demonstrated that with a good dipper dredge the rock can be handled at a cost not exceeding 8 cents per cubic yard. With suitable equipment there is no doubt that the muck can be removed at a cost of less than 4 cents per cubic yard." Ibid., 137. Comparison should be made with the Furst-Clark bid accepted by the Trustees in 1910 of 20 cents for rock and 8 cents for earth. I.I.B. Minutes, VIII, 430-434.

<sup>75</sup> I.I.B. Minutes, VIII, 301-311.

January, 1910, on the selection of James O. Wright, a supervising engineer of the Drainage Investigations branch of the Department of Agriculture and the official who had directed the 1907-1908 federal examinations in the Everglades. The major works in the first ten years of state operations in the area were based in large measure on the recommendations contained in the abstract of the Wright report delivered to the Trustees in March, 1909.

The activity of the reclamation operations in the southern part of the peninsula together with the advertising given the Drainage Board's program attracted the attention of land buyers. The Davie, Bolles, and Tatum tracts had been divided and subdivided for resale to individual purchasers who were interested through land sales promotion campaigns. In the

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<sup>76</sup> I.I.B. Minutes, VIII, 301-311, 1912 Everglades Hearings, Number 4, 126-127. The land companies agreed to cooperate if the drainage board, ". . . would employ a certain engineer, which the Board did at a stipulated salary of \$5,000 per annum." Address of John W. Martin, Governor of Florida on the Everglades and the Drainage Problem, West Palm Beach, October 28, 1926, 5.

<sup>77</sup> 1912 Everglades Hearings, Number 16, 765. The complete Wright report was not published until 1911, when it appeared in a compilation of various papers, The Everglades of Florida, issued as Senate Document, Number 89, 62 Congress, 1 Session, 140-180. The Wright excerpt was "reprinted by the land companies in the form of a 'dodger' and was distributed 'with their compliments' to prospective investors as the opinion of the Department of Agriculture regarding their 'proposition'." H. Parker Willis, "Secretary Wilson's Record: 2, The Everglades," Collier's, XLIX (March 23, 1912), 15. Hereinafter cited as "Secretary Wilson's Record."



summer and fall of 1910 the Trustee-Commissioners also advertised Everglades lands in Florida and midwestern papers.<sup>78</sup>

The Trustees met on October 20 of that year to consider bids on block sales of 50,000 acres, but received none of a satisfactory nature; however, on November 16, a sale of 50,560 acres was made to E. C. Chambers at \$15 an acre. This sale led Gilchrist to remark that it had "placed the fund on 'easy street' with ample funds to complete the work on hand and in sight."<sup>79</sup>

In October, 1911, the Trustees offered ten acre canal front tracts to bona fide Florida citizens at \$35 an acre, lands behind canal front tracts at \$30 an acre, and all other acreage at \$25 per acre.<sup>80</sup>

The Everglades received a great deal of publicity, in addition to the paid advertisements, in the accounts of travelers and general writers. Authors wrote in detail about the drainage and agricultural plans for the Everglades. D. A. Simmons wrote in Collier's that

When Okeechobee's surface has been lowered five or six feet, it will draw in the water from the surface of the Everglades, and the work of reclamation will be complete. 81

78 I.I.B. Minutes, VIII, 557, 587.

79 Ibid., 567, 597. R. E. Rose, The Swamp and Overflowed Lands of Florida, 13. Lands in the Chambers' sale were located between townships 47 and 52 South and ranges 30 and 40 East.

80 I.I.B. Minutes, IX, 234.

81 D. A. Simmons, "The Florida Everglades; How They Happened; What They Are; What They Will Be," loc. cit., 536.

This same writer stated that lateral canals would be dug by the state to connect the main arteries,

. . . but these will be intended for transportation purposes rather than for drainage as . . . the soil is so very porous that a heavy rainfall disappears within a few minutes and it is thought that when the impounded water is drained off the land will take care of the natural precipitation. 82

As for agriculture, Simmons' opinion settled on sugar cane growth and manufacture as the chief prospect. "Enormous crops can be grown without any fertilizer whatever," he said, and the Everglades could supply vegetables through the winter for all the cities and towns east of the Rocky Mountains.  
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By 1910 the rapid growth in Everglades land sales was approaching "boom" proportions. The Bolles interests sold ten thousand ten acre farms at twenty to twenty four dollars per acre; the Everglades Land Company sold two thousand of the same size at the same price; the Everglades

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82 D. A. Simmons, "The Florida Everglades; How They Happened; What They Are; What They Will Be," loc. cit., 536.

83 Ibid.; See also N. B. Broward's "Draining the Everglades," loc. cit., 1448-1449; and "Homes For Millions," loc. cit., 19; T. E. Will, "The Everglades of Florida," loc. cit., 451-456; Day Allen Willey, "Reclaiming the Everglades," Cassier's, XXXIX (March, 1911), 418-432, and "Draining the Everglades," Scientific American, CIV (January 21, 1911), 67-69; A. W. Dupuy, "Air-line Across the Everglades," World's Work, XV (February, 1908), 9893-9897; L. C. Persons, "Everglades of Florida," Harper's Weekly, LIV (November, 1910), 6; S. M. Ball, "Reclaiming the Everglades," Putnam's, VII (April, 1910), 796-802.

Plantation Company, a thousand ten acre farms at fifty to a hundred dollars an acre; and the Everglades Land Sales Company, a thousand ten acre tracts at thirty to fifty dollars

<sup>84</sup> an acre. It was estimated that forty per cent of the sales were to prospective settlers, and the remainder to small speculators who hoped to get an increase later on, "when they come out from under the water."<sup>85</sup> One commentator warned his readers that much of the land being sold in the area could be traversed only in a boat, and he added, "I think as a rule the buyers understand that. If they do not it is their own fault."<sup>86</sup>

Perhaps the most spectacular sale of Everglades land was that of the Bolles interests. Richard J. Bolles set up a corporation, the Florida Fruitlands Company, which sold 16,000 contracts for small plots of the land he had purchased from the Trustees. An advertisement which appeared

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<sup>84</sup> Winthrop Packard, "The Rush for Florida," Technical World, XVI (March, 1910), 20-23.

<sup>85</sup> Ibid., 21; H. Parker Willis, "Secretary Wilson's Record," Collier's, XLIX (March 23, 1912), 15.

<sup>86</sup> Ibid. "There is a project on foot which glibly promises to drain the Everglades. Several dredges are lustily digging ditches through which this flood water is supposed to drain rapidly off some thousand square miles of level . . . land. To look at these tiny machines merrily at work on one hand and the area of water they attack on the other is to smile once more at the Atlantic Ocean, Mrs. Partington, and her mop." Winthrop Packard, Florida Trails from Jacksonville to Key West and from November to April Inclusive, 1910, 253.

in a Pittsburgh, Pennsylvania newspaper on February 5, 1911,  
sought prospective Bolles Company buyers:

Florida Farms-Florida Everglades Special  
Everglades and Lake Okeechobee Excursion  
February 21

Applications are coming in--only 16 days until we start. Time is short. Reserve your space now. The cost of this trip will return to you one-hundredfold and we pay a large part of all the expenses. . . .

Secretary Wilson, of the United States Agriculture Department, says the doubting Thomases who are waiting for the Everglades to develop before buying will regret it all their lives. Write for our literature.

Ten acres of Everglades is as good as 100 acres in the North. We need you to help spread the knowledge of this wonderful land in this territory.

All the land we have for sale is rich black soil, known as muck. Our soil will not run through your fingers like table salt. 87

In March, 1911, thousands of contract holders or their representatives converged on Ft. Lauderdale to select their tracts, through a lottery, from the Bolles purchase. At the meeting the question arose as to who would survey the tracts. Since the section lines had not been established, the location of the lots varied in the important consideration of their proximity to the drainage canals. Bolles conquered the

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87 Exhibit "Z," 1912 Everglades Hearings, Number 26, 1323. "A story is told of one of the prospective northern suckers who saw the high water mark on one of the trees about five feet above the ground [Caloosahatchee River, 1911]. He asked the land agent what caused it and the latter stated that it was made by hogs scrubbing their backs against the trees. After a time the agent asked the visitor if he wished to purchase a ten-acre tract. He replied, 'No, not by a d--d sight, but I would like mighty well to buy a pair of those hogs to take north with me.'" W. S. Blatchley, In Days Agone, 98.

survey problem by stating that he would place a stake or monument in the center of each section, but some of the contract holders refused to accept this compromise or to make further payments on their contracts and instituted a suit for recovery of previous installments.<sup>88</sup>

Under the articles of agreement by which Bolles bought his land the promoter was to make his final settlement to the Trustees in 1916, whereas his sales contracts were due in two years. Bolles' transactions involved 160,000 acres for which he received \$4,000,000 in a "scheme of financing that would have done credit to a Wall Street promoter."<sup>89</sup> It is evident that he made well over a thousand percent profit.

One of the largest syndicates interested in Everglades promotion at this period was the Everglades Land Sales Company with general offices in Kansas City, Missouri. This company became the agents for the properties of the Everglade Land Company, Everglade Sugar and Land Company, Miami Everglade Land Company, the R. P. Davie interests, and several smaller holders.<sup>90</sup> Interesting in the light of subsequent

<sup>88</sup> 1912 Everglades Hearings, Number 4, 146-147.

<sup>89</sup> George T. Odell, "Paradise on the Installment Plan," Technical World, XVII (September, 1912), 21. See also Isidor Cohen, Sketches of Miami, 166-168. At the 1912 congressional hearing Chairman Ralph W. Moss asked James O. Wright, at that time Chief Drainage Engineer for the Everglades Drainage District, if any of the Bolles lands were under water in February of that year. Wright replied, "Yes, some of it is, no doubt." 1912 Everglades Hearings, Number 4, 150.

<sup>90</sup> V. W. Helm, president and general agent, Everglades Land Sales Company to J. P. Hirth, Washington, D. C.,

events is a publicity form letter issued to the public in Washington, District of Columbia, in 1912 and 1913, which informed the prospect that "the work of reclaiming the Florida Everglades is advancing by leaps and bounds."<sup>91</sup> The letter pointed out that six dredges of the Furst-Clark Company were on a twenty-four hour schedule with several more scheduled to begin work. After reciting several paragraphs of praise from various unidentified persons, the communication declared,

Everglades lands are going fast. Within a year, one tract of 64,000 acres, and another of 180,000 acres were sold; another of 46,000 acres is now almost gone. . . .

. . . . .  
The prices have risen from \$24 and \$30 to \$40 and \$50 per acre. Our fifty dollar land is now almost gone, and buyers can afford to waste no time unless willing to purchase at \$60 and \$80 per acre, at which figures, also, we have land to sell. 92

The letter further offered the facilities of its Washington office, with its displays of 'Glades products, and "lantern lectures" three nights each week. The letter expressed a desire "to present THE opportunity of a life time" to those who had not bought lands; "to those who have,

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September 15, 1911, Thomas E. Will Collection, University of Florida Library, Gainesville, Florida. Hereinafter referred to as Will Collection.

91 Unaddressed and unsigned promotion letter of Everglades Land Sales Company, Kansas City, Missouri, Will Collection.

92 Ibid.

we can outline one plan which will simplify their tasks of paying for their lands, and another for obtaining revenue therefrom."<sup>93</sup>

Among the productions of the advertising campaign of the Everglades Land Sales Company were two books: John Clayton Gifford's, The Everglades and Other Essays Relating to Southern Florida, and Walter Waldin's Truck Farming in the Everglades. Gifford's work comprised a group of reprints of articles from various periodicals on a number of topics pertaining to south Florida in general. In the first article Gifford attempted to compare the reclaimed Florida area with that of the Landes of France and the Heathland of Denmark. He estimated that it cost \$1 an acre to drain the Florida Everglades.<sup>94</sup>

There are agents at work selling this land in every state in the Union . . . the money from the sales is doing the work, and the further it progresses the more land will bring and the more eager people will be to get hold of it. The Board of Internal Improvement is wisely holding back much of the land from sale. . . . In many cases the state has only sold the alternate sections.

By the application of lime, the cultivation of legumes, etc., this soil can be kept at a maximum state of fertility, so that five acres would be ample for the support of an ordinary family. 95

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93 Unaddressed and unsigned promotion letter of Everglades Land Sales Company, Will Collection.

94 John Clayton Gifford, The Everglades and Other Essays Relating to Southern Florida, 1-2.

95 Ibid., 10-11.

The book by Waldin was written with a certain amount of background since he had been engaged for several years in farming along the edge of the Everglades.<sup>96</sup> For the future farmer who would cultivate intensively five acres, Waldin thought a capital of \$700 beyond the cost of the land was necessary.<sup>97</sup> Waldin said that he had begun with \$600 and six acres of land. He planted the land in tomatoes and received

. . . after six months of close application  
 . . . a gain of \$3,400, after all bills were paid including expenses of a family of five. No help was engaged until it came time to pick, pack, and ship. We did the work. 98

Waldin felt there was no part of the Everglades that was not reclaimable or that would not respond to man's influence and energy and become valuable thereby. Among the advantages of farming glades land he listed the ease with which it could be cleared since it was free from trees or stumps, the

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96 "Our townsman, H. Dale Miller [one of the vice presidents of the Everglades Land Sales Company in 1912], who had been associated with the Ralston-Helms Everglades interests, was frequently seen on the streets of Miami at the head of processions of bewhiskered strangers whom he conducted to the Walter Waldin demonstration farm, at the edge of the Everglades, a few miles west of the city, from which point 'Dale' gave the prospectors a view of their future imperial domains." Isidor Cohen, Sketches of Miami, 168-169. See also Journal of the State Senate of Florida of the Session of 1909, 1591-1592.

97 Walter Waldin, Truck Farming in the Everglades, 12.

98 Ibid., 13.



ease of tilling and irrigation, the climate, the location, and the fact that the busiest season came in the cool winter months. Because of the high nitrogen content of the muck Waldin dispensed with any trace of that element in the fertilizers he used. In preparing the land for cultivation he merely cut the saw grass or other wild growth and plowed, disked, and pulverized the earth until a deep and compact earth remained.

Often in this part of the country it is preferable to plow some time in advance of the cropping season, so as to let the land settle thoroughly, if possible catching some of the later tropical rains to help settle the soil before finally harrowing to a fine seed or plant bed. 99

Waldin offered the newcomer all manner of advice on various crops to plant, markets for produce, fertilizers, and drainage. For the latter subject he suggested the use of a shallow lift pump of great capacity, such as those used in rice fields, to assist the natural drainage and irrigation facilities of the gravity system in use at that date.

My prophecy is that the great Everglade district will not only develop into a most beautiful and prosperous country, but will in a short time prove itself the Eden of North America. 100

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99 Walter Waldin, Truck Farming in the Everglades, 21-22.

100 Ibid., 141. Waldin believed the following quantities and/or prices could be made in trucking on Everglades muck: Irish potatoes, 125 bu. per acre; bell peppers, 1200 crates per acre with a net of 75¢ per crate; egg plants, 1200 crates per acre; beans, 200 crates an acre at \$2-3 per crate; celery, 900-1200 crates per acre at \$1 a crate or

Thomas Elmer Will, one of the salesmen and publicity writers of the Everglades Land Company and the Everglades Land Sales Company whose interest in the lands south of Lake Okeechobee became a vocation, wrote that the Everglades provided a logical place for satisfaction of the public interests in "the bringing together of the man and the land."<sup>101</sup>

Will, who spent the last thirty-five years of his life seeking

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higher; cabbage, 3-6¢ per lb. in Miami; melons, \$400 per acre; sweet potatoes 4-500 bu. per acre at 75¢ a bushel; strawberries, 5-10,000 quarts per acre at 35¢ a quart in January-February season. Ibid., 46, et. passim.

101 T. E. Will, "The Everglades of Florida," loc. cit., 456. Thomas Elmer Will, 1861-1935, was born in Stones Prairie, Illinois. Spending his childhood in Illinois and Missouri, he graduated from Illinois State Normal College in 1885. From 1885 to 1888 he taught in Illinois public schools, and in 1888-89 was a graduate student at the University of Michigan and 1890-91 at Harvard College from which he received a Master's Degree. In 1891-92 he was a professor of history and political science at Lawrence University at Appleton, Wisconsin. He served as professor of political economy at Kansas State Agricultural College, and as president of that institution in 1897-98. The next two years he spent in lecturing. In 1900 he became dean of Ruskin College in Trenton, Missouri, where he remained until 1905 when he entered the Census Office in Washington, D. C. In 1906 he served in the Forestry Service of the Department of Agriculture. From 1906 to 1910 he acted as secretary of the American Forestry Association. He joined the sales force of the Everglades land companies in 1910. He served with them till 1912, when he became a free lance writer. From 1913 until his death in 1935 he lived at Ft. Lauderdale and Belle Glade, Florida, where he was very active in public affairs pertaining to the Everglades. J. D. Walters, History of Kansas State Agricultural College, 8-10; Ft. Lauderdale (Florida) Call, June 12, 1926.

to help develop this region, had his attention directed to southern Florida when as editor of Conservation he accepted an article for publication by J. C. Gifford on the Everglades. In January, 1910, Will made a trip to the peninsular state and inspected the southern portion at some length before returning to Jacksonville and Tallahassee, where he met and talked with Broward, Jennings, and Bolles. <sup>102</sup>

In 1911 Will helped organize and became president of the Florida Everglades Homebuilders Association, an organization composed of buyers of Everglades land, which was open to all landowners irrespective of the company through which they had made their purchases. A tract of land on South Canal, purchased by the Association, was to be farmed by a manager in 1911-1912 to furnish the members information on how to "learn and earn" and "what can be done in the muck lands behind Miami." The Association adopted a constitution and by-laws and set up a schedule of bi-monthly meetings to assist the material interests of buyers of Everglades lands. <sup>103</sup>

The high tide of the Everglades advertising and sales promotion campaign was reached in an item which appeared in the February 5, 1912, issue of the Washington (D.C.) Star.

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102 Memorandum in Will Collection.

103 Florida Everglades Homebuilders Association, printed prospectus, Will Collection.

Business Opportunity--  
United States Official Indorsement

First time in the history of the Government such a thing has been done. The Sixty-second Congress has recently issued a document of 208 pages indorsing the great reclamation, climate, healthfulness, and fertility of the Everglades. The greatest opportunity of the century is offered here to the man with small capital to establish himself where the evident cooperation of the Government is sufficient to make the community rich and prosperous. Free literature. Call for some.

Everglades Land Co. 309 G. Street 104

In August, 1911, V. W. Helm of the Everglades Land Sales Company wrote T. E. Will that he had received a letter from Senator Duncan U. Fletcher announcing the forthcoming publication of Senate Document Eighty-Nine. Helm declared: "This is certainly great news and I want to congratulate you on this successful part of the program."<sup>105</sup> Helm asked Will if it would be possible to secure a large number of copies of this document on the Everglades with Fletcher's wrapper "all complete for mailing with his frank."<sup>106</sup> On August 22 Helm

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<sup>104</sup> 1912 Everglades Hearings, Number 7, 298. On May 2, 1911, a letter had been received by the Board of Trustees of the Internal Improvement Fund from the Everglades Land Sales Company offering to act as agent in the sale of the Fund's lands. The offer was refused. I.I.B. Minutes, IX, 107.

<sup>105</sup> V. W. Helm to T. E. Will, August 16, 1911, Will Collection.

<sup>106</sup> Ibid. Will was associated with the Everglades Land Sales Company in 1910 and 1911. 1912 Everglades Hearings, Number 13, 597. In the assimilation and publication of the various papers of Senate Document 89, Will secured the suppressed Wright Report and went to various libraries and government offices to collect the other material for Senator Fletcher. 1912 Everglades Hearings, Number 19, 956, 958, 964-965.

again wrote Will, ordering a thousand copies of the document for \$98 and requesting Will to ascertain prices on copies of the document in one, five, and ten thousand lots.<sup>107</sup> On August 26 Helm informed Will that the company officials were urging Senator Fletcher to persuade President William Howard Taft to stop and inspect the Everglades on a proposed trip to Florida in January, 1912.<sup>108</sup>

The 1910-1912 boom in the development and sale of the Everglades and contiguous lands of South Florida was received with very decided differences of opinion in the state and in the nation at large. There were many who had feelings on the subject similar to the Miami merchant, Isidor Cohen, who believed the reclamation of the Everglades had been a boon to Miami and that it was gratifying to note subsequent drainage and agricultural experiments in the area had fully vindicated the attitude of the "boomers."<sup>109</sup> Cohen was convinced that the wide publicity given the reclamation project attracted numerous realty dealers to Dade County who aided in Miami's rapid growth and supported civic enterprises which

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107 V. W. Helm to T. E. Will, August 22, 1911, Will Collection.

108 V. W. Helm to T. E. Will, August 26, 1911, Will Collection.

109 Isidor Cohen, Sketches of Miami, 170. "In those experiments the late Walter Waldin had taken a leading part. His farm on the edge of the Everglades, a few miles west of Miami, has for a number of years been the show place and demonstration center, for countless Everglades land exploiters." Ibid.

brought many wealthy and notable people. Many "wide-awake" young business men were drawn south by the Everglades propaganda and remained in the east coast city contributing to its welfare.

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Joe Hugh Reese, a reporter on the Miami Metropolis (in 1909), writing in 1926 recalled that many newspapers in Florida were against the Everglades project in those early years on account of the exploitation by the land agents and the political connections which resulted. Reese felt, however, that

It was not until that time that Miami and Fort Lauderdale amounted to much. . . . At that period Miami was pretty much of a dead town but the Everglades action woke it up, and in less than two years it was flourishing and has been throbbing with progress ever since.

. . . . .  
It must be said in justice to the land agents that, as a rule, they were men of high and cultured intellect, and they relied upon the estimates that had been officially published, as to the time required to complete the drainage system. 111

During the winter of 1911 W. S. Blatchley, a former state geologist of Indiana, made a trip into Lake Okeechobee where he observed a dredge working in the lake end of the

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110 Isidor Cohen, Sketches of Miami, 170-175.

111 Joe Hugh Reese, "Agricultural Possibilities in the Everglades," Florida Grower (Tampa), XXXIII (April 10, 1926), 2-3. "Richard J. Bolles is entitled to the gratitude and the thanks of the people of the State . . . for his enterprise, courage and continued faith in the ultimate success of Everglades drainage . . . as evidenced by his investment of more than one million dollars in their reclamation." R. E. Rose, "The Swamp and Overflowed Lands of Florida," loc. cit., 128.

North New River Canal. After seeing the operation he remarked:

When we remember that the lake is only a great saucer 20.5 feet above tide, and that the Kissimmee drains into it, practically in four months of the year, 48 inches of rainfall from 8,000 square miles of territory, we can understand how visionary is the scheme proposed. Thousands of dollars have been spent in advertising and millions gotten back in profit by selling to widows, orphans, and poor devils in the North, this land, in five or ten acre tracts at \$50 to \$100 an acre. 112

As with any project in which there is a question of success, doubt as to the ultimate reclamation of the Everglades was expressed from the first attempt. The Everglades drainage operations gave rise to land selling by high pressure salesmanship with a considerable amount of speculation. The whole program was subjected to a vast amount of criticism: the methods employed in dredging, the accuracy of the surveys, the estimates of the engineers, the practicability and feasibility of drainage, and the resulting value of the soil. All of these became questions without immediate answers. The enterprise became a subject of national agitation.

The attack came from all quarters. The corporate interests which had lost their grip on the bounty of state lands opposed the work from the outset and fought their way to the United States Supreme Court to stop it. R. E. Rose

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112 W. S. Blatchley, In Days Agone, 100.

had no doubt but that an organized system of "criticism, slander, and defamation" had been started by "interested parties, citizens, and newspapers of the state, and of western states" who were envious of the emigration of capital and people to Florida.<sup>113</sup> J. C. Gifford found it hard to believe that there were hundreds of "knockers" among the "home people, who had nothing to lose and everything to gain, and who talked it down by the hour on the street corner to newcomers."<sup>114</sup>

A concrete expression of skepticism regarding the Everglades land promotions appeared in a letter written to the editor of Harper's Weekly by L. C. Parsons in November, 1910. Parsons cited a prospectus of the Florida Fruitlands Company which offered 180,000 acres for sale. "Nothing like it can be found on the continent today . . . twelve hundred farms and homes are being practically given away."<sup>115</sup> The advertisement quoted Department of Agriculture and Florida officials to support its claims. Parsons said he had spent the winter of 1910 in Florida and wondered why so much money was being spent on the drainage of waste land when there were thousands of uncultivated acres in the state. He said that

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<sup>113</sup> R. E. Rose, "The Swamp and Overflowed Lands of Florida," loc. cit., 129.

<sup>114</sup> J. C. Gifford, The Everglades and Other Essays Relating to Southern Florida, 99.

<sup>115</sup> L. C. Parsons, letter to the editor, Harper's Weekly, LIV (November 12, 1910), 6.



questions of frost, fertilizer, irrigation, freight rates, and profits of commission men should be settled before one purchased Everglades lands; he added that he hoped his letter would be a warning to keep the savings of the poor out of the proposition. "I regard the drainage project many years premature."<sup>116</sup>

George T. Odell, in an article entitled "Paradise on the Installment Plan," launched a severe assault against the promoters who had sold ten acre tracts to "tens of thousands of clerks and stenographers and school teachers all over the United States."<sup>117</sup> Odell asked who ever heard of making a living out of sugar on a ten acre farm. Propheying the future trend of land holding in the Everglades, he added:

How many of these silly persons who bought their land "sight and unseen" will have their tiny patches when the time comes that the Florida Everglades is transformed into fertile farms?

Florida has suffered too. There are fertile lands in the state, lots of them, and it is probably destined to be a great agricultural State, but not through these poor deluded people who have bought land by the acre which should have been sold by the quart. 118

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116 L. C. Persons, letter to the editor, loc. cit., 6.

117 George T. Odell, "Paradise on the Installment Plan," loc. cit., 17.

118 Ibid., 21. Margaret M. Topham of Miami wrote the following letter to the United States Department of Agriculture on November 13, 1910: "Can not this department take some measures to force the stoppage of sales of so called drained Everglade lands? Not a day but some poor deluded victim arrives here in Miami to find the acres which he has bought, and which have been described to him as a very gold mine for productiveness sometimes as much as 8 feet under

Herman B. Walker of Ft. Lauderdale, one of the out-of-state settlers who bought land in the Everglades on a sales contract from T. E. Will when the latter represented the Everglades Land Sales Company, wrote on January 18, 1912, reciting the grievances of the "pioneers" against the state and the land companies. Walker was trying to get his Everglades tract into agricultural production. The company continued to dun him for payments but he refused to make any more payments until it became evident whether or not the crops would pan out.

Walker insisted that he had not lost faith in the future of the glades, but that he had had his eyes opened when he saw the state selling canal frontage for \$35 an acre while other state lands similar to his were being sold for \$15 an acre.

In view of a congressional investigation of land company methods, I am disposed to believe that all speculative companies will be inclined to act rather decently from now on. 120

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water, and with no prospect of that water disappearing. These land companies are flooding the country, particularly the Middle West, with the most fabulous misrepresentations. We who live here know how absolutely cruel are the sufferings of these misguided creatures. The Everglades may be drained someday, but the day has not arrived." 1912 Everglades Hearings, Number 25, 1263.

119 Herman B. Walker to Thomas E. Will, January 12, 1912, Will Collection.

120 Ibid.

Walker was convinced that the Everglades Land Sales Company was the only firm making any effort to keep promises for drainage and delivery of land.

The dredging had been done in the wrong end of the canals, according to Walker, since the cuts merely drained the surface water from the edges, which enabled the agents to show drained land to prospects. Pointing out the promise of the company to deliver him "drained" land in a year and a half, Walker wrote that the rate of dredging in 1912 would require at least three years to accomplish the necessary work. As for his crops, he said he found it necessary to put plants in "trenches" or "holes" in the trash atop the soil, but he expected to pick beans and tomatoes from six acres of hand cultivated muck that season.

The company's literature is not directly deceptive as to Everglades conditions, but is greatly so in bulk. The pictures, stories, and experiences shown of successful groves, farms, etc., on muck soil are of course intended to convince the reader that these illustrate Everglades conditions. . . . The whole Everglades proposition is experimental. Nobody knows what it will do, although I believe it will do almost anything when we learn how to do it. . . . You and others have exploited Walter Waldin as an Everglades farmer and he never farmed in the glades. . . .

There is not a farm of commercial size, and not an orchard of any size more than a few weeks old, anywhere in the Everglades despite all the lurid literature. The mosquitoes in the Everglades are fearful; the gnats are blinding and the morning fog looks like a sea. There are all kinds of snakes, every kind of bug that lives,

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and my folks cannot keep the army worms out of their clothes and food. 121

Walker wrote Will that the vegetable packing house conditions were not of the cooperative variety, but rather of the exploitative kind, and that the railroads took at least half of what a farmer could get for his produce. The company had done nothing for the purchasers of the tracts except to send a soil pulverizer around six months after it was promised, and to try to get the new farmers to give the combination a monopoly of the packing, boating, and selling of the crops.

The whole combination . . . is, so far as I am able to judge, a mere scheme to get as much as possible out of the dammed Yankee suckers who have come here to plant. . . .

And wouldn't it be well for you to drop a hint to some other of your people that if I go before a congressional committee, I propose to tell everything I know, which won't hurt the Everglades but will raise hell with selling land. 122

The "boom" had become so loud and the clamor so great that the Commissioner of Agriculture of Florida, under the direction of the Internal Improvement Fund Trustees, published a statement regarding the Board's stand on the situation. It

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121 H. B. Walker to T. E. Will, January 12, 1912, Will Collection. Dr. Beverly T. Galloway, Chief of the Bureau of Plant Industry of the U. S. Department of Agriculture, had been down at the Miami Sub-Tropical Plant Station where he had seen "land sharks bringing people down there and showing them the Government experiment station, which was located on hummock soil and not on the glades, as being typical of what could be done on the Everglades. . . ." 1912 Everglades Hearings, Number 1, 16; Number 25, 1262-1283.

122 Ibid.

said:

Large tracts of lands lying in the Everglades or drainage district are owned by private individuals, companies, and corporations. The Trustees of the Internal Improvement Fund have nothing whatever to do with these companies, know nothing of their plans, methods of selling or contracting to sell their holdings. Their financial standing must be found through other channels. While we have no cause to doubt their good faith, we can not in any way indorse or recommend any private enterprise. 123

The Trustees did not wish to be saddled with any responsibility for this land boom.

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123 Senate Documents, Number 89, 62 Congress, 1 Session, 119.

## CHAPTER VIII

### CONGRESSIONAL INVESTIGATION OF THE EVERGLADES PROJECT

#### 1. The Calm Before the Storm

After considering the amount of money which would be needed to survey the 'Glades, dig canals, and construct canal locks, as well as to complete the Furst-Clark contract the Trustees of the Internal Improvement Fund adopted a resolution on March 12, 1911, requesting the legislature to increase the Everglades District drainage tax from five to ten cents an acre.<sup>1</sup> The large landholders of the district, at the suggestion of the Trustee-Commissioners, met in Tallahassee and conferred on the subject on March 29. They found it inadvisable to recommend any change in the tax rate. They agreed, however, that the Florida East Coast Railway would not seek to withdraw any further acreage from the boundaries of the district; and they also admitted that the drainage tax had proven its worth, as shown by the fact that lands in and adjacent to the reclamation operations had trebled in value since 1906.<sup>2</sup>

Shortly after the above conference Governor Gilchrist presented his biennial message on the condition of the state

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1 I.I.B. Minutes, IX, 42.

2 E.D.D. "Minutes," I, 145-147.

to the legislature. He reported that prior to the letting of the contract on July 1, 1910, the Drainage Commissioners had completed 15.84 miles of canals and that since that date the six Furst-Clark dredges had cut 24.06 of the 184 miles in their agreement.<sup>3</sup> Gilchrist recited the details of the settlement between the Trustee-Commissioners and the land companies which resulted in the dismissal of the litigation over the drainage tax. Touching on the problem of drainage for the benefit of the land in the Everglades District which had been sold by the large brokers in small quantities to different individuals, the chief executive stated in definite terms that

The necessity for prompt reclamation of these lands, in order that they may be more quickly prepared for settlement and cultivation, is quite apparent. Under the preceding administration, lands were sold in alternate sections. As laterals will have to be constructed, it is the policy of the present administration to solidify their holdings as much as possible.<sup>4</sup>

As in the case of the 1907 and 1909 legislatures, the 1911 body created, by concurrent resolution, a joint committee to visit the Everglades operations, and to make a report on the work accomplished, in progress, and contemplated by the Trustees. The committee was instructed to ascertain the

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<sup>3</sup> Journal of the State Senate of Florida of the Session of 1911, 56-57.

<sup>4</sup> Ibid., 64.

costs of the program, the acreage reclaimed, and to make a summary of lands disposed of together with the conditions of their sale, and of the lands still held by the Trustees.<sup>5</sup>

The committee of two senators and three representatives viewed the canals at the tidewater and lake ends of the incompleated canals and came to the conclusion that no land was adequately drained nor would be until the canals were finished through to the lake and the lake level lowered; some 15,000 acres adjacent to the outlets were, however, partially drained.<sup>6</sup> Observing that the consent obtained from the federal government to the lowering of Okeechobee was predicated on the establishment of locks, the committee called attention to the necessity for control works in the canals at eight to twelve mile intervals to control the waterways for irrigation and navigation.

The committee found that the Trustees had received \$834,730.35 from the sale of Everglades lands from January, 1905, to May, 1911, and that on the latter date the Trustees and Commissioners had \$439,993.95 in cash or negotiable

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<sup>5</sup> Senate Concurrent Resolution Number 2, Acts and Resolutions Adopted by the Legislature of Florida at its Thirteenth Regular Session Under the Constitution of 1885, 937.

<sup>6</sup> Journal of the State Senate of Florida of the Session of 1911, 1755. They declared that when "the water in the lake is lowered, thereby making an immense reservoir, so that when the rainy season begins, this reservoir will hold the excessive rainfall, and by means of opening the canals the rainfall can be carried to the sea without the lake overflowing its banks," the Everglades will be drained. Ibid., 1755.



instruments on hand with drainage taxes due through the life of the Furst-Clark contract of \$1,578,864, making a total of resources of \$2,018,857.<sup>7</sup>

We are advised that about 35,000 acres of land in the Everglades had been sold in small tracts by promoters at prices as high as eighty (\$80.00) dollars per acre, under an agreement that the promoters would cut a canal at certain places which is supposed to be sufficient to carry off the water and make the land suitable for cultivation. Parties buying the land are fully advised, so far as we can ascertain, of the existing conditions and of the progress of the drainage operations. 8

The committee recommended that the Trustees encourage immigration into Florida and at the same time bring more money to the Improvement Fund by selling Everglades tracts in multiples of five acres to bona fide settlers. Estimating that roughly a million acres remained to the Fund in the drainage district, the legislators believed the lands should bring an average of \$25 an acre on such a plan. The committee also recommended that the Trustees donate the spoil banks along the canals, together with a right-of-way, for the construction of a cross-state highway; they said: "We know of nothing that would develop the Everglades more rapidly, except of course the drainage operations now in progress."<sup>9</sup>

Encountering doubt in the minds of many persons as to

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<sup>7</sup> Journal of the State Senate of Florida of the Session of 1911, 1759.

<sup>8</sup> Ibid., 1759-1760.

<sup>9</sup> Ibid., 1761.

the drainage project, the committee pointed out that such a question was merely a matter of mathematics to be solved by combining the elements of rainfall, evaporation, and the size of the drainage canals. The group endorsed the enterprise and recommended that it be pushed with all vigor to complete the contracted canals, and suggested that a further canal be dug from Okeechobee to Lake Worth via West Palm Beach if such an outlet would be needed to implement the system.

Your committee is of the opinion that the drainage operation will ultimately be a great success, and is one of the greatest undertakings of the age, and will convert the Everglades--once a watery waste--into one of the garden spots of the world. We believe, however, before it has reached perfection, that individuals will have to spend for farm ditches and lateral canals a sum approximating two dollars per acre. When completed, the farmer need not fear cold, droughts nor floods, and has [sic] the consciousness of knowing that he is tilling as rich a soil as is to be found within the bounds of the South. 10

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10 Journal of the State Senate of Florida of the Session of 1911, 1763. "We find that the I. I. Board has well in hand [sic] the drainage operations, and under J. O. Wright, Supervising Drainage Engineer, there is a thorough check on all the proceedings, and that everything is well mapped out and planned, and we do not believe a more competent, honest, energetic, and thorough man could be found anywhere, than Mr. Wright. So long as he is in charge of the actual construction, it is our opinion that the interests of the State will be thoroughly protected in every particular. At the same time, no mean advantage will be taken of the contractors." Ibid., 1761. The Board of Commissioners of the Everglades Drainage District adopted a route for the Palm Beach canal on December 22, 1911, and let the contract for its excavation on December 17, 1913. E.D.D. "Minutes," I, 229, 218-227.

In order to comply with the constitutional requirement Attorney General Park Trammell submitted his biennial advisory report to the legislature in 1911. Included among his proposals for action by that body was the passage of a bill providing that the Trustees of the Internal Improvement Fund establish and maintain two experimental farms in the Everglades, to consist of not more than ten acres each, one on the east coast and one on the west coast. Since the state possessed over a million acres below Okeechobee such stations would be of negligible expense and would add to the worth and development of the area by determining "the diversity of crops for which the soil of the Everglades land is suitable," and for "demonstrating the agricultural value of this land for the production of different crops."<sup>11</sup>

In late December of 1911 the Miami Board of Trade asked the Improvement Trustees to establish an experimental farm on the 'Glades near Miami. The Trustees replied that they would gladly donate land for such a farm but were doubtful of their right to "use funds for an experimental farm, if the funds were available."<sup>12</sup> The Trustees referred the request to the State Experiment Station at Gainesville.

The question of permanent locks and dams in the drainage canals became a veritable nightmare for the Board of

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<sup>11</sup> Journal of the State Senate of Florida of the Session of 1911, 149.

<sup>12</sup> I.I.B. Minutes, IX, 327.

Commissioners. Land owners on the coastal ends of the canals were eager to see such installations constructed to protect their lands from the overflow of the waters from the upper reaches, while settlers on the latter lands were opposed to them because they feared they would hinder the run-off at their location. J. O. Wright, the chief engineer, objected to the locks because the water in the canals would have to be three feet below the surface of the lowest ground traversed by the canal in order to furnish drainage to lands adjacent to the waterway.<sup>13</sup>

This dilemma was brought to the attention of the Trustees in a communication of November 21, 1911, from A. B. Sanders of Miami who stated that he had bought fifty acres of "drained" land from the I. I. Trustees in 1910. He later sold it but when the prospective tenant arrived "she found the land she had purchased under two feet of water."<sup>14</sup> Sanders asked the Trustees if his unfortunate buyer could buy or lease lands below the temporary locks in order to make a winter crop. "The Trustees while refusing to admit they had sold Mr. A. B. Sanders or any one else land claiming that it had been drained, nevertheless were desirous of

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<sup>13</sup> I.I.B. Minutes, IX, 225. Wright brought up "another fact to be considered . . . that when this muck land is drained, it will settle so that the canals will not be as deep as they are at the present time. This settlement will be as much as a foot or a foot and one-half in the deep muck soil."

<sup>14</sup> Ibid., 277.

assisting and will lease certain lands below the locks at three dollars (\$3.00) per acre for the season."<sup>15</sup>

Although drainage activity had been in progress for seven years, Lake Okeechobee was still a wilderness area in 1912. The main entry was through the Hicpochee Canal from the Caloosahatchee to the big lake. Small river steamers plied the Caloosahatchee to Ft. Thompson and the Kissimmee from Tohopekaliga to Ft. Bassinger.<sup>16</sup> W. S. Blatchley, making the Caloosahatchee River trip in 1911, noticed "Orange groves, landing docks, and small settlements" along the river, "but the groves were mostly narrow tracts on the river shore, put out to aid in selling lots to tourists."<sup>17</sup> At La Belle, just below Ft. Thompson, Blatchley found a small village which was the center of "a settlement of five and ten acre tracts which have been sold to northern people at high prices."<sup>18</sup> After entering the lake this tourist found but three houses on the shores of the lake, and the

<sup>15</sup> I.I.B. Minutes, IX, 277.

<sup>16</sup> Harrison Garfield Rhodes and Mary Wolfe Dumont, A Guide to Florida for Tourists, Sportsmen, and Settlers, 210-218. "To go to Lake Okeechobee from Kissimmee is a very interesting excursion. Steamboats and motor boats make the journey with little trouble to the traveler. . . ." Ibid., 216.

<sup>17</sup> W. S. Blatchley, In Days Agone, 94.

<sup>18</sup> Ibid., 96. "While docked here a large launch filled with northern tourists passed us. They were in charge of a land agent or real estate boomer who was taking them up to sell land in the everglades near the North New River Canal now being dredged between Lake Okeechobee and Fort Lauderdale." Ibid., 97.

only settlement was on Taylor's Creek off the northeastern shore of Lake Okeechobee.

Writing of early days on Lake Okeechobee, Gertrude M. Winne recalled that there were not many people living about Lake Okeechobee in 1912 when the Winnes built a house on Torry Island in the southeastern section of the lake.<sup>19</sup> The nearest female neighbors of the Winnes were members of the V. H. Waggoner family on Kreamer's Island some miles away. Hunting, fishing, and trapping were the occupations of the inhabitants although J. O. Wright found "several men who had squatted around the lake who were cultivating the land" in 1908.<sup>20</sup> Gertrude Winne remembered that Okeechobee's shores were an ideal hiding place from the law and that no questions were asked of people who dropped by; without any law,<sup>21</sup> however, conditions were safe. There were no stores on the lake and all provisions and supplies had to be brought from Ft. Myers, where the trappers and fishers sold their catch. With the opening of the North New River Canal in October, 1912, the distance to "civilization" was cut from

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19 Everglades News (Canal Point, Florida), March 7, 1930.

20 1912 Everglades Hearings, Number 3, 90.

21 A visitor to Kissimmee in 1895 wrote: "The unknown reaches of the Everglades lie just below, and with a half-hour's start a man who knew the country would be safe from pursuit even if it were attempted; and as one man cheerfully confided to me, 'A boat don't leave no trail, stranger.'" Frederic Remington, "Cracker Cowboys of Florida," Harper's Magazine, LXXX (August, 1895), 342.

135 miles to Ft. Myers to 64 miles to Ft. Lauderdale.

Gertrude Winne had noticed several gardens in the Everglades muck along Okeechobee's shore and wrote that she determined to have a good one. The 1911 legislative commission found every kind of garden vegetable being grown successfully in the muck except corn.

On the banks of Lake Okeechobee we saw cabbage growing that were four feet across, and were assured that fertilizer of no kind was used. We were told that they sold a cabbage the week before our visit that weighed twenty-eight pounds, and which was grown on the south side of the Lake without fertilizer. We found alfalfa growing most luxuriantly on the banks of the canal on the south shore of Lake Okeechobee. . . .

On the South New River Canal, some four to five miles out in the "Glades" we found a settlement of some eight or ten families who have been conducting vegetable gardens for the season past, and they were well pleased. They had raised cabbage, tomatoes, beans, Irish potatoes, and all kinds of garden truck profitably. One person there stated he had grown one hundred and twenty-six hampers of beans on a half-acre, and sold them at an average price of three dollars and a quarter per hamper--that the average crop of beans was about three hundred hampers to the acre. They raise about five hundred crates of tomatoes to the acre and have grown as high as eight hundred and fifty crates to the acre, which yielded them from \$1.50 to \$3.50 per crate. 23

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22 Everglades News (Canal Point, Florida), March 7, 1930. In the early winter of 1913 the steamer Suawnee made weekly trips from Ft. Myers to the lake.

23 Journal of the State Senate of Florida of the Session of 1911, 1762. "We often found along the banks of the canal houses, boat landings, etc., that had been taken possession of by settlers." Ibid., 1762-1763. In 1907 the Florida East Coast Railway moved 1,500,000 crates of tomatoes, 700,000 crates of pineapples, and 150,000 barrels of Irish potatoes,

J. O. Wright, making his first public utterance on the Everglades at Miami in 1908, said that the 'Glades could be drained but that the land would not be permanently settled without the introduction of some staple crop of high commercial value such as sugar cane or rice.<sup>24</sup> Wright knew a cane patch on Rita River, a mile south of Lake Okeechobee, which produced profitable crops of syrup from 1909 to 1912; and another patch five miles out on the South New River Canal which was grown without fertilizer and with little cultivation.<sup>25</sup>

According to a survey made by the State Plant Board in 1919, the first plantings of sugar cane in the Everglades were made in 1908 and 1909 on Rita Island in Lake Okeechobee of two to four acres by F. A. Forbes and A. V. Callahan.<sup>26</sup>

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the latter from one station. In 1897 the railway had moved a total of 76,000 crates of vegetables. In 1907 the railway grossed \$819,000, in 1908, \$4,000,000; in 1908 it transported 1,000,000 passengers. Edwin Lefevre, "Flagler and Florida," Everybody's, XXII (February, 1910), 176.

<sup>24</sup> J. O. Wright, The Everglades of Florida, 13.

<sup>25</sup> Ibid., 55. Wright speculated on the prospects of two million acres of 'Glades and adjacent lands adapted for cane, averaging thirty tons per acre at three dollars a ton to produce \$180,000,000 per year. Ibid., 81. At the 1912 Congressional Hearings, Wright said "there are a great many crops that can be grown there, but the conclusion I have reached is that the settlement and salvation of the Everglades is sugar cane." 1912 Everglades Hearings, Number 4, 157.

<sup>26</sup> F. D. Stevens, "History of Florida Sugar Operations," 15-16.



David Grandison Fairchild, the eminent plant authority, attempted to interest H. M. Flagler in 1912 in the avocado, mango, and other tropical fruits but "he was strongly of the opinion that there was a great future for sugar cane in the Everglades, and said that a big company was planning to plant a thousand acres."<sup>27</sup>

## 2. Background of the Congressional Investigation

The reclamation of the Everglades provided a wonderful opportunity for the sale of lands of a definitely questionable character which had been bought in wholesale lots from the Trustees of the Internal Improvement Fund of Florida. Covering the capital scene for the New York Sun, a Washington correspondent reported:

These companies . . . have advertised extensively throughout the United States, and it is contended, have collected millions of dollars for lands obtained at 50 cents an acre and sold as high as \$60 an acre. 28

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27 David Grandison Fairchild, The World Was My Garden, 387.

28 "Draining the Everglades," Literary Digest, XLIV (February 17, 1912), 327. "To turn a land of mystery into a prosaic farming country--to throw the limelight of familiarity into the fastnesses of a much-misunderstood region--to change an almost inaccessible hunting-ground and a hiding-place for Indians and bad men into a productive region--all this is the object of one of the most gigantic schemes of reclamation ever undertaken in the world's history now being carried out . . . in the Everglades of Florida. That it is being used by unscrupulous promoters to cover the sale of worthless lands at fancy prices does not detract from the value of the plan itself."

The chain of events which reached a climax in the Congressional Investigation of the Everglades drainage scheme had its beginnings in the correspondence between C. G. Elliott, Engineer in Charge of Drainage Investigations, United States Department of Agriculture, Office of Experiment Stations, and Governor N. B. Broward. Elliott wrote Broward on February 28, 1905, offering to cooperate

. . . in every way consistent with the means we have at command for determining the practicability and otherwise improving and developing the hidden resources of the wet lands of Florida. 29

As noted in the preceding chapter, the exchange of letters and conferences between state and federal officials resulted in intermittent examinations of the Everglades by James O. Wright and others from 1906 through 1908, and the subsequent preparation of an abstract of Wright's report. 30

Just how the excerpt of the Wright Report was released is unknown. Sometime in February, 1909, Henry Clay Hall, who represented a large Colorado brokerage firm interested in Everglades lands, appeared in the Washington office of the Agriculture Department's drainage investigations seeking information on the South Florida area. 31 Hall was allowed

29 1912 Everglades Hearings, Number 25, 1259.

30 *Ibid.*, Number 18, 846-861.

31 C. G. Elliott maintained that the Florida Trustees sought the federal engineers' recommendations in February, 1909, and were furnished the excerpt, a copy of which was also given to Hall. "This was the way the transaction remained in my mind, and I still remember it so, but according to

to read a draft of what Wright had written and a typewritten excerpt was mailed to him by Elliott on February 27, 1909.<sup>32</sup> Another copy of the excerpt was sent to the Florida Trustees on March 6, 1909, by Elliott, both abstracts having been mailed "with the understanding that the information contained therein be not made public until the appearance of the complete report, which is in course of preparation."<sup>33</sup>

Governor Gilchrist wrote Secretary Wilson on March 11, 1909, and asked permission "to use so much of the report as I may deem proper to submit to the legislature," when it should meet in April.<sup>34</sup> Wilson replied March 27:

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the files my memory is at fault, Mr. Hall having been given the excerpt first, and it was sent to the board a few days later, apparently without a request from them." 1912 Everglades Hearings, Number 21, 1039-1041. J. O. Wright maintained that ". . . Henry Clay Hall, of Colorado Springs, came to Washington and asked to see the report I had written, Elliott gave him the report to read and he asked permission to make a copy of it. This privilege was denied him. A day or two later he appeared with an order from Secretary Wilson directing Elliott to give him a copy of that portion dealing with the drainage problem. . . . After this extract of the report had been given to Mr. Hall, I said to Elliott, 'I think this same information . . . should be sent to the trustees of the internal improvement fund.' He objected to doing this, but . . . finally decided it would be the proper thing to do. . . ." Ibid., Number 5, 188. On February 14, 1912, Hall wrote: "Saw Secretary Wilson . . . received typewritten extract signed by Wright, from forthcoming report under cover letter from Elliott, dated February 27, 1909 . . . Henry C. Hall." Ibid., Number 26, 1300.

32 1912 Everglades Hearings, Number 26, 1328.

33 Ibid., Number 12, 559.

34 Ibid., 560.

Since this report relates to the conditions which prevail in the lands tributary of Lake Okeechobee and proposes a plan for the drainage of the Everglades, I see no reason why it should not be submitted to the legislature as a portion of the forthcoming report which will be published by this department in the near future. I take pleasure in granting you this request, trusting that, as a progress report upon the Everglades, it may be of some use to the State. 35

The release of the abstract of the Wright Report bearing the prestige and approval of the drainage division of the Department of Agriculture set in motion a succession of events from which there was no retreat. The first draft of the report had not been completed when Wright selected the abstract, but without examination or review by any authority it was delivered under Elliott's signature as chief drainage engineer to Hall and the Trustees. <sup>36</sup> Soon after the delivery of the Wright abstract by Governor Gilchrist to the 1909 legislature certain parts were seized upon by the Everglades

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35 1912 Everglades Hearings, Number 12, 560. "The Department of Agriculture entered upon this very responsible work of reclamation of its own initiative, but does not seem to have had a proper conception of the vast interests involved in the project. This work was undertaken without serious consideration, was not prosecuted vigorously or successfully, and was abandoned by the department after an expenditure of \$11,017.34, without having accomplished any definite or satisfactory results." "Expenditures in the Department of Agriculture," House of Representatives Documents, Report Number 1207, 62 Congress, 2 Session, 1-2.

36 House of Representatives Documents, Report Number 1207, 62 Congress, 2 Session, 2. See also 1912 Everglades Hearings, Number 10, 409-410, and Number 21, 1039.

land selling promoters to back up their high pressure campaigns with the authority of a federal report.<sup>37</sup>

The delay in the preparation of the final report by Wright was attributed to several causes: other work in the drainage division, speaking tours, and seeming indifference on the part of both Wright and Elliott.<sup>38</sup> Matters were brought to a head in August, 1909, when Harold Wheeler called at the office of the drainage division of the Department of Agriculture. Wheeler stated that he represented persons who had contemplated buying land in the Everglades; that he had been through the area and had made some examinations; and that certain statements in the Wright excerpt "did not appear to him to be justified, and he called to ask some one in the office to explain that report to him."<sup>39</sup>

Elliott, the chief drainage engineer of the department,

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<sup>37</sup> "Data included in this excerpt was regarded by interested parties as being so favorable to this work of reclamation that it was circulated as advertising matter to stimulate the sale of the Florida Everglade lands by companies who placed these lands on the market before the ditches were dug to drain. Thus with only a cursory examination in the field and no critical review in the office, engineering plans for this vast reclamation work--the largest project in the world, was favorably recommended to the public, bearing the approval of the Department of Agriculture." House of Representatives Documents, Report Number 1207, 62 Congress, 2 Session, 2. See also H. Parker Willis, "Secretary Wilson's Record," loc. cit., 15-16.

<sup>38</sup> J. O. Wright, Why Was Wright's Report on the Everglades Suppressed?, 8-10. For Elliott's story see 1912 Everglades Hearings, Number 20, 987-998.

<sup>39</sup> 1912 Everglades Hearings, Number 9, 341.

and Wright were away on an inspection tour, so Wheeler turned to Arthur E. Morgan, one of the supervising engineers, to answer his questions regarding costs of excavation and the evaporation of rainfall as stated in the abstracted report. Wheeler told Morgan he had made a visit to one of the dredges and had noted that "where the ditch was said to have been dug 10 feet he found that it had filled up immediately behind the dredge, making a ditch only about 5 feet deep. . . ."<sup>40</sup>

Wheeler said no accurate account had been kept of the work, and the records in the Tallahassee offices of the Internal Improvement Fund regarding drainage costs were in such condition that the Board's employees could not give any idea of the cost; and "as a result of that investigation he [Wheeler] did not believe the board itself knew what the work was costing."<sup>41</sup> Using Wright's figures on rainfall and evaporation, Wheeler found that the latter exceeded the former to such an extent that, if true, Lake Okeechobee would soon dry up and there would be no run-off on the Everglades whatsoever.

Meanwhile Wright had completed his full report and presented it to Elliott for approval the previous May. The chief drainage engineer of the federal division made a number of changes in the arrangement and subject matter and presented

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<sup>40</sup> 1912 Everglades Hearings, Number 9, 343.

<sup>41</sup> Ibid., 344.

it to the printer the latter part of June. It was during Elliott's absence in August that galley proof was returned to the office and was almost ready to be sent back to the printer when Wheeler called at the drainage division. <sup>42</sup>

With the impetus given by Wheeler's questions, Morgan examined the Wright plans and assured himself that it was

. . . so completely erroneous and gave evidence of such complete incompetency that its publication would not only be misleading, but that it would be a very serious reflection upon the professional character of the services performed by drainage investigations. <sup>43</sup>

As a result Morgan consulted with Alfred D. Morehouse, acting chief of drainage investigations in the absence of Elliott, and after communicating with the latter, the three engineers held up the proof of the Wright report for further investigation. Upon Elliott's return the Wright manuscript received a thorough going over at the hands of the engineers of the division. The subsequent revision incurred Wright's displeasure and as the summer and fall wore on an increasing

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<sup>42</sup> 1912 Everglades Hearings, Number 18, 857. By way of explanation, Elliott wrote: "I made some quite radical changes in the arrangement and in part of the subject matter, but the extract which had previously been made public and which dealt with many of the engineering features of the problem and with the plans for draining the Everglades, I gave no special attention to and it was left without change, for the reason that I was seriously handicapped for time, and also at that time had sufficient confidence in Mr. Wright's ability as an engineer not to question the accuracy and reliability of his work and deductions." Ibid.

<sup>43</sup> Ibid., Number 10, 409. Wheeler reduced his questions regarding the report to writing in letters to both Wright and Moorehouse. Ibid., Number 9, 385-386.

amount of bad blood developed between Elliott and his junior engineer. On January 28, 1910, the revised page proof was presented to the director of experiment stations, in which bureau the drainage division was located, "with the request that it be printed as soon as possible, as its publication had already been deferred too long."<sup>44</sup>

The controversy between Elliott and Wright reached a climax in February, 1910, when Wright accepted the position of chief drainage engineer for the Board of Commissioners of the Everglades Drainage District. According to Elliott, Wright did not intend to resign from the federal agency to take up the Florida work, but instead asked for a furlough which his senior refused to grant, whereupon Wright submit-<sup>45</sup>ted his resignation.

The activity of the state drainage operations and the sales campaigns of the various land companies focused a

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<sup>44</sup> 1912 Everglades Hearings, Number 21, 1041. Since the revision of the Wright report was made by several men credit for this work was given under Wright's name as author by adding: "Prepared by engineers of drainage investigations under the direction of C. G. Elliott, Chief of Drainage Investigations." "It is this change in the title which Mr. Wright publicly ascribed to my jealousy of him and my desire to rob him of deserved credit," wrote Elliott. Ibid. When Elliott examined Wright's report in October, 1909, he confirmed his suspicion of the latter's incompetency, but did not recommend his removal from the department. Elliott declared he just "did not assign him any more important work." Ibid., Number 20, 994.

<sup>45</sup> Ibid., Number 21, 1042. Wright later wrote: "I accepted the position tendered me because it placed me in charge of the largest drainage project in the United States." Ibid., Number 5, 190.



great deal of attention on the Everglades. Since the United States Department of Agriculture was known to be conducting examinations in that area it was natural that many letters seeking information would be addressed to the federal agency.

During the years 1908 and 1909 the office received increasingly frequent letters of inquiry concerning the Everglades from persons who were contemplating investing in them. Replying to these finally became so arduous a task that . . . one of the office engineers was instructed to compile from the data in the office a concise statement covering the points on which the information was most frequently asked, and prepare a multigraph letter that could be sent in answer to such inquiries. 46

Elliott's office prepared a form letter in January, 1910, which was used to answer the requests for information on the south Florida region. After a brief history and geographical description of the Everglades, the letter discussed other features, including climate, rainfall, soil, land sales, and drainage operations. In part, the circular stated:

The climate of southern Florida seems as healthful as that of other localities having the same latitude. . . . The long and hot summers are usually very irksome to the people from more northern states, but do not seem detrimental to the health. . . .

. . . . .  
The State has sold large tracts in the Glades to companies that are now offering these lands for sale. The State retains the ownership of alternate sections throughout the tracts, but has

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46 1912 Everglades Hearings, Number 21, 1042. For typical letters see, ibid., Number 18, 890-892, Number 20, 1000. According to George P. McCabe, Solicitor of the Department of Agriculture in 1912, the drainage division in Washington had received 1,533 inquiries to February 3, 1912. Ibid., Number 1, 14.

sold several hundred thousand acres for about \$2 per acre, agreeing to expend about \$1.50 per acre toward drainage. . . . A number of miles of canals have been excavated, and it does not seem improbable that as this work progresses the land bordering the canals will be at least partially drained. But undoubtedly much time will yet be required before any considerable areas will be habitable or fitted for cultivation.

For the drainage of the Everglades a very complete system of main ditches and laterals will be required and farm ditches in detail. Also in this soil provision must be made for irrigation or for maintaining the water in the ditches and soil at a fairly uniform depth, not too low, in order that there may always be sufficient moisture for the production of crops, and to prevent the liability of the muck catching fire and burning.

The drainage of the Everglades is entirely feasible from an engineering standpoint, but the value of the land when drained is highly problematical. Some small drained tracts on the edge of the Glades have produced very satisfactory crops of vegetables; usually but not always, large quantities of fertilizers have been used. . . .

. . . . .  
Further than the preparation of . . . a drainage plan, the National Government is doing nothing toward the drainage of the Everglades, and has made no appropriation from which any such works may be constructed. 47

In conclusion, the circular referred the inquirers to the Gainesville, Florida, Agricultural Experiment Station and the Board of Trustees of the Internal Improvement Fund of Florida, adding that further information regarding conditions in southern Florida would be issued later by the Office of Experiment Stations, "with an outline for the main drainage system to

reclaim about 1,800,000 acres of the Everglades lying between Miami and Lake Okeechobee and about the lake."<sup>48</sup>

The delay in the appearance of the complete Wright report had led to an increasing correspondence on the subject, and to meet this demand the form letter was used. The statements on the soil, agricultural value, and amount of ditching necessary were of such cautionary nature that they were objectionable to parties interested in promoting Everglades land sales.<sup>49</sup>

On February 3, 1910, Senator Duncan U. Fletcher received the following telegram from ex-Governor Broward:

Received a telegram /from Harold K. Bryant of Chicago/ "Bulletin coming out of Agricultural Department knocking Everglades." I earnestly ask you to investigate and prevent such action if you can. I understand that Dr. Wiley, Chief Chemist Agricultural Department, is opposed to having his

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<sup>48</sup> 1912 Everglades Hearings, Number 5, 216. Solicitor G. P. McCabe stated before the Moss Committee investigating expenditures in the Department of Agriculture in 1912 that Secretary Wilson had signed 265 letters answering questions on the Everglades and had invariably stated that the department had never investigated the companies selling Florida lands nor was there any publication available regarding the Everglades. *Ibid.*, Number 1, 27-28. Arthur E. Morgan, in his testimony before the same committee, said: "I was personally acquainted with many of these letters that came in inquiring about the Everglades, and in very many statements are made, 'This is our everything that we are putting in here.'" *Ibid.*, Number 9, 370.

<sup>49</sup> House of Representatives Documents, Report Number 1207, 62 Congress, 2 Session, 3. It was later determined that "The same interests which made . . . objection to the circular had been guilty of circulating highly extravagant statements in praise of Everglade lands, and falsely attributing the authorship to Secretary Wilson." *Ibid.*

name used by companies selling Everglade lands. They claim to quote Dr. Wiley to Secretary of Agriculture, 1891, page 170. They think they have a right to print excerpts of report, it being a public document. Am writing. 50

Senator Fletcher called on Secretary Wilson on the morning of February 4, read to him Broward's message, and presented Wilson with a copy of the circular letter. The letter had been produced in a regular manner by Wilson's subordinates in the office of the drainage division and sent out with C. G. Elliott's signature, but Fletcher's copy was the first the Secretary of Agriculture had seen.<sup>51</sup>

Fletcher quoted Wilson as saying: "I know nothing about any such circular . . . you must be mistaken; I have never heard of it, and I think it can not be true."<sup>52</sup> Wilson thereupon called in Joseph Arnold, Chief of the Division of Publications and editor of the department, and questioned him at some length about the letter. After some discussion Wilson told Arnold:

This is not part of our business; we are here to furnish scientific data and the results of scientific investigation. We are not here to give opinions or make statements otherwise than that, and I want this stopped right where it is. 53

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<sup>50</sup> House of Representatives Documents, Report Number 1207, 62 Congress, 2 Session, 3.

<sup>51</sup> Ibid.

<sup>52</sup> 1912 Everglades Hearings, Number 19, 928. Fletcher stated that H. L. Bowen, an agent of the Everglades Land Company in Washington, gave him the copy of the circular letter, in 1910. Ibid., Number 16, 757-758.

<sup>53</sup> Ibid., Number 19, 929. Testifying before the congressional committee on April 3, 1912, Secretary Wilson stated he

Within a few days after Fletcher's visit to the Department of Agriculture, E. C. Howe and T. E. Will, salesmen of the Everglades Land Sales Company, visited the drainage division of the Office of Experiment Stations in the same federal agency and wanted to know who prepared the circular letter. They were indignant at what they termed its misinformation, and sought to have the letter suppressed and a retraction issued. The real estate agents received a cool reception in the drainage division and took their case to Secretary Wilson, who had already suppressed the circular.<sup>54</sup> Congressman Frank Clark, in whose district most of the Everglades lay, took several of his farmer constituents to meet Secretary Wilson in February, 1912. During the conversation Clark asked Wilson why the now ill-famed circular letter had been suppressed. According to Clark, Wilson replied that he had suppressed it at the instance of persons selling Everglade lands, "and he said he thought he had done right, and asked me if I did not

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ordered the circular suppressed because it was not only unauthorized but was not up to the style of publication which the department would want to send out. 1912 Everglades Hearings, Number 26, 1317. See also speech of Fletcher in the United States Senate on February 15, 1912, in which he amplifies the story of the meeting he had with Wilson in 1910. Congressional Record, XLVIII, 2085.

<sup>54</sup> 1912 Everglades Hearings, Number 13, 597, 624-625; Number 21, 1042-1043.

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think so."

About the middle of May, 1910, Clark introduced a resolution on the floor of the House of Representatives which definitely showed his attitude in regard to the position of the United States Department of Agriculture and the Everglades project. Clark proposed that the Secretary of Agriculture furnish the lower house

. . . with any and all information in the possession of his department showing what if anything, the Government of the United States is doing or has done toward directing or supervising the drainage of any lands in the Everglades region of Florida. . . . 56

This resolution was never reported on, but tended to create disquiet in the public mind, according to T. E. Will, and was another part of the campaign which the Florida congressman was waging against the Everglades.<sup>57</sup> The public mind in Will's eye probably represented the "buying public" at this time.

On May 17, T. E. Will and M. L. Bowen paid a visit to

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55 1912 Everglades Hearings, Number 1, 8. Clark remembered he had insisted on seeing a copy of the circular, "which the old man did not show very much disposition to exhibit, but after some considerable insistence he did send and get a copy of it." Wilson was reputed to have said that he "was not running his department for the protection of fools who bought stuff all over the country without seeing it." Ibid., 19. See also the testimony of William R. Hardee and Henry E. Sewell, who substantiated Clark's statements on the interview with Wilson. Ibid., Number 18, 908, 926.

56 Congressional Record, XLV (May 10, 1910), 6317.

57 1912 Everglades Hearings, Number 13, 625.

Secretary Wilson in regard to the Wright report, which had been promised to the public some months previously. Will recalled that he had expressed the hope that the delayed publication would soon appear, when Wilson brought his fist down on the table and said, "I told them fellows I would not do a damn thing for them until they quit fighting among themselves."<sup>58</sup>

Under C. G. Elliott's direction a report had been prepared and submitted to Secretary Wilson on May 20, 1910, which would have been sent to the house had the call arrived. On June 14, 1910, some five months after the Wright report on the Everglades had been transmitted in completed form for printing, Elliott was informed by the director of the Division of Publications that "The Secretary had decided not to publish [it]."<sup>59</sup>

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<sup>58</sup> 1912 Everglades Hearings, Number 13, 627. Wilson was referring to the differences of opinion in the Florida congressional delegation, and especially between Senator Fletcher and Representative Clark. When J. O. Wright resigned from the department on February 15, 1910, he called on Secretary Wilson before leaving and asked if the report he had written would be published. Wright said, two years later, that Wilson had told him: "There is a difference of opinion over on the hill about the propriety of publishing this report, and I have ordered it held up. . . . There are things in there the department should not stand for." Ibid., Number 6, 236. Will claimed Clark had criticized the Everglades at the door of the House of Representatives in front of a crowd on February 7, 1910, and had promised to bring the matter up on the floor of the House in a speech. Ibid., Number 16, 748-749.

<sup>59</sup> Ibid., Number 21, 1041. In his statement to the investigating committee on April 3, 1912, Secretary Wilson said the Wright Report had not been published because "We had not done enough; we had not done what the people of Florida had a right to expect, and that, taken with other surroundings, prevailed upon me to stop the work. It was not what it should have been." Ibid., Number 26, 1311.

Judson C. Welliver, on October 8, 1911, published an article in the Washington Times in which he asked who had suppressed the report on land drainage in Florida.

For more than a year the document has been in type at the Government Printing Office. Engineering authorities say that if it had been published it might have saved thousands of innocent investors from sinking their money in Florida development and drainage propositions.

Millions upon millions of dollars would have been saved, it is declared, if the official document could have been given publicity. 60

Welliver went on to answer his own original question, at least in part, by citing Senator Smoot's resolution of August 7, 1911, ordering the printing of a compilation of assorted papers on the Everglades. Welliver's second article, which appeared in the same paper on October 15, went much further into detail; it was quite evident that the writer had been on the receiving end of somebody's grapevine intelligence system.

Welliver found that a feud had existed in the Department of Agriculture over the J. O. Wright report. The Florida East Coast Railway was accused by the pro-drainage forces of making its presence felt because of the competition of state lands with those of the carrier, and had exerted pressure to have the report suppressed as one means of knocking the Everglades. Welliver brought in the ill-fated course of the

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60 Judson C. Welliver article from Washington Times, October 8, 1911, quoted in full in 1912 Everglades Hearings, Number 18, 879-880.



Florida East Coast Sugar and Drainage Company and laid its failure to the anti-railroad machinations of Jennings and Broward. Attaching Congressman Frank Clark to the Florida East Coast alignment, Welliver declared that he too had sought the suppression of the Wright report. <sup>61</sup>

The article brought out the efforts of Senator Fletcher to get the report published and of this difficulty which he finally solved in the August resolution. Welliver then traced the story of the Elliott-Wright feud, taking Elliott's side to the extent of declaring that Wright had laid down on the job and was practically dismissed when all responsible work was taken away from him. The Times story closed with a resume of Fletcher's attitude and attempts to bring out the long awaited Wright production.

It is expected the long suppressed document will finally appear about the time Congress meets. That it will stir up a new manifestation of trouble between the political and business factions of Florida is confidently expected. <sup>62</sup>

Within a few days after the appearance of the October 15 article, Clark wrote to Secretary Wilson asking for a full explanation of Welliver's accusation that he had aided in the suppression of the engineering report. Clark reminded Wilson of his visit to the secretary's office in February, 1910, and

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<sup>61</sup> Judson C. Welliver article in Washington Times, October 15, 1912, quoted in full in 1912 Everglades Hearings, Number 18, 880-883.

<sup>62</sup> 1912 Everglades Hearings, Number 18, 883.

the exhortation the Florida legislator had made to get more facts published about the Everglades.<sup>63</sup> Wilson answered Clark on October 24 and agreed with the latter that Clark had never sought to suppress any of the various reports or letters; he added that since the Wright report would soon appear in a senate document the public would be informed.<sup>64</sup> Clark again wrote Wilson on October 26 and cited the fact that Jennings, Fletcher, and Wright had corrected and revised the proofs of the forthcoming document, and urged Wilson to keep a copy of the original Wright report for comparison and publication.<sup>65</sup> The Clark-Wilson correspondence continued

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<sup>63</sup> 1912 Everglades Hearings, Number 18, 840-841.

<sup>64</sup> Ibid., 841.

<sup>65</sup> Ibid., 842. Clark wrote: "The land sharks who insisted on the suppression of this report and the circular letter are now claiming in the public press that they have always urged the publication of these documents, because the said documents were very favorable to the drainage of the Everglades, but that you suppressed them at the instance of myself and others because a certain railroad company would be financially injured by the consumation of the drainage scheme.

"I am giving you the real facts, Mr. Secretary, so that you may know the real situation. I have never seen the report, but the circular letter, while admitting that the lands could be drained, made the very positive statement that it would cost millions of dollars and require many years, and that after accomplishment the lands would be of doubtful value. This did not suit the big land companies, because if it was going to take years of time, millions of money, and then the lands would be of uncertain value, they could not unload their holdings in small tracts to the American citizen. This was the motive prompting them in appealing to you, and after you suppressed the report and the circular letter they straightaway took from the report the favorable clauses and scattered them in their literature broadcast over the land, thus proclaiming to the world that your department endorsed their scheme in toto and coined millions of money." Ibid., 842.

into January, 1912, when the Florida representative urged the secretary to publish the "real Wright Report" as against the doctored edition in the senate document.<sup>66</sup>

Another party whose toe was stepped on in the Welliver articles was J. O. Wright. The Florida drainage engineer wrote A. C. True, Director of the Office of Experiment Stations and Elliott's immediate superior, on October 27, 1911, in regard to the "scurrilous attack." Wright stated that he had resigned to take charge of the Florida project at a better salary than the bureau chiefs of the agriculture department received, and asked True to see if Elliott would not set the record straight. "I shall surely not rush into print with a denial. . . . I have other means at my disposal, which I think will be much more effective."<sup>67</sup>

The Wright report on the Everglades lay dormant in the files of the department of agriculture for a full year before Senator Fletcher made a determined effort which resulted in the publication of the much sought after account. Broward, Gilchrist, and a veritable host of others had attempted to secure copies of the government engineers' recommendations without success.<sup>68</sup> In June of 1911, Senator

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<sup>66</sup> 1912 Everglades Hearings, Number 18, 845, 846, 861, 863-865.

<sup>67</sup> Wright to A. C. True, October 27, 1911, ibid., Number 7, 270-271.

<sup>68</sup> Senate Documents, Number 89, 62 Congress, 1 Session, 17-18.

Fletcher heard the report had been killed, the plates melted up, and the number the paper was to have borne given to another document.

Senator Fletcher, who represented the progressive element that wanted to carry out the drainage project, figured out a plan to force its publication whether the department liked it or not. So he introduced a Senate resolution to have the whole thing published as a Senate document, along with much other matter bearing on the drainage enterprise--the Buckingham Smith report, the Jefferson Davis report, the legislative reports, governors' messages, and the like. 69

On August 7, 1911, Chairman Reed Smoot of the Senate Committee on Printing submitted Senate Resolution 130 to the Senate, which was considered and by unanimous consent agreed to, authorizing the printing as a public document a compilation of acts, reports, and other papers relating to the reclamation of the Everglades. <sup>70</sup> This collection of assorted

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69 Judson C. Welliver article in the Washington Times, October 15, 1911, quoted in full in 1912 Everglades Hearings, Number 18, 882. In a statement before the congressional investigation committee, Senator Fletcher said: "The document was prepared at my instance, and under my direction, purely as a public matter, in the effort and the endeavor to give purely [sic] record, and to state only the absolute truth in connection with that great enterprise." Ibid., Number 7, 282. See also Senator Fletcher's defense of Senate Document 89 on the floor of the upper house, Congressional Record, XLVIII (February 15, 1912), 2084-2086.

70 Congressional Record, XLVII (August 7, 1911), 3669. R. E. Rose wrote that "The Everglades enterprise became the subject of national agitation, and was denounced in the Halls of Congress, resulting in the investigation by the U. S. Senate and the publication of Senate Document No. 89. . . ." R. E. Rose, "The Swamp and Overflowed Lands of Florida," loc. cit., 130.

manuscripts pertaining to the south Florida wet lands became the celebrated Senate Document Number 89 about which the gathering storm broke in the fall of 1911 when it appeared in print and played a major part in the congressional hearings of February and March, 1912.

Senator Fletcher began assembling the materials for the 208 page volume in the early summer of 1911. George H. Carter, clerk of the Joint Committee of Congress on Printing, asserted that the material was prepared and arranged by T. E. Will. The former educator and editor managed to secure, without the Department of Agriculture's authorization, a copy of the notorious Wright Report for the printing committee.<sup>71</sup> The document did not, however, contain a copy of the controversial Elliott circular of January, 1910.

At the hearings in Washington in the late winter of 1912

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<sup>71</sup> 1912 Everglades Hearings, Number 19, 943-956, 958, 964-965, Number 21, 1029. When Will was on the stand in March, 1912, before the House Committee investigating the Everglades he was asked if he had had any connection with Senate Document 89. He asked Chairman Ralph W. Moss if the chair desired him to answer the question. William H. Ellis, representing the Florida Internal Improvement Fund Trustees at the hearings, objected to the question and the objection was sustained by Moss. Ibid., Number 16, 760. In an article published by Will in the Ft. Lauderdale (Florida) Call on June 12, 1926, Will wrote that he had conceived and compiled Senate Document 89 in 1911. The Moss Committee did not press Will to ascertain where he procured the page proof of the suppressed Wright Report and Will's memory failed him as to the name of the man in the government printing office who supplied the material. 1912 Everglades Hearings, Number 13, 634-635.

this document continued to bob up on the questioning of the various witnesses. Testimony brought out the facts that the proofs were read and corrected in the late summer of 1911 in Jacksonville, Florida, by Senator Fletcher, ex-Governor Jennings, and chief engineer James O. Wright of the Florida drainage commissioners.<sup>72</sup> Congressman Frank Clark wrote in October that Jennings and others "who are largely interested in the Everglades land companies have largely gone over these proofs, presumably to see that they are all right before they are finally published."<sup>73</sup>

On February 20, 1912, during one of the hearings before the Moss Committee, Henry E. Davis, attorney for the investigators, was asked by William H. Ellis, attorney for the Florida Trustees, if the former intended to attack Senate Document 89. Davis replied that it was his purpose to point out the interests which its preparation served.<sup>74</sup> At the same hearing Chairman Moss read a large display from an Everglades Land Sales Company into the record. It reads as

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<sup>72</sup> 1912 Everglades Hearings, Number 1, 10, Number 5, 221, Number 18, 841.

<sup>73</sup> Clark to Secretary Wilson, October 20, 1911, 1912 Everglades Hearings, Number 18, 841. Jennings was interested in more than a political manner with the Everglades project. He had received 27,000 acres as a gift from Richard J. Bolles. Ibid., Number 7, 261. Jennings was closely associated with Bolles in the Everglades Reclaimed Land Company and associated firms. Ibid., Number 26, 1325.

<sup>74</sup> Ibid., Number 7, 261.

follows:

United States Senate Document No. 89, regarding Everglades, now ready. Every person interested in the glades should send for this publication, compiled at the request of the Miami Board of Trade, submitted by Florida's distinguished Senator, Duncan U. Fletcher. 75

Moss questioned J. O. Wright as to the reputation of the document in Florida as an indorsement of the Everglades project. Wright answered, "Yes, I think I could say it is an indorsement of the project."<sup>76</sup> When Representative E. R. Bathrick asked Will if the Everglades Land Sales Company had used the document as a means of selling land, the latter<sup>77</sup> replied, "I think so. They have used it."

Senate Document Number 89 was a very popular collection. The first edition, appearing in the fall of 1911, was soon exhausted for on February 1, 1912, Senator Nathan P. Bryan, the junior senator from Florida introduced a resolution providing for the printing of 4,800 additional copies of the document, 2,000 for the senate and 2,800 for the superintendent of documents to be sold to the public.<sup>78</sup> Smoot,

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75 1912 Everglades Hearings, Number 7, 300. Fletcher attempted to rebut the evidence read by Moss by stating that the document was not prepared "at the instance of any one board of trade or individual. . . . I thought the public interest would be subserved by a collection, compilation, and publication of public records. . . . I sought to do this for the public good and in the public interest. . . ." Ibid., Number 8, 334-335.

76 Ibid., Number 7, 299.

77 Ibid., Number 16, 766.

78 Congressional Record, XLVIII (February 1, 1912), 1615. "The promoters and the boomers have thus been furnished

of the printing committee, reported the resolution favorably and after consideration it was adopted by unanimous consent on February 15, 1912.<sup>79</sup>

### 3. The Battle Lines Are Drawn: Investigation

. . . I now proclaim that it will develop as a matter of fact that the Department of Agriculture itself, through its officials, in the latter part of the year 1911, gathered itself together and girded up its loins to meet this inquiry. 80

This statement made by Henry E. Davis, counsel for the Moss Committee, was borne out in the Clark-Wilson correspondence and also in the Welliver newspaper articles discussed above. The devious trails of the Wright Report, Elliott circular letter, and Clark correspondence from 1909 through 1911 had Secretary James Wilson in such a dizzy whirl that in November, 1911, he summoned Charles G. Elliott to his office and told him to prepare a full account of the events covered in the Everglades experiences of the United States Department of Agriculture.<sup>81</sup> Elliott's statement was prepared and

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with a fresh supply of ammunition, which they can use at will for the purpose of misleading investors." H. P. Willis, "Secretary Wilson's Record," loc. cit., 16.

<sup>79</sup> Congressional Record, XLVIII (February 15, 1912), 2084. It was after the adoption of this resolution that Senator Fletcher made his defense of the document. Ibid., 2084-2086.

<sup>80</sup> 1912 Everglades Hearings, Number 7, 275.

<sup>81</sup> Ibid., Number 21, 1036. ". . . I want you to prepare me a complete statement, giving me all the ins and outs. I don't want you to keep back anything," Wilson told Elliott. Ibid.



passed to the secretary on November 21, 1911. In his resume Elliott did not pull any punches but let the blows fall where they might with especial emphasis on the part played by the land agents in the suppression of the circular letter and the inaccuracies of the Wright report.<sup>82</sup>

On November 29, 1911, Representative Clark called Secretary Wilson and requested a complete history of the department's activities in the Everglades. Wilson sent a copy of Elliott's long statement to Clark, who apparently released the letter to the press, for it appeared verbatim in the Jacksonville (Florida) Metropolis on December 15, 1911.<sup>83</sup> The candid statements made by Elliott in regard to James O. Wright remained intact throughout and came to the attention of the chief engineer of the Everglades operations soon after the Florida paper published the letter. James O. Wright later declared:

My friends in Tallahassee, and the trustees of the internal improvement fund of the State of Florida, by whom I am employed came to me and said, "Mr. Wright, you can't ignore this any longer. It is up to you to make an explanation of this matter. It is injuring your work and it is injuring the State."<sup>84</sup>

In an attempt to defend himself from what he felt was

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<sup>82</sup> 1912 Everglades Hearings, Number 18, 857-860, Number 21, 1039-1042.

<sup>83</sup> Wilson to Clark, letter of November 29, 1911, 1912 Everglades Hearings, Number 18, 846; J. O. Wright, Why Was Wright's Report on the Everglades Suppressed?, 1.

<sup>84</sup> 1912 Everglades Hearings, Number 7, 272.

the "abuse" of Elliott, Wright wrote and published an eight page account of why his report had never been revealed. Wright laid the full responsibility for the non-appearance of his manuscript at Elliott's feet, stating that Elliott had declined the original job of the Everglades surveys in July, 1906, and had been hostile to the project ever since that time.<sup>85</sup>

It will be recalled that Wright had written the director of the office of experiment stations of the agriculture department, shortly after the publication of the Welliver articles, in October, 1911, asking that official to request Elliott to deny the statements about Wright's incompetency and separation from government service.<sup>86</sup> On January 20, 1912, while attending to private business in Washington, Wright called on the chief of the division of accounts and disbursements in the department of agriculture and revealed several financial irregularities which had occurred in making up a deficit in the division of irrigation and drainage in

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<sup>85</sup> J. O. Wright, Why Was Wright's Report Suppressed?, 1-8. This statement was published in the Jacksonville (Florida) Metropolis on December 15, 1911, and also reproduced in the 1912 Everglades Hearings, Number 5, 186-192. Wright stated that he had never been subject to any outside influences during his Florida surveys for the agriculture department or while he was composing the report. "I have no land in Florida and have not any interest in any land company doing business in the State." Ibid., Number 5, 191.

<sup>86</sup> 1912 Everglades Hearings, Number 7, 273.

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 1909. The irregularities involved illegal shifting of funds within the division under Elliott's supervision and illegal borrowing to cover certain deficits. As a result Elliott was dismissed from the department and Wright had used the means which he felt "to be more effective than a printed denial," even though he had made a public defense. 88

Throughout the fall of 1911 and early winter of 1912 references were made to the probability that the House of Representatives' Committee Investigating Expenditures in the Department of Agriculture, under the Chairmanship of Representative Ralph W. Moss of Indiana, would look into the Everglades project. Interest in Washington centered on the stories behind the suppression of the Wright engineering report, the Elliott circular letter, and the appearance of the so-called Wright-Elliott report in Senate Document Number 89 on December 1, 1911.

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87 House of Representatives Documents, Report Number 1207, 62 Congress, 2 Session, 9-11; 1912 Everglades Hearings, Number 7, 273. "Mr. Davis. You discovered the alleged irregularities about these matters in the summer of 1909, and you remained in the service of the Government six months thereafter?

"Mr. Wright. Yes.

"Mr. Davis. And during that time, although an official of the Government having cognizance of the alleged irregularities, you did not attempt to tell about it or deem it your duty as an official to impart that knowledge to anybody?

"Mr. Wright. No, sir. I wasn't reporting a superior officer." Ibid., Number 7, 273.

88 1912 Everglades Hearings, Number 1, 11, Number 31, 1453.

89 Welliver article in Washington Times, October 8, 1911, quoted in 1912 Everglades Hearings, Number 18, 880, Number 18, 903.

Charges that the State of Florida loaned its name and credit to one of the biggest land swindles in history; that the Department of Agriculture has, by suppression of information about the Everglades, aided and abetted, and that 500,000 persons in all parts of the country have been victims--these and other exceedingly regrettable allegations are to be looked into just as soon as possible by the House Committee on Expenditures in the Department of Agriculture. 90

A meeting of the House Committee on Expenditures in the Department of Agriculture was called on February 3, 1912, to give Congressmen Frank Clark of Florida and E. R. Bathrick of Ohio an opportunity to appear before the group and make such statements as they desired regarding the Everglades of Florida and such requests as they cared "To present to this committee in regard to any action which this committee might take in reference thereto."<sup>91</sup>

Representative Bathrick declared that the purpose of the proposed investigation was "not to learn all about Florida" but to learn why information secured by the Department of Agriculture on the assumption of purveying facts to answer inquiries was withheld, "or whether it was really suppressed."<sup>92</sup> Tracing the general outline of the reasons

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<sup>90</sup> Washington Times, December 8, 1911, quoted in 1912 Everglades Hearings, Number 19, 953.

<sup>91</sup> 1912 Everglades Hearings, Number 1, 3.

<sup>92</sup> Ibid. Bathrick's presumption that the purpose of the investigation was not to learn all about Florida was putting the case somewhat mildly as the committee met in 43 hearings from February 3 to August 9, 1912, and collected 1759 pages of testimony and exhibits on the Everglades. There was hardly a subject about the peninsular state that was not mentioned.

for the origin of the federal surveys and their ensuing progress, Bathrick sought to encourage the committee to inquire into the complaint of whether the circular letters and abstracts issued by the agricultural department were unfair to those buying or selling Everglades lands, and the reasons why the full report had been held back.

On February 6, 1912, Representative Frank Clark appeared before the Moss Committee and gave his reasons for seeking an investigation of federal participation in the Everglades project.<sup>93</sup> Clark traced the detailed events of the federal engineers' examinations, the Wright excerpt, the Elliott circular, and speculative tendencies of the contemporary boom in South Florida. He requested the Moss committee to proceed with an investigation of the Everglades to find out why the Elliott circular letter was suppressed, at whose instance the suppression took place, and why the Wright Report had been delayed for three years.

Now, I do not hesitate to say, gentlemen, that a number of syndicates have gotten into this Everglades proposition for the sole purpose of exploiting

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<sup>93</sup> 1912 Everglades Hearings, Number 1, 8-9. Herman B. Walker, a purchaser of an Everglades tract from the company represented by T. E. Will, wrote to Will from his farm near Ft. Lauderdale that Clark and Bathrick were "crazy in their stand" on the Everglades being worthless, but that the two congressmen might well be correct on the political and speculative issues involved. Walker to Will, January 18, 1912, Will Collection.

it, injuring the fair name of the State of Florida, and swindling innumerable people all over this country. . . . If The Department of Agriculture has made itself subservient to the will of a few land sharks who have been exploiting that property to their own benefit and to the detriment of those people and to the great injury of the State of Florida, I think the country ought to know about it.

I am not opposed--I do not want to be understood as opposing the drainage of the Everglades of Florida as a project of internal improvement. The engineers say it is feasible; that it can be done. They say that land is of very vast value. Of those things I know absolutely nothing, but I do object most seriously to a few land sharks getting large holdings in that property and making representations to the people of the United States and to foreign lands that are absolutely untrue, statements that I know are false, and I do object to a great department of this Government being put in the attitude of, if not participating, at least acquiescing in that fraud. 94

Clark added that if the United States Department of Agriculture had not acquiesced in the statements of the land promoters then the department should have an opportunity to defend itself against such charges. It could be established, however, that the department had given an excerpt of the Wright Report to a representative of a land concern in Colorado and to representatives of the State of Florida.

These land companies took that excerpt and they culled from it those things they thought might militate against their schemes. The favorable ones, disconnected from the others and unexplained and which put it in an altogether different light, they spread broadcast over the country in these lurid advertisements in the Sunday papers and the magazines. Now, I contend that the department right then should have come to the front and said,

"Here is this whole report; we want the public to see all of it, and not these disconnected and disjointed extracts which these people are using for their own purposes." 95

Clark's statement before the Moss Committee drew the fire of the agricultural department; its press release declared the Floridian's testimony was "prejudiced, one sided and untrue." <sup>96</sup> On February 8, Clark replied to the attack, saying that he knew, when he went before the Moss Committee, the assault upon him would be sharp.

I have no interest in any land company in the State of Florida or anywhere else. I have not a foot of Florida land for sale in any part of the State. The only interest that I have is in protecting the people of this country from being ensnared by the lurid, truthless, false statements of these land sharks. . . .

These men have brought discredit upon our State. Millions of dollars have gone into their coffers for land 8, 10, and 12 feet under water, lands that ought to have been sold by the quart instead of by the acre; and I wanted to know what connection the Department of Agriculture has with these land boomers and land sharks. 97

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95 1912 Everglades Hearings, Number 1, 12.

96 Washington Herald, February 8, 1912, quoted in speech by Frank Clark, Congressional Record, XLVIII (February 8, 1912), 1840. One commentator wrote Clark had shattered 40,000 dreams of paradise on the installment plan when he made it "plain to 40,000 people that all their savings had been thrown away." George T. Odell, "Paradise on the Installment Plan," loc. cit., 16.

97 Congressional Record, XLVIII (February 8, 1912), 1840-1847. Although Clark claimed he was not connected with or interested in any land company he admitted under questioning before the Moss Committee that he had sought to obtain brokerage fees for selling lands along the St. Johns River in Florida after he had sponsored and secured passage of a federal

George P. McCabe, Solicitor of the Department of Agriculture and its representative throughout the Everglades Hearings, followed Clark as a witness before the committee. McCabe presented a statement showing the work and attitude of that agency toward the South Florida project.<sup>98</sup> He said Clark had been afforded every opportunity to see every paper, letter, or report in the files of the department, and that Secretary Wilson had offered personally to conduct him through an investigation within the agency, but that Clark had failed to visit Wilson. The solicitor then proceeded to outline the entire history of the relations between his department and the State of Florida on the Everglades project from the correspondence initiated in 1904, by Charles G. Elliott, and closed by Secretary Wilson in 1910 with the decision not to print the Wright Report.<sup>99</sup>

The Moss Committee summoned a large number of witnesses to its hearings to determine if

. . . public funds had been expended in the examination and survey of the Everglades and

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appropriation in a River and Harbors Act to improve the channel and consequent drainage of adjacent lands of that waterway. For example, Clark had written V. W. Helm of the Everglades Land Sales Company, one of the major companies he attacked in his speeches and testimony, relative to a 32,000 acre tract near Osceola, Florida. 1912 Everglades Hearings, Number 18, 877, 883-884.

<sup>98</sup> 1912 Everglades Hearings, Number 1, 14-46.

<sup>99</sup> Ibid., 15-16.



[if] certain reports prepared by the engineers as a result of this expenditure of public funds had been refused publication; or, having been published, their circulation had been suppressed. 100

It will be recalled that Wright had been employed as chief drainage engineer by the Board of Commissioners of the Everglades Drainage District in February, 1910, presumably on the basis of the plan set forth in the excerpt of his Report sent to the Florida Trustees in 1909. Wright became the first witness to testify before the committee and made a good defense of his Report. 101

In rebutting Wright's testimony the agricultural department was fortunate in presenting Arthur E. Morgan, a special drainage engineer of the experiment stations. Morgan pointed out in no uncertain terms that Wright had been completely incorrect in the important factors of estimating rainfall, run-off, and evaporation; that he had

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100 House of Representatives Documents, Report Number 1207, 62 Congress, 2 Session, 1. "The admission before [The] committee by the department that certain appointments in the Drainage Division had been irregularly made and that certain moneys had been unlawfully disbursed seemed to warrant an exhaustive inquiry into the organization, methods, and operation of this division of the Office of Experiment Stations. Charges that certain employees of the Department of Agriculture became, or sought to become, financially interested in drainage schemes which were under examination by the Division of Drainage also came to the notice of your Committee. Accordingly, witnesses were examined under oath, and this testimony has been printed for the information of the House." Ibid.

101 1912 Everglades Hearings, Numbers 3-8, 14, 32.

minimized the necessity of cross canals, laterals, and farm ditches; that he had planned to use the same system for drainage and irrigation, though relying on gravity for water flow; that he had made absurdly low estimates of costs of excavation of rock and soil; and finally that the canals planned by Wright would carry only fifty-five per cent of  
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 the amount claimed.

Morgan stated that he had suggested to Elliott, when the Wright Report was being revised in the department, that it might be desirable not to publish any report at all with

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102 1912 Everglades Hearings, Number 9, 338-391, 10, 410-418, 11, 466-467. Morgan believed that "the Florida Everglades are possible of reclamation through a slow development of a system of agriculture adapted to that country." Ibid., Number 9, 391. Drainage and irrigation, Morgan testified in 1912, if ever worked out, would be accomplished by "supplying water by pumping or perhaps using the same pumps for drainage at some times and for irrigation at other times, in addition to the ditches." Ibid., Number 9, 376. Morgan told the committee an adequate engineering plan would cost \$100,000 and take several years to work out, and that reclamation of the Everglades in ten acre tracts would cost \$15 to \$30 an acre. Ibid., Number 9, 347, 365. He pointed out the hyacinth nuisance in the canals and cited experiences in Louisiana where continual maintenance of the canals was necessary due to their very low gradient. Ibid., Number 9, 367. Wright's Report was suppressed, Morgan stated, because of its inaccuracies. Ibid., Number 9, 391. The problem of subsidence and shrinkage had been evaded, Morgan felt, for similar lands in Minnesota had shrunk from six inches to four feet a year. "As a matter of history, the drainage works in the fens of England and Holland have had to be in many cases reconstructed, with the ditches all deepened and the entire work readjusted to make up for this matter of shrinkage in turf soils." Ibid., Number 9, 375.

such meager data.

He replied that the difficulty about that was the excerpts had all been made public and were being used in the advertising literature of the land companies, and under those conditions it was the duty of this office to present the data they had, with the proper safeguards, so that it could not be used improperly. 103

Other witnesses who testified before the committee included C. G. Elliott, Secretary Wilson, Senator Fletcher, and Congressman Clark. Early in March, 1912, Governor Albert W. Gilchrist made the trip to Washington and "lost no time in making known his desire to be heard by the committee . . . in the matter of the charges made against the proposition to reclaim the Everglades of his State."<sup>104</sup> Gilchrist, in an interview, made it known that he was at a loss to understand or account for the attacks made upon the Everglades by Representative Clark, since, from what he had been told, Clark had never even seen the area. The Florida governor associated Clark's name with that of Henry M. Flagler, and renewed the

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103 1912 Everglades Hearings, Number 9, 365. ". . . a report which had been made by the department away back in 1891 on the results of some sugar experiments carried on in Florida . . . had been and was being used to advertise Glade lands by these commercial companies despite the protests of the department officers who had been responsible for that report in 1891." McCabe statement, ibid., Number 1, 28. Morgan wrote to Secretary Wilson on January 29, 1912, "I am well aware of the strong influence that has been brought to bear against Mr. Elliott by Florida real-estate promoters to prevent him from making public the facts of the situation." Ibid., Number 10, 410.

104 Washington Post, March 5, 1912, as quoted in Congressional Record, XLVIII (March 5, 1912), 2834.

allegation of a political affinity between the two men.

The newspaper account of Gilchrist's interview led Clark to answer the governor in the House. Clark repeated the charges he had made several times previously in regard to the exploitation of the peninsular state by land sharks. Referring to the association of his name with Flagler's, Clark denied that the former Standard Oil Company executive exerted any influence over him.

Not that I disclaim association and acquaintance with Mr. Flagler. I am not a groundling. . . . But this little pin-headed governor [laughter] thought it would hurt me politically in my district to associate me with Mr. Flagler. 106

Governor Gilchrist sent William H. Ellis, counsel for the Trustees of the Internal Improvement Fund, to the Moss Committee hearings after the third session. Ellis was to check on the adverse criticisms with which newspapers were said to lead the public to believe emanated from the various witnesses. 107

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105 Washington Post, March 5, 1912, as quoted in Congressional Record, XLVIII (March 5, 1912), 2834.

106 Ibid., 2835. Gilchrist had asked T. E. Will to prove that Clark was opposed to Everglades drainage specifically, as "It is vital to this proposition to show the true animus of Clark." 1912 Everglades Hearings, Number 16, 749. Later in the same hearing Will was asked if it were not true that vegetables froze in the truck gardens at Ft. Lauderdale in February, 1912. Gilchrist objected and said: "If this attacking of the Everglades system down there has anything to do with the \$11,000 spent by this Agricultural Department, I would like the committee to tell me." Ibid., Number 16, 767.

107 Ibid., Number 4, 129. On March 13, 1912, a member of the Moss Committee drew the statement from Ellis that he was counsel for R. J. Bolles in several cases then pending in Missouri, and that "When Mr. R. J. Bolles offered me some of his business, legal business, I was then the retained

The majority report of the Committee on Expenditures in the Department of Agriculture on the Florida Everglades Drainage Project found that

The vacillating course of the department in its treatment of this important project was, in the opinion of your Committee, in part due to a difference of opinion among Members of Congress and the State authorities of Florida; irreconcilable differences in the opinions and conclusions among the engineers in the Division of Drainage was another contributing cause. The evidence before your committee warrants the conclusion that the entire treatment of the project was most unfortunate and subjected the Department of Agriculture to much suspicion and criticism. 108

The conclusions reached by the Moss Committee were phrased in gentler terms than those found in a magazine article on Secretary of Agriculture James Wilson's record in the Everglades case. The author of the article, after considering the facts, decided that Wilson had transmitted to the Florida Board of Drainage Commissioners

. . . an incomplete, partial and hasty report by an engineer who was considered incompetent by his superiors, and whose investigations had been carried on in close communication with the local politicians who were furthering the work of the

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counsel of the trustees of the internal fund of the State of Florida. Before I accepted that employment I had a conference with the trustees of the internal improvement fund of the State of Florida and asked if they saw any reason why I should not represent him. They said, 'Why none in the world;' and it was with their full knowledge and consent that I took his employment, accepted his legal work." Ibid., Number 20, 1020.

108 House of Representatives Documents, Report Number 1207, 62 Congress, 2 Session, 3.

land interests. He allowed this incomplete document to be published in a form which was immediately used by promoting interests to further their schemes. Although he was soon informed by more competent men that the document was unreliable and misleading, he issued no retraction, but permitted it to continue in circulation. When a statement calling attention to the discouraging features of the Everglades speculation was prepared in the department, Secretary Wilson ordered it suppressed. He then discharged as scapegoats, on a technical charge, subordinates who had been under attack by the land boomers because of their unwillingness to join in the exploitation of the public. 109

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109 H. Parker Willis, "Secretary Wilson's Record," Collier's XLIX (March 23, 1912), 16. Willis' inferences to "close communication" between the federal investigator and local politicians was borne out in part by Wright's testimony of the personal meetings he had had with Broward in Tallahassee and Ft. Lauderdale. 1912 Everglades Hearings, Number 3, 74-75, 77. Broward had also furnished J. O. Wright and his wife a small cruiser with a crew of two to "inspect" the Florida east coast during a fortnight's excursion. Ibid., Number 3, 86-87.

## CHAPTER IX

### EXAMINATION OF THE DRAINAGE SCHEME

#### 1. Mead-Metcalf-Hazen Report

In early March, 1912, the Miami Board of Trade, realizing the significance of the congressional investigation, invited the Moss Committee "and all critics who have not seen the Everglades to visit this district with a view to ascertaining the actual facts. . . ." <sup>1</sup> The Board of Trade felt that the investigation had led to adverse criticism of the drainage works which might work great harm to the entire state; and, believing the project feasible, the soil adaptable to all branches of agriculture, and the climate unequalled, the businessmen urged the legislators to inspect the area before submitting their report to Congress.

Joe Hugh Reese believed the congressional investigation brought on by Frank Clark and others had been a healthy thing for all of Florida since it had made drainage no longer an issue, but a definite policy. <sup>2</sup> T. E. Will, in an article on the history of the Everglades land owners' troubles, did not mention the investigation, but he did write that in the 'Glades slump of 1912 all the buyers

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<sup>1</sup> 1912 Everglades Hearings, Number 14, 463.

<sup>2</sup> J. H. Reese, "Agricultural Opportunities in the Everglades," loc. cit., 4.

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deserted the market. The Trustees of the Internal Improvement Fund of Florida attempted to stem the tide of adverse criticism of the lands and the drainage project by appropriating \$1,000 to cover the expenses of a party of representatives of the press on a tour of the Everglades.<sup>4</sup> The Trustees believed they had executed the laws of Florida in good faith in regard to the drainage operations. They felt that the adverse reports on their plans and work as well as on the value and fertility of the lands might be remedied in part if such a tour were sponsored by them. The party arrived in Jacksonville on April 12, 1912, and was accompanied on the trip through South Florida by Governor Gilchrist and other state officials.<sup>5</sup>

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<sup>3</sup> T. E. Will, "Light on a Dark Subject," Ft. Lauderdale Daily News, April 1, 1931. "Its most important consequence for the board of trustees of the internal improvement fund and for the large landholders was that they found difficulty in attracting new purchasers, and that the funds with which they expected to finance the work of drainage were seriously depleted." F. P. Manuel, "Land Development in the Everglades," loc. cit., 12886.

<sup>4</sup> I.I.B. Minutes, IX, 391-395.

<sup>5</sup> Jacksonville (Florida) Evening Metropolis, April 22, 1912. Personnel of the party included Gilchrist, Comptroller William V. Knott, State Chemist Rufus E. Rose, Chief Drainage Engineer James O. Wright, Frank A. Hendry of LaBelle; W. H. Patterson of the Western Newspaper Union, Chicago; C. E. Moore of the Cleveland Plain Dealer; W. J. Elten of the Grand Rapids News; W. A. Wiley, syndicate writer of Baltimore; Berry Akers of the Des Moines Capital; W. L. Park, vice-president of the Illinois Central Railroad; Frank Adams, president, Barnett National Bank of Jacksonville; ex-Governor Jennings; Dr. Albert A. Murphree, president, University of Florida; Peter H. Rolfs, director, U. S. Experiment Station,



The furor did not die down, however, for in September, 1912, the Drainage Board accepted the resignation of J. O. Wright as chief engineer. He stated that he thought the drainage program had been divorced from politics, but that

During the last six months the Everglades has been the principal issue in a most bitter and acrimonious political campaign; it has been the subject of criticism and misrepresentation by the public press. It has been criticized by engineers and public men who have no interest in the work and who have never seen the Everglades. 6

The whole operation had been placed in a false light, Wright continued, and public confidence destroyed to such an extent that the future of the work was jeopardized. Wright told the Board that he had tried to do the conscientious thing, but had not accomplished the desired results and wished to be relieved of his duties.

In December, 1912, the former state engineer, having lost some of the exuberance he possessed before the Moss Committee the previous winter, explained that no part of the Everglades was sufficiently drained for occupancy or cultivation. He admitted that attempts had been made to engage in agriculture on lands adjacent to the canals and along

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Gainesville, Florida; Dr. Lincoln Hulley, president, John B. Stetson University; Dr. T. E. Will, former president, Kansas State Agricultural College and former editor Conservation Magazine; and twenty others. "It is thought that the trip will give the newspaper representatives a good idea of the many advantages which can be found in the Everglades, which are rapidly being improved." Ibid.

6 I.I.B. Minutes, IX, 504-505.

Okeechobee's south shore, but maintained that such lands were subject to overflow since main outlets for water control of the lake had not been completed.

It will . . . be necessary to dig additional outlets, and put in a complete system of laterals, before the Everglades as a whole can be put in cultivation. No arrangement has yet been made for this work. 7

A footnote to the narrative of the Everglades land boom and succeeding collapse was the federal indictment of several dealers in 'Glades lands for using the mails to defraud the general public. Foremost in attracting attention were the investigations made of Richard J. Bolles, Jesse L. Billingsley, and other officials of the spectacular Florida Fruitlands Company in the Ft. Lauderdale land lotteries.<sup>8</sup> The indictments returned by a federal grand jury accused

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7 J. O. Wright, The Everglades of Florida: Their Adaptability for the Growth of Sugar Cane, 34-35. Wright subsequently formed an association with the Furst-Clark Company, contractors for the state drainage works, and appeared before the Trustees in their behalf in 1913. I.I.B. Minutes, X, 305.

8 New York Times, November 11, 21, 1913, December 7, 1913. It will be remembered that Bolles was represented in the suit brought by the trustees of his own company against him by former Florida attorney-general and I.I.F. counsel W. H. Ellis. 1912 Everglades Hearings, Number 20, 1019-1020. This suit, brought by the trustees of 12,000 purchasers, was settled on December 6, 1913, by allowing Bolles to retain \$1,400,000 paid to him by the Florida Fruitlands Company for Everglades acreage. The court ordered Bolles to proceed with the drainage of the lands and the company to withhold further dividends to the former until the work had been accomplished. The company maintained in its defense that the State of Florida had contracted, in the original sale of the lands, to complete the reclamation. New York Times, December 7, 1913.

Bolles and seven others of the sale of 180,000 acres of undrained and unsurveyed land to small purchasers for \$2,000,000 of which \$700,000 had been paid to the company under the sales contracts.

Some of the purchasers said their tracts were entirely under water, and could be reached only by boat. Company agents asserted that the State of Florida was under contract to drain the land, and that canals soon were to be dug and the land put in condition for cultivation. 9

Other indictments were brought by grand juries at Kansas City, Missouri, against officials of the Miami Everglades Land Company, the Everglades Plantation Company, and the Chambers Land Company for using the United States mails with intent of fraud.<sup>10</sup> The indictments, charging Bolles and others in the Florida Fruitlands Company with fraudulent use of the mails in promoting 'Glades lands, were dismissed when

9 New York Times, November 21, 1913. The controversy was reopened by the disagreement between the members of the Florida congressional delegation and Florida officials over the drainage project, as the attorney-general of the United States had dismissed the matter in February, 1913, on the basis of having "not even a point for grand jury investigation." Ibid.

10 Ibid., December 10, 1913, November 27, 1914. Frank M. Perkins of the Miami Everglades Land Company was accused of writing and mailing a letter from Kansas City to John T. Joyce of Denver, Colorado, booming the Florida wet lands as consisting of muck soils which were shown by chemical analysis to be the richest in the world and which need not be fertilized for agricultural use. Perkins further stated that his company was associated with men of national reputation and that he would furnish Joyce with letters of introduction in case the latter desired to visit Miami and make a personal investigation of the company's lands. The prosecution charged that the described lands were undrained and unfit for cultivation. Ibid., December 10, 1913.

the evidence presented showed that the company and its officers were guiltless of fraud or fraudulent intent.<sup>11</sup>

Brokers in Florida lands outside the Everglades, as well, were indicted for fraudulent use of the mails; "these indictments were published throughout the nation, particularly in those states from which a large number of settlers and large amounts of capital were being drawn."<sup>12</sup> A resulting panic among purchasers of lands saw many payments on sales contracts lapse, and the consequent failure to obtain funds was reflected in the State's inability to prosecute vigorously the operations of reclaiming the Everglades.

Further evidence of the doubt regarding the ultimate success of the Everglades reclamation project and especially as to whether or not the system of canals as outlined was sufficient to handle the drainage of the upper Everglades was found in a letter of instructions addressed to Daniel W. Mead,<sup>13</sup> Leonard Metcalf, and Allen Hazen as a board of consulting engineers employed by the Everglades Land Sales

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<sup>11</sup> New York Times, April 13, 1914.

<sup>12</sup> R. E. Rose, "The Swamp and Overflowed Lands of Florida," loc. cit., 130.

<sup>13</sup> Daniel W. Mead was professor of hydraulics and sanitary engineering at the University of Wisconsin in 1912; Leonard Metcalf, of Boston, Massachusetts, was a consulting engineer on water supply and sewage disposal problems; and Allen Hazen was also a water supply and sewage disposal engineer located in Chicago, Illinois. Albert Nelson Marquis, Who's Who in America, VIII (1914-1915), 1590, 1611, 1072.

Company for a private investigation on July 23, 1912.<sup>14</sup>

Vance W. Helms, president of the company, directed the engineers to ascertain what amplifications of the state system, if any, would be required "to take care of the runoff from the 'Upper Everglades' as a whole and of the 70,000 acres owned by us."<sup>15</sup> Helms directed the investigators to determine if it would be possible to dike the company's holdings on the north and west and thus render them independent of the remainder of the Everglades.

We desire the Board to furnish us with specific information as to the canals, laterals, ditches, etc., which should be installed by our company in order to properly drain our specific acreage, assuming that the canals to tide water will be installed. We desire the Board of Engineers to recommend such additional main canals and laterals as will be necessary for the purpose, and to designate the routes of such on maps to be submitted with the report. <sup>16</sup>

In their letter of transmittal, submitted with their report, Mead, Metcalf, and Hazen notified their employers that they found the drainage of the Everglades feasible from

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<sup>14</sup> "Mead, Metcalf, and Hazen Report," 11-12. Through the courtesy of Fred C. Elliot, Secretary of the Trustees of the Internal Improvement Fund of Florida, the author was able to use a photostatic copy of this manuscript report in the Tallahassee office of the secretary. The citations are to this copy. During the winter of 1946, Arthur E. Morgan loaned the author a privately printed copy of the Mead, Metcalf and Hazen Report. So far as can be ascertained, Dr. Morgan's copy is the only one extant.

<sup>15</sup> Ibid., 11.

<sup>16</sup> Ibid., 12.

both engineering and financial points of view, but were of the opinion that the development must be a gradual one.

We find the present and projected system of canals, as provided by the State of Florida, totally inadequate to accomplish the drainage of the Everglades. We are of the opinion that the reclamation of your lands can best be accomplished by diking, ditching, and the construction of pumping stations by which the water may be drained from your lands. 17

The consultants found that to ascertain the amplification which would be necessary would require a large amount of study and investigation, together with extended observations and surveys, and they recommended that further studies be carried out by the State or others interested in the redemption of the wet lands.<sup>18</sup>

Mead, Metcalf, and Hazen reported that without attempting to analyze the plans of the drainage commissioners they

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17 "Mead, Metcalf, and Hazen Report," 13. The three engineers convened at Jacksonville, Florida, on August 3, 1912, where they were met by H. H. Ralston, vice-president, and W. J. Kackley, a drainage engineer of the Everglades Land Sales Company, and J. O. Wright, chief drainage engineer of the Board of Florida Commissioners. The six men reached Ft. Myers on the fourth and were at Observation Island in Lake Okeechobee on the fifth. The party spent two days inspecting the Miami Canal, excavated twenty miles below the lake, and various gardens on the lake shore and islands. On August 7 they left the Bolles Hotel on Rita Island for the North Kew River or Ft. Lauderdale canal and Miami by way of Ft. Lauderdale. August 8-9 were spent in the Miami area and the party returned to Jacksonville on the tenth. August 11 was spent in various conferences and visits to federal engineers and weather bureau offices; the board finished its Florida work on August 12. Ibid., 18-22.

18 Ibid., 13-18.

felt that several conclusions could be considered fairly definite. The drainage of the Everglades was possible from an engineering standpoint and the increase in the value of the lands would more than pay the cost of reclamation. However, the excavations completed and the work projected in 1912 were entirely inadequate to drain the area. It would be financially inexpedient to attempt reclamation except as the lands could be settled, since the cost of complete reclamation would be prohibitive until the demand for lands was greater than in 1912. The magnitude of the agricultural possibilities of the Everglades would require a gradual readjustment of market conditions, transportation, and experimental work which in turn would involve much time, capital, and labor; hence the drainage work should be a progressive development with much of the work to be completed only after some of the lands had been drained and brought under successful cultivation.

These engineers held that it was apparent that private lands would not be effectually drained by the work then underway or projected by the State and, if such lands were to be drained, the work would have to be done by the landowners whose job would be especially difficult as most of the land had been sold in alternate sections. Complete reclamation would require the control of water levels in Lake Okeechobee

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and the construction of more numerous drainage canals as the canals constructed and projected would benefit the lakeshore, but aggravate the flood conditions along the lower reaches. The Okeechobee control canals would have to be independent of the drainage of the Everglades and all canals would have to be increased in capacity with a prism below sea level at full discharge capacity.

In order to accomplish effective reclamation, Mead, Metcalf, and Hazen recommended that a thorough and comprehensive study be made which should include a systematic study of rainfall conditions, run-off and evaporation, rise and fall of Lake Okeechobee and of the discharge of the various lake outlets, experiments on the agricultural possibilities of the muck soils, relation of the water table to cultivated surfaces, requirements of land shrinkage and irrigation, and detailed examination of various canal routes from Okeechobee to tide-water.

To assist in the immediate reclamation of at least part of the private and public lands in the Everglades, they believed cooperation of the State was essential in the preparation of plans for progressive drainage, the passage of a sound drainage act, and in the exchange of lands to permit segregation of private holdings. As a final conclusion, it was suggested that the State devote its available resources

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to the control of Lake Okeechobee, the enlargement of the natural outlets of the Everglades, the construction of additional outlets to the sea, and to the progressive construction of interior drainage canals. Mead, Metcalf, and Hazen made it quite plain that under the State plans for reclamation no formal notice had ever been given that the Everglades would be drained, but it appeared that the Trustees of the Internal Improvement Fund had been led to hope their plans might be sufficient and that the public had quite generally assumed this to be the case. The engineers found it inconceivable that some 20,000 to 30,000 purchasers of lands would have bought had they not presumed such to be their eventual circumstance.<sup>19</sup>

The private engineers found that J. O. Wright in his 1909 report, published in Senate Documents, Number 89, 62 Congress, 1 Session, 1911, had not used available United States Weather Bureau statistics, that no South Florida stations data had been consulted, that his evaporation figures were wholly inapplicable under Florida conditions, and that his conclusions were unwarranted in the contemplated eight canals either by the information discussed or any other. Mead and his associates held that agricultural development in ten acre tracts was impractical and that the bulk of the Everglades would have to be developed in large tracts for

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<sup>19</sup> "Mead, Metcalf, and Hazen Report," 44.

citrus groves, sugar cane, or other produce for which the  
lands might be adaptable.<sup>20</sup>

The ultimate success of the Everglades project was given an overwhelming vote of confidence by these three men. The nurseries, gardens, and fields on Rita Island, Lake Okeechobee's shores, the Miami experiment station, and other developments along the edge of the 'Glades were proof of what the future held. Such agricultural developments would have to be accompanied by the erection of canning, sugar, and other factories as well as the facilities entailed by population growth, all of which under the best conditions must be slow. However, a warning was sounded against rapid drainage which might leave unsettled areas where fires could destroy the unguarded soil, which the board noted had happened in peat bogs in the North. It was pointed out that the logical plan for development would be along the eastern edge near centers of population and established transportation facilities.<sup>21</sup> The engineers held that private endeavor, insofar as individual lands were concerned, would have to take up where the State left off; and

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20 "Mead, Metcalf, and Hazen Report," 45-57. "It is unfortunate indeed for the State of Florida, for the land companies interested in the sale of these lands, and for the numerous purchasers of small tracts that the warning conveyed in the second Elliott revision of the Wright report was not promptly published by the Department of Agriculture and thus made available for their information." Ibid., 58.

21 Ibid., 88-94.

they emphasized the necessity of a sound State drainage act whereby property owners could act together in smaller units or districts.

The consultants held that the lands of the company by which they were hired could be rendered arable only by a combination of gravity flow and pumping. The engineers estimated a total subsidence of forty percent of the soil depth, with a possible minimum of thirty percent and a maximum of fifty percent; and a further possibility that continued cultivation might result in even more compaction.<sup>22</sup>

Since the Mead, Metcalf, and Hazen Report was made for a private corporation and was never publicized, the facts that it contained did not reach a large audience. Even a private report, however, could not be kept completely out of circulation and it can well be imagined that the resignation of J. O. Wright as chief drainage engineer of the state's operations was a direct result. There is some chance that publication of the report of Mead and his associates might have

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<sup>22</sup> "Mead, Metcalf, and Hazen Report," 95-105. "Drainage by pumping has the merits of smaller cost installations, which are easier to enlarge, and have an operating cost largely dependent on the amount of rainfall . . . pumping systems are flexible in operation since they can be used for irrigation at no material increase of the fixed charges of the plant." The Mead, Metcalf, and Hazen Report suggested the drainage of the eastern part of the 'Glades by gravity and the western part by pumping. It was noted that the first costs of the gravity system were much higher than those of pumping. Ibid., 115.

led to the abandonment of the state's participation, which would have been a total loss to thousands of investors. Arthur E. Morgan believed that "The report of Mead, Metcalf and Hazen was a straightforward attempt to look the facts in the face, but it was largely neutralized by the report of Randolph, Leighton, and Perkins in 1913."<sup>23</sup>

## 2. The Everglades Engineering Commission

Just before leaving the governor's office Albert W. Gilchrist wrote a lengthy letter to the Board of Trustees of the Internal Improvement Fund stating that during his four year term there did not appear in the minutes record of as much as one motion being made by him. But the chief executive listed some accomplishments of his administration and asked that the letter be spread on the minutes.<sup>24</sup>

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<sup>23</sup> Dayton Morgan Engineering Company, Report to the Board of Supervisors of Dade Drainage District on the Reclamation of the Everglades, 7. The Mead, Metcalf, and Hazen Report was reviewed in some detail in two of the nation's leading engineering journals. A reviewer in the Engineering News emphasized the shrinkage of the muck to a likely sixty per cent of the original altitude, and to a pumping system as the most likely method to be used in the Everglades. Engineering News, LXX (October 23, 1913), 835-837. Another reviewer gave the general background of the South Florida project, and severely criticised the Wright Report which had appeared in Senate Document 89, as well as the lack of an adequate drainage law in Florida and the policy of selling the muck lands in alternate sections. Engineering Record, LXVIII (October 25, 1913), 454-457.

<sup>24</sup> I.I.B. Minutes, X, 11-17.

Since a certain onslaught on the lands of the Trustees, it has been very difficult to sell any lands and it has been difficult, therefore, to finance the proposition. Those owing the trustees have found difficulty in paying the same. At this New York conference, the captains of industry and their representatives were anxious for the great work of the reclamation of the Everglades to be continued. They were unwilling, however, to pledge any money toward the continuation of the same unless there were some definite plans made by which they could see the final completion of this work. I suggested that the legislature of 1913 should pass a law, authorizing the trustees to bond for a sufficient amount of money to drain the Everglades. . . . That the amount of money derived from the taxes in the Everglades district be used with which [sic] to guarantee the interest and as a sinking fund, the lands also to be security for the bonds. 25

Park Trammell, Gilchrist's successor, found upon his inauguration that the Trustee-Commissioners were down to less than \$25,000 in cash. The revenue consisted only of drainage taxes since no lands could be sold "on account of the well organized opposition to the drainage of the Everglades." In

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25 I.I.B. Minutes, X, 15. In the latter part of 1912 a syndicate from Holland was alleged to have offered the State of Florida \$8,000,000 for the remaining state interests in the Everglades. In January, 1913, William Jennings Bryan emphatically opposed the sale. "The state has gone far enough to demonstrate the feasibility of drainage, the only thing necessary being to cut enough canals to get the water off. . . . It is time to take the Everglades from the domain of speculation and deal with it as it is--a great reclamation project which needs only time and intelligence to convert this great area into a garden." Lake Worth (Florida) Herald, January 19, 1913, quoting Jacksonville Metropolis, clipping in Will collection.

26 R. E. Rose, "The Swamp and Overflowed Lands of Florida," loc. cit., 130.

his first message to the 1913 legislature Trammell stated that there had been marked progress in draining the Everglades, but that the enterprise had been embarrassed financially. The governor recommended a bill to allow the Trustees of the Internal Improvement Fund to set up one or more experimental farms which would add materially to the development of the state and enhance the value of all the lands in the area. He also asked for a bill to provide for the establishment of local drainage districts to enable private land owners to cooperate in the construction of lateral canals and local ditches to form an integrated system supplementing the main canals provided by the state.<sup>27</sup>

During the first month of the biennial session of the legislature in 1913 the Trustees called a public meeting to consider ways and means for financing future Everglades reclamation. Various owners of land in the drainage district were invited to discuss the matter with the board.<sup>28</sup> The Trustees suggested the division of the Everglades Drainage

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<sup>27</sup> Journal of the State Senate of Florida of the Session of 1913, 51-52.

<sup>28</sup> I.I.B. Minutes, I, 138-142. Among the land company representatives present were Pearl Wight, Maurice Stearn, Edgar Stearn, and George F. Bensel of the Southern States Land and Timber Company; Walter F. Coachman and D. R. McNeil of the Consolidated Land Company; Sidney Harrison of the Model Land Company and Florida East Coast Railway; W. S. Jennings representing V. W. Helms of the Everglades Land Sales Company, Everglades Land and Sugar Company, and Everglades Land Company; and E. J. L'Engle of both the Consolidated and the Southern States Land and Timber Companies.

District into zones, with lands in the zones to be assessed for drainage taxes in proportion to the benefits received. On April 21, 1913, the group held an evening meeting and after a long discussion of the amount of assessment per zone, the creation of a new drainage district, and bond issues, the Trustees adopted two motions. The first motion directed the counsel to draft a new bill for the district and to make provisions for a \$6,000,000 bond issue.<sup>29</sup> By the second motion it was agreed to color lands, on a map of the district, nearest the canals with a red color, those within five miles a blue color, and to leave the remainder uncolored; to assess the first group fifteen cents per acre for the first three years, eighteen cents per acre for the next three years, and twenty-five cents an acre thereafter; and to assess the other groups on a similar but lower scale.<sup>30</sup> The Trustees directed the attorney general and the board's counsel to contact Dillon, Thompson, and Clay, New York bond brokers, on the subject of floating the issue and the technicalities to be included in the proposed bond bill.

House Concurrent Resolution Number Eight of the 1913 legislature requested the Trustees of the Internal Improvement

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29 I.I.B. Minutes, X, 140.

30 Ibid. W. S. Jennings, representing the V. W. Helm companies, asked the Trustees not to place the highest rates of assessment on the private lands near such canals as his companies were developing at their own expense. Ibid.

Fund to furnish that body with a detailed statement of the condition of the work of reclaiming the Everglades. The governor and his associates on the board submitted a detailed report on May 8.<sup>31</sup> The Trustees brought the legislature up to the date of April 1, 1913, on the progress of the operations. Under the Furst-Clark contract approximately 177 miles of main canals had been partially completed, and 21 miles of smaller canals averaging 40 feet in width and 5 feet in depth had been excavated. Prior to the beginning of that contract on July 1, 1910, the Trustees had excavated approximately 44 miles of main canals. The total drainage expense of the I. I. Trustees to April 1 was approximately

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<sup>31</sup> Journal of the State Senate of Florida of the Session of 1913, 443, 905-918. On May 29, 1912, the I. I. Trustees were granted a permit by the United States War Department to lower the level of Lake Okeechobee to sixteen feet above sea level although the United States reserved the right to require the closing of all gates allowing outflow from the lake in order to insure the lowest level not falling below that height. I. I. B. Minutes, IX, 443-445; 1912 Everglades Hearings, Number 22, 1103-1104. In a speech in October, 1926, Governor John W. Martin blamed J. O. Wright for lack of foresight in drawing the federal government's attention to a matter over which the government had claimed no previous suzerainty, "but as a result of this they forthwith laid strong hands on the lake for navigation purposes and since that time the drainage board has had to contend with rules and regulations laid down by the United States as to lake levels, some of which were impossible to comply with if the drainage were to proceed." Address of John W. Martin, Governor of Florida on the Everglades and the Drainage Problem, West Palm Beach, Florida, October 28, 1926, 5.



\$2,150,000 which had been wholly derived from drainage taxes and sale of swamp and overflowed lands of the Fund, "and no part thereof has been paid by general taxation upon the people of the state, nor from the General Revenue Fund."<sup>32</sup>

The Trustees entered a minute discussion of their financing of the works of reclamation. They related that there had been little difficulty from 1906 to 1912 because of good prices for land and the collection of the drainage tax after 1910. The problem the Trustees presented the legislature was one of finding ways and means for handling the crucial financial situation facing the Everglades project in 1913.

32 Journal of the State Senate of Florida of the Session of 1913, 906.

Cost of Drainage in Everglades Drainage District  
From September 21, 1905 to July 1, 1910

Four dredges	\$ 224,512.72
Operating dredges	389,972.73
	<u>\$ 614,485.45</u>

Under Contract from July 1, 1910  
to April 1, 1913

Excavation	\$1,402,656.39
Locks	75,294.54
Engineer, office, survey inspection, other expense	59,233.31
	<u>\$2,152,669.69</u> [sic]

Receipts Paying for Drainage Work

Drainage tax @ 5¢ per acre	\$1,063,067.16
One-half of Belles' 500,000 acre sale	491,370.00
Other land sales by Trustees	598,232.53
	<u>\$2,152,669.69</u>

The plan suggested to the legislators by the five state officials was two-fold; first, graduated drainage taxes on the district's lands according to the benefits received from the drainage facilities; and, second, the issuance of bonds to be secured by the drainage tax on the lands of the district which would also provide a sinking fund to retire the bonds. The Trustees reported that such a measure, incorporating these two ideas, had been prepared and would be submitted to the legislative body.<sup>33</sup>

The stewards of the Florida wet lands advised the legislature that the results of the drainage works were not yet up to expectations but that the operations were still incomplete. Crops grown along canal banks and the driest parts of the Everglades had proven the worth of the lands. It was true that there had been considerable damage from the overflow of "unusual rainfall,"

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<sup>33</sup> Journal of the State Senate of Florida of the Session of 1913, 910-912. "It may be said in connection with the various criticisms which seemed to have so greatly injured the project that those who have visited the operations and those who were familiar with the lands in the territory in question have been confident that the drainage could be accomplished and that the land was unquestionably very rich and productive, and therefore quite valuable. . . . The thousands who know nothing of the land, however, and the possibility of its reclamation have become very distrustful on account of the agitation." Ibid., 908.

. . . but no one who has had experience in planting in the Everglades, as far as we are aware, has for one moment questioned the fertility of the land. A similar injury to crops, due to overflow conditions, has occurred not only in the Everglades but in other parts of the State and in other parts of the country. 34

The Trustee-Commissioners felt that no large amount of territory would be free from damage by excessive periods of rainfall until the canals then under contract, including the new Palm Beach Canal, had been completed, and that even then "other canals will be necessary."<sup>35</sup> In order to ascertain the full needs of the district the Trustees and the Drainage Board had completed three months negotiations with the J. G. White Engineering Company of New York, "an engineering firm of national reputation," relative ". . . to making a report upon a system of main canals necessary for the entire territory embraced within the Everglades. . . ."<sup>36</sup>

Lastly, these five state officials believed that the Everglades and other wet lands of Florida would have gone to the railroad and other land grant corporations had it not been for the initiative of previous Boards of Trustees to

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<sup>34</sup> Journal of the State Senate of Florida of the Session of 1913, 909.

<sup>35</sup> Ibid., 910.

<sup>36</sup> Ibid. ". . . within the past week an agreement has been perfected whereby a commission of engineers composed of Isham Randolph, Marshal O. Leighton, representing the J. G. White Engineering Corporation and Edmund T. Perkins have been engaged by the Drainage Board. . . . The gentlemen composing this commission are recognized as the highest and best authority on drainage in America."

carry out the provisions of the federal swamp and overflowed land grant act of 1850. Railroad land grant acts for more than five million acres were unsatisfied in 1906 which would have taken all of the land then held in the Internal Improvement Fund if Broward had not entered on the reclamation program. The Trustees noted that the State owned 1,200,000 acres in the Improvement Fund and 160,000 acres in the School Fund in 1913.

If this land is only worth \$10.00 an acre in its present condition, the State is \$12,000,000 better off than it would have been had not drainage been undertaken, and the school fund is \$1,600,000 better off, as its land has enhanced this amount. 37

In accordance with the wishes of Governor Trammell and the four members of his cabinet comprising the Trustee-Commissioner Board the 1913 session of the legislature enacted five drainage measures into as many laws. Under Chapter 6453, Laws of Florida, 1913, the legislature authorized the Trustees of the Improvement Fund to borrow money for drainage purposes in reclaiming lands granted the state under the federal act of 1850 and to issue promissory notes, be sued, transfer obligations, and to make loans to the Board of

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37 Journal of the State Senate of Florida of the Session of 1913, 914.

Drainage Commissioners. Chapter 6454 authorized the Board of Drainage Commissioners to borrow money and to apply the drainage tax assessed on lands in a drainage district to re-  
 pay such loans in almost the same words as Chapter 6453.<sup>39</sup>

Chapter 6456, Laws of Florida, 1913, reestablished the Everglades Drainage District creating a board of commissioners with authority to assess taxes, borrow money, issue bonds, and

. . . with all the powers of a body corporate including the power to sue and be sued by said name in any court of law or equity, to make contracts and to adopt and use a common seal and alter the same at pleasure. . . . 40

Further, the act empowered the Commissioners to exercise the right of eminent domain, and set a differential or zone scale on all of the lands of the district. Lands held by the Trustees of the Internal Improvement Fund were made subject to the taxes imposed and these officials were authorized to pay such taxes from any funds in their possession, derived from land sales or otherwise.<sup>41</sup> Finally, seven sections of the act authorized the issuance and redemption of coupon bonds to the extent of \$6,000,000 but not

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38 Acts and Resolutions Adopted by the Legislature of Florida at the Fourteenth Regular Session under the Constitution of 1885, 125-126. Hereinafter cited as Laws of Florida, 1913.

<sup>39</sup> Ibid., 127-128. Both acts were to be valid by sections should any section be determined unconstitutional in the courts.

<sup>40</sup> Ibid., 131-132.

<sup>41</sup> Ibid., 132-160.

more than \$1,500,000 could be issued in any one year.

Chapter 6457 amended some nine sections of the General Statutes of Florida, and conferred about the same authority on the several boards of county commissioners of the state as had been given in Chapter 6456 to the Everglades Drainage District officials.<sup>43</sup> Chapter 6458 related to the creation, organization, and maintenance of drainage districts for the purpose of protecting swamp, wet, or overflowed lands, and was the answer of the legislature to the governor's request for an act enabling local or sub-drainage districts to be established throughout the state.<sup>44</sup>

By April, 1913, the demand for a public engineering examination because of the ". . . continued criticism of the undertaking, denial of the correctness of the surveys and estimates, and of the agricultural value of the lands when drained . . ." reached realization when the Trustee-Commissioners contracted with the J. G. White engineering outfit to organize a board of engineers to be known as the Florida Everglades Engineering Commission consisting of Isham

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<sup>42</sup> Laws of Florida, 1913, 165-168. The Treasurer of the State of Florida was made legal custodian of any bonds issued by the drainage district, was authorized to pay the interest on such bonds, and directed to set up a sinking fund of two per cent annually of the amount of bonds outstanding.

<sup>43</sup> Ibid., 180-183.

<sup>44</sup> Ibid., 184-227.

Randolph, chairman, Marshall O. Leighton, and Edmund T.  
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 Perkins.

One anonymous writer declared:

It will be difficult to discover a more emphatic lesson of the importance of a thorough study of rainfall and runoff in drainage and irrigation than is afforded by the work upon which the State of Florida has embarked. It is evident that the canal system which is under construction there is wholly inadequate for its purposes, and that its deficient capacity is due to inadequate preliminary engineering investigations. 46

The writer went on to state that the result of such a blunder had been to involve Florida in "something approaching a land scandal" and "to lead many thousands of people to invest in swamp land in the belief that it was ready for market gardening."

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45 R. E. Rose, "The Swamp and Overflowed Lands of Florida," loc. cit., 131. The Randolph Commission agreement was signed and became effective on April 30, 1913. E.D.D. "Minutes," I, 155-160. W. S. Jennings and P. A. Vans Agnew had appeared before the Board of Trustees on April 22 representing the J. G. White Company of New York, and again on April 28 when they were accompanied by Isham Randolph. I.I.B. Minutes, X, 142-143, 151-153. The articles of agreement called for a survey, of not more than six months duration, to make a complete and comprehensive examination of the area and its watershed, with the best methods of drainage, specifications for canals and other works, and a thorough coverage of the estimated costs of the proposed system. Ibid., X, 153-159. "The report to be prepared by the engineers recently employed will take into consideration the work already accomplished and carry with it recommendations as to future operations." Journal of the State Senate of Florida of the Session of 1913, 910.

46 Engineering Record, quoted in New York Times, November 1, 1913.

It is a striking commentary on public and private business methods that the first thorough preliminary study of the Everglades problem was made for the private land company which is now going ahead to protect its lands and those it has sold according to the plans of its engineering advisers. Later the state awakened to the situation, determined to follow the company's example. 47

Randolph, Leighton, and Perkins set up their headquarters in Miami on May 3, 1913, and proceeded with their contracted examination of the Everglades. Leighton undertook the hygrometric investigations, while Perkins supervised the surveying and mapping operations. The first secretary of the commission was George C. Pierce, who served for six weeks and was succeeded by George B. Hills, who had previously<sup>48</sup> been in charge of one of the survey parties. The finished

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47 Engineering Record, quoted in New York Times, November 1, 1913.

48 The Randolph commission was guaranteed \$7,500 for reports and surveys, and \$27,500 for their total expenses. I.I.B. Minutes, X, 154. Isham Randolph, civil engineer, had served as chief engineer of the Chicago Sanitary District and supervised the construction of the Chicago Drainage Canal. In 1905 he had served on the Panama Canal Commission under appointment by Theodore Roosevelt and later accompanied Taft to the Panama Canal as an advisor in 1908. "The name of Isham Randolph attached to any enterprise was a guarantee of honesty, integrity and technical efficiency." Burr Arthur Robinson, "Isham Randolph," Dictionary of American Biography, XV, 359-360. Marshall Ora Leighton had been chief hydrographer of the U. S. Geological Survey, 1906-1913; he had been a consultant on the U. S. Inland Waterways Commission and several New Jersey flood commissions. Edmund Taylor Perkins, civil engineer, was topographer in the U. S. Geological Survey 1885-1902, in the U. S. Reclamation Service, 1902-1910, and president of E. T. Perkins Engineering Company since 1910, and president, American Reclamation Federation of the National Drainage Congress. A. N. Marquis, Who's Who in America, XV (1914-1915), 1398, 1838.



report was turned over to the Internal Improvement Trustees on October 25, 1913, and was printed as United States Senate Document 379, 63 Congress, 2 Session, after having been submitted for this purpose by Senator Duncan U. Fletcher of Florida.

The Florida Everglades Engineering Commission concluded that the drainage of the Everglades was entirely practicable and could be accomplished at a cost which the reclaimed land would well justify. The solution of the drainage problem was found to be dependent on the disposition of the waters entering Lake Okeechobee, principally from the north. "In our judgment the Everglades can best be relieved of this servitude by diverting the flood waters through a canal of adequate capacity occupying the shortest practicable route to the Atlantic Ocean or an outlet thereof."<sup>49</sup>

With the Okeechobee flood waters diverted, the problem of draining the lands south of the lake would then be reduced to the proper provisions for carrying off the precipitation upon the Everglades by adding to the main canals traversing the territory. It was recommended that the lake control canal be excavated on the shortest course from Okeechobee to the south branch of the St. Lucie River and that the cost of this canal, two hundred feet wide and twelve feet deep, be

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49 Senate Documents, Number 379, 63 Congress, 2 Session, 5.

apportioned for: (1) control of Okeechobee's level for land drainage and flood storage; (2) twelve foot navigable channel; and (3) water power of primary capacity of 5,000 horsepower. The commission estimated the total cost of this canal, lock system, and power plant at \$2,500,000.<sup>50</sup>

We have encountered the idea, which if not generally prevailing, is, at least entertained by a large number of intelligent citizens of Florida to the effect that the problem of draining the Everglades cannot be solved by progressive steps. . . . 51

This view the engineers held to be erroneous in that the drainage work could proceed only as fast as there was need for those areas as homesteads or useful agricultural production. The three drainage specialists noted that the system of canals, North and South New River, Miami, Cypress Creek, Snake Creek, Snapper Creek, Hillsboro, Palm Beach, and Caloosahatchee, had been excavated or were in the process of excavation or contracted for, and contemplated the reclamation of a greater portion of the Everglades in the immediate future than would probably be justified by the demand for new lands.

It would have been much better to provide for an orderly progression of reclamation in accordance with the demand and with due regard to

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<sup>50</sup> Senate Documents, Number 379, 63 Congress, 2 Session, 6. The novel feature of the hydroelectric plant would "return to the drainage district an income that will contribute largely toward the future maintenance of the drainage system." Ibid.

<sup>51</sup> Ibid., 7.

market conditions and transportation facilities. The existing works and the conditions of land ownership and settlement, seems not to be such as to necessitate an earnest effort to reclaim in one continuous project and with the greatest possible expedition all the lands south and southeast of Lake Okeechobee between the Miami Canal, the proposed West Palm Beach Canal and the eastern boundary of the drainage district. 52

Motivated by this philosophy, the commission endeavored to plan a scheme of reclamation to provide adequate main canal drainage for the territory as outlined in the above quotation. The proposed system embodied in the Randolph plan was an amplification of Broward's original excavations under the Bolles agreement. For the control of Okeechobee's level the commission urged the large cut from the lake to the St. Lucie River. For the drainage of the Everglades east of Miami Canal, the following additional main drainage cuts were suggested: (1) a canal between West Palm Beach and Hillsboro Canals leading into the Hillsboro Canal; (2) a canal between North New River and Hillsboro Canals leading into the Cypress Creek Canal; (3) a canal between North New River and Miami Canals leading into the Snake Creek Canal; (4) the enlargement of Snake Creek Canal from a secondary to a primary cross-section; (5) the enlargement of Cypress Creek Canal from a secondary to a primary cross-section; (6) a canal from the Allapattah Flats to the St. Lucie

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52 Senate Documents, Number 379, 63 Congress, 2 Session, 12.

Canal; (7) Indian Prairie-Fisheating Creek Canal; (8) and 53 thirteen other secondary canals between larger main canals.

The Randolph plan envisaged the drainage of approximately 2,000,000 acres, of which 400,000 lay outside the district, at a cost over and beyond the work done to October, 1913, of roughly \$8 an acre. The plan was all-inclusive and arranged for the complete reclamation in the area noted. It was further recommended that canals should be equipped with both locks and stop-logs, so that in cases of unusually high water the canals could be used to supplement the St. Lucie control canal in lowering Lake Okeechobee. Randolph and his colleagues recommended that laws be enacted to require the maintenance of the canals and that local landowners be required to maintain all laterals through or adjoining their property. It was further recommended that the commissioners of the drainage district bear the need for and costs of maintenance in mind when setting the size of their assessments.

The Randolph Report recognized subsidence in muck soils as a factor to be considered in their reclamation, but felt it

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53 Senate Documents, Number 379, 63 Congress, 2 Session, 12-14. "The present canals will, as a part of a broad comprehensive system, be worth to the State every dollar that they have cost. They are there to serve a useful purpose in the great scheme of reclamation upon which the State has embarked; a scheme which has only to be carried to completion to make fertile fields of a watery waste and a populous land where now no man dwells." Ibid., 7.

a relatively minor problem, setting total shrinkage under eight inches above the water table.<sup>54</sup> Upon reclamation the engineers believed that a suitable number of dredges in constant operation would be required unless the district revert to the swampy conditions of 1913. These examiners believed that when completion of an Okeechobee-St. Lucie canal had become assured, the federal government would recognize the cut as a link in a practicable waterway across Florida, provided without cost to the United States; and would

. . . proceed to improve the channel from Lake Okeechobee to the Gulf via the Caloosahatchee River, with depth equal to that which will obtain in the Okeechobee-St. Lucie Canal; thus providing an aid for marine commerce the need for which has been felt for generations past. 55

It was unfortunate that 1913 was a dry year since many of the observations and calculations made by the commission were based on low water. Had 1913 been a very wet year, the

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54 Senate Documents, Number 379, 63 Congress, 2 Session, 63. Randolph, Leighton, and Perkins urged that "Patient and continuous study by the State's officers, and especially by the farmer, must proceed for a generation. . . . This Commission in its goings about the Everglades has gathered from old residents and from apparently reputable observers and experimenters more contradictory information about muck than the commission's members have confronted about any other subject in all their professional lives." Ibid., 42-43.

55 Ibid., 67. The main differences between the Wright plan of 1909 and the Randolph plan of 1913 were the control canal for Okeechobee's waters and the amplification of the canal system to provide for the run-off of precipitation on the Everglades. Both plans depended on gravity for drainage and irrigation.

report would in all probability have made allowances for larger flood stages than are found in the document. The water power suggestion was the most questionable aspect of the report in view of the head and continuous flow which would have been needed for a hydro-electric plant. Furthermore, Lake Okeechobee had never reached an eleven foot stage within the memory of man, and it was supposed by these engineers that the Kissimmee River would supply a steady and continuous flood for waterpower use.

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56 Randolph later read a paper on his Florida experiences before the Franklin Institute of Philadelphia, Pennsylvania, in which he pointed out that "We recommended that the development should only proceed so fast as to keep ahead of actual demands of population." Randolph commented that vendors of Everglades land had appeared to be sharks, but that the real estate men had assurances of drainage which "were made by officials who were ill advised and too optimistic." Journal of the Franklin Institute, CLXXXVIII (July, 1917), 60-61. For reviews of the Randolph Report, see Engineering News, CXXI (January 15, 1914), 146-148, and Engineering Record, LXXIX (January 24, 1914), 119-120.

## CHAPTER I

### 'GLADES LIFE IN THE EARLY DAYS

Scattered references in the writings of travelers, census enumerators, sportsmen, and nature lovers may be found regarding settlers on the borders of the Everglades and the shores of Lake Okeechobee, but there was no real settlement in the 'Glades until the second decade of the twentieth century. Even after that date there are few extant records of the common, every-day happenings of the settlers, because the floods and storms of the 1920's destroyed such as had existed.

W. S. Blatchley and a companion made a leisurely cruise in the early months of 1913 down the Kissimmee waterways from Lake Tohopekaliga to Lake Okeechobee and left one of the few intimate views of the almost forgotten fresh water fishing industry which was then in its heyday. Before reaching the big lake the two vacationists took their craft into Istokpoga Creek and thence into the lake of the same name, where they made the acquaintance of one of the five Brentley brothers, fishermen and fish brokers, who had camps on both Istokpoga<sup>1</sup> and Okeechobee.

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<sup>1</sup> W. S. Blatchley, In Days Agone, 213-215. Blatchley snared an alligator which was killed and the tail was cut into steaks for the bill of fare. "The steak was white, very good but without much taste. We could have called it catfish and not one out of twenty would have known the difference." Ibid., 213.

On entering Okeechobee's shallow waters the naturalists bore to the left along the northern and northeastern shore where they observed a number of houseboats at anchor and fishermen's shacks along the shore off and on for fifteen miles. The crude shelters were built of a framework of poles which was thatched with palmetto leaves.<sup>2</sup>

In early March the two voyagers reached Taylor's Creek which they ascended to Utopia, a settlement consisting of one wooden building. Blatchley commented on the prevalence of the water hyacinth found in the estuary, a pest that had floated down the Kissimmee River and since 1903 had covered the sheltered parts of the lake. From Taylor's Creek the two men secured a tow to the Brentley brothers' fish camp at Pelican Bay on the eastern shore of the lake. The main house, a rough board shack, contained a large sleeping room and a smaller room for messing and stores. At the time of Blatchley's

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<sup>2</sup> W. S. Blatchley, In Days Agone, 229-233. Fearing the effects of a freshening wind the voyagers secured their skiff to a houseboat owned by a Louisiana Creole fisherman-trapper who told Blatchley he had over a hundred otter traps; and his wife chimed in with her feat of bagging forty-two Florida bobcats in one season. The couple had a fish pound with a number of catfish awaiting the fish boat's arrival for which they were paid three cents per pound. When asked what the Creoles did during the September, 1910, storm, the man replied: "My Gawd, mister, them was serious times; me and the old woman clung to a sapling for thirty-two hours, and I prayed for the first time in fawty years." Ibid., 229.



visit sixteen men were employed, eight to run the seines and dress the fish, and the others to run trotlines.<sup>3</sup>

The Brentleys operated several fishing boats and also bought fish from independents around the lake, selling the dressed fish at Ft. Myers and Ft. Lauderdale to wholesale shippers for five cents a pound. These brothers handled a yearly catch worth \$25,000 on which, they told Blatchley,<sup>4</sup> they cleared a net of \$5,000.

The men who work for the Brentleys are a rough lot--derelicts on the sea of life--some of them doubtless refugees; others soldiers of fortune filled with wanderlust. One of them has fought in several revolutions in Central America, another has been a beachcomber along the shores of Alaska. This was in their younger days, when the God of whim led them where he listed. Now that they are middleaged they are content to spend their days catching catfish in the dark waters of Okeechobee.<sup>5</sup>

The travelers accepted a Brentley invitation to go to Ft. Myers by launch, towing their skiff. Leaving the camp on March 8 with 5,920 pounds of dressed fish in the hold of the power boat, they reached the city of palms the following day.

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<sup>3</sup> W. S. Blatchley, In Days Agone, 236-237.

<sup>4</sup> Ibid., 243-244. A typical operation required four men with a seine 20 feet wide and 450 yards long. One end of the seine was anchored on the shore and the remainder payed straight out into the lake by a launch which then made a wide circle back to the starting point. In September, 1912, twenty-one hauls produced 35,400 pounds of dressed catfish. The Brentleys were taking 100,000 pounds of fish a week in March, 1913.

<sup>5</sup> Ibid., 242.

Isham Randolph had observed the Okeechobee fishing industry while making his studies for the engineering report on the Everglades and noted that the gross catch ran into six and possibly seven figures annually.<sup>6</sup>

The first permanent settlement in the upper Everglades, aside from squatters and the homesteaders on the lake shore and the lake islands, was that planned by Thomas Elmer Will, located at Okeelanta, at the intersection of the North New River and Bolles Canals five miles south of Lake Okeechobee, on October 24, 1913.<sup>7</sup> On that date Lawrence Will, son of T. E. Will, Samuel R. Copper and three other men planted the first colony in the Everglades. The original Okeelanta had been the product of a firm of real estate promoters who had

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<sup>6</sup> Isham Randolph, "Reclaiming the Everglades of Florida," loc cit., 53. See also Everglades News (Ft. Lauderdale), January 30, 1917 quoting Daily Tropical Sun (Ft. Lauderdale), July 22, 1916; Gertrude M. Winne, "Early Days on Lake Okeechobee," Everglades News (Canal Point), March 7, 1930.

<sup>7</sup> T. E. Will, "Confessions of a Conservationist," unpublished manuscript in Will Collection, probably written in 1927. See also John Newhouse, "Memories of Early Days in the Glades," I, 9, (Through the kindness of Mr. Newhouse the writer was able to use his unpublished Memories); and T. E. Will, "Light on a Dark Subject," Ft. Lauderdale Daily News, April 1, 1931. In 1911, while a salesman for the Everglades Land and Sales Company, Will had sent a group of settlers to Zona, now Davie, a pioneer settlement several miles west of Ft. Lauderdale on the edge of the Everglades. "Some business men of Miami who were interested in the sale of Everglade lands had established an experiment station at a little settlement called Davie. . . ." D. G. Fairchild, The World Was My Garden, 388.

offered a lot in a townsite to each purchaser of one of their ten acre tracts. The townsite was surveyed and staked off in 1913 with streets, public parks, residence, business, shipping, and marketing districts included in the proposed zoning.

Nicely painted stakes with black numbers dotted the townsite for a couple of years afterward, but fires, decay, and squatters raised havoc with the survey, and soon most of the stakes disappeared. <sup>8</sup>

Other settlers followed the first five pioneers, and in 1914 a small settlement existed at the canal crossing; most of the inhabitants were bachelors, but there were some families, and one couple brought a babe in arms. One of the pioneers who joined the Okeelanta group in 1914, John Newhouse (Jon Van Nyhuis), an emigrant from the Netherlands, came to the Everglades by way of South Dakota. <sup>9</sup>

Newhouse remembered that there were two squatters' shanties at the lake entrance to the North New River Canal and that here and there along the south lake shore the buildings of pioneers could be seen. At the little settlement and post-office of Ritta there was a store and hotel. The latter had been built by the Bolles interests to lodge their prospective purchasers when brought up the canal from Ft. Lauderdale to

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<sup>8</sup> John Newhouse, "Memories of Early Days in the Glades," I, 11. Hereinafter cited as "Memories." "There was a development on the Miami Canal, 12 to 15 miles from Miami, called Hope City, which was soon nicknamed 'Hopeless City' on account of its failure." Ibid., 2.

<sup>9</sup> Ibid., I, 3-7. T. E. Will joined the Okeelanta community in December, 1914. Memorandum in Will Collection.

see the Everglades. On Ritta Island the Forbes Hotel provided the only other lodging place in the area.<sup>10</sup>

The summer and fall of 1913 had been very dry and with the long canals opened to the ocean, Okeechobee fell to a level of 17.2 feet above sea level. The glades were dry from six to eight miles along each side of the canals. Near the lake the water was three feet below the soil, which resulted in excellent conditions for cropping.<sup>11</sup> Many farmers moved into the Everglades and a Japanese colony was established at Sand Point, now Clewiston, on the south shore of the lake.<sup>12</sup> Congressman Frank Clark had earlier urged Governor Trammell to call an extraordinary session of the legislature to prohibit landholding in Florida by members of any Oriental ethnic group.<sup>13</sup>

According to Newhouse the real estate propagandists said:

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10 John Newhouse, "Memories," 3. Torrey, Kreamer, and Ritta Islands were claimed by homesteaders. "There was a dispute of several years standing whether these islands belonged to the United States . . . or to the State of Florida. About 1916 the homesteaders got their deeds from the U. S. government." *Ibid.*, 7.

11 E.D.D. "Minutes," I, 232-233.

12 G. M. Winne, "Early Days on Lake Okeechobee," *loc. cit.* Frederick L. Williamson, pioneer resident of Clewiston and former vice-president of Southern Sugar Company, told the author that a Japanese couple who were members of this early group ran a hotel in Clewiston in 1925, after having been engaged in truck and poultry farming.

13 *New York Times*, October 15, 1913. Clark was reported to have said that with the Negro problem demanding solution, the citizens of Florida were in no frame of mind to be saddled with another race question.

Take a tent, a bag of beans, and a hoe; clear a few rows in the sawgrass, plant the seeds and you will have an income. . . . That may have provided an income for the land offices, but the settlers found out differently. 14

The difficulties which beset these pioneers were common to any frontier settlement of the nineteenth century with the differences caused by the overflowed lands, but this was the modern year of 1914. All supplies had to be floated sixty miles in small boats and barges from the lower east coast. There was no skilled labor available. Pests included mosquitoes, snakes, and 'gators. Newhouse recalled that he killed at least one snake--moccasin, king, chicken, copper-head, grass, or garter--a day for several weeks. "They were not vicious, when not annoyed and generally would crawl a couple of feet out of the path . . . curiously watching that new creature: man."<sup>15</sup>

The pioneers had no machinery; consequently all clearing of the land was accomplished by hand. The saw grass was cut with a scythe and burned when dry. The roots of the

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14 John Newhouse, "Memories," I, 8.

15 Ibid., I, 14-15. "One settler who owned a tract of land one mile from the canal, secured his lumber, in the early winter of 1915, cut a trail through the sawgrass and weeds, carried every stick of his lumber on his back from the canal bank to his tract, and then built the house himself; and lived in it as a bachelor for the next ten years." Ibid., I, 9-10. Early in 1915 one of the settlers procured a horse but the soil was too soft and the horse mired down. Muck shoes were procured but their use rendered the horse very clumsy; however, the horse came to an untimely end upon falling into the canal one night. Ibid., II, 38.

grass were "belabored" with a hoe to cut the long tough runners, which were then pulled out with a potato hook, left for two weeks to dry, and finally piled and burned. These early planters figured it took one man two months hard labor<sup>16</sup> to clear one acre.

The object of the settlers was to raise truck crops through the winter months and capitalize on the high prices of the early season. The land sales promotion literature had emphasized the Everglades' location below the frost line; nonetheless, Newhouse and his colleagues had been on the muck less than three weeks when on November 26, 1914, a cold snap froze their water pump and even left a crust of ice on a pail of water inside the house.<sup>17</sup> The Okeelanta group experienced a frost about every two weeks, with the last one occurring on April 5, 1915. The untutored growers covered

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<sup>16</sup> John Newhouse, "Memories," I, 15-16. The Everglades land is "free from trees and stumps and almost free from bushes, the item of clearing being of no consideration whatever, simply requiring mowing down the grass and burning it, when the soil is ready to be tilled as soon as the excess water is run off by the drainage canals." Senate Documents, Number 89, 62 Congress, 1 Session, 187. For an excellent article on the trials and tribulations of a successful agriculturist on the redlands in the Cutler area south of Miami about this same time see C. R. Ross, "Homesteading in Florida," Country Life, XVII (February, 1910), 468-474.

<sup>17</sup> John Newhouse, "Memories," I, 17. "A few settlers at the cross canal (Bolles) planted small areas to beans, cabbage, etc., but the freezes of 1914-15 killed most of the crops. . . ." Baldwin, Hawker, and Miller, 1915 Soil Survey, 15.

their plants with muck when the wind blew from the northwest, and even hung lanterns on rakes poked into the muck. "The repeated covering and uncovering did about as much damage as the frost."<sup>18</sup> Several of the farmers burned trash for such protection as a smudge could provide, but on the still nights the smoke rose and the tender plants froze to within a few feet of the fire.

The pioneers found that for a time the plants grew wonderfully on the raw sawgrass muck, but that for unexplained reasons, the plants then wilted and died. The settlers called it the "reclaiming disease."<sup>19</sup> This calamity is now known to be caused by the lack of minor elements in the organic soil. The Irish potato plots did well, in all probability because of the copper bluestone used in various insect sprays; and, curiously enough, after the tubers had been grown for several seasons it was discovered that beans, lettuce, cabbage, corn, and other crops would prosper on these old beds. In the spring of 1915 the settlers pooled their resources in order to purchase a carload of Rose number four potatoes at a bargain price, rather than the tried and true Red Bliss variety, with a sequel of "plenty of vines but precious few potatoes."<sup>20</sup>

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<sup>18</sup> John Newhouse, "Memories," I, 18.

<sup>19</sup> Ibid., 18-19.

<sup>20</sup> Ibid., 27. Newhouse relates the unexpected results obtained by one of the pioneers who utilized elderberry stakes for pole beans. When the beans were picked the poles put out a luxurious growth, even those stuck in "upside down."

The dangers of frosts in the winter months caused the Okeelanta group to set out potatoes for the fall and spring markets, and as prices for the hardy cabbage and lettuce were not too good the suggestion of celery was taken up as a community project. Seed at twenty-five dollars a pound was a problem which was overcome, but the plan failed when a blight killed the stalks. The need for an agricultural experiment station was keenly felt as the pioneers knew so little about this virgin soil or its cultivation. "The settlers would try out cures themselves and sometimes experiment in a haphazard way, but often the reason of cause and effect were lost sight of,"<sup>21</sup>

By and large little fertilizer of any sort was used on the muck soils before the discovery of the importance of the use of trace elements in the middle 1920's. P. D. Dyke of Okeelanta reported in 1917 that he had tried six types of fertilizer his first year on the land with no effect and that the second year he cut out all such soil aids with

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<sup>21</sup> John Newhouse, "Memories," IV, 154. As a result of a surprise party given one of the Okeelanta families in 1915, J. F. Waters remarked that such events should happen often. Newhouse wrote that the settlers made good company for each other off in the wilderness. The Okeelanta Growers Association grew out of the idea, prospering for ten years as a division of the Federal Farm Bureau Federation, and was one of the prime movers in the establishment of the Everglades Experiment Station near Belle Glade in 1923. Ibid., I, 28-29, IV, 154-155.



the result of "better crops of everything."<sup>22</sup> James E. Beardsley, whose family moved to the lake shore near Clewiston in 1914, stated in 1942 that no fertilizers were used around the lake before the early thirties.<sup>23</sup> W. C. C. Branning, Sr., Palm Beach County census enumerator, gave a glowing report in July, 1916, of a small acreage of corn planted on the lake-side end of the Miami Canal on April 16 which was twelve feet high on July 19. The plot produced enough to make seventy bushels per acre. He wrote that even without fertilizer vegetables on the lakeshore soils yielded four fold over ordinary lands.<sup>24</sup>

The need for the addition of fertilizer to the muck soils of the Everglades was pointed out by an observer who wrote that the crops grown there showed clear evidence of potash hunger and the lack of phosphoric acid.

When these needs were suggested to the real estate men they were at first indignantly denied, and when the matter was further pressed and evidence offered, three different men came back with the same argument, namely: that it was undoubtedly true, but that it would never do to

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<sup>22</sup> Everglades News (Ft. Lauderdale), January 30, 1917, reprint of article from Ft. Lauderdale Sentinel, October 6, 1916.

<sup>23</sup> Hearings Before the Select Committee Investigating National Defense Migration, House of Representatives, 77 Congress, 2 Session. Hereinafter cited as 1942 Migration Hearings.

<sup>24</sup> Everglades News (Ft. Lauderdale), January 30, 1917, reprint of article from Daily Tropical Sun (Lake Worth, Florida), July 22, 1916.

acknowledge that this soil lacked for anything. In other words, they considered that it would be treason to their business to begin the use of fertilizers, as one of the great claims of the place had been the richness of the soil. 25

David G. Fairchild, writing in 1938 from notes he had made in 1912 on the Davie Experiment Farm, said that "almost everybody except expert soil chemists had an exaggerated<sup>26</sup> idea of the fertility of the Everglades soils."

Attempts to eliminate the manual labor necessary to prepare the Everglades soils for agriculture were made in a number of instances with the use of walking, crawling, and rolling types of tractors. T. R. Copper tried a walking tractor at Okeelanta in the winter of 1913-1914 and another in the fall of the latter year but both were returned to the factory for further modification.<sup>27</sup> A caterpillar tractor fitted with a revolving shaft and cutting knives which pulverized the ground to a depth of eight inches was shipped to Okeelanta from Davie in 1914, and all the pioneers were able

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25 H. F. Bulton, "Some Land Booms in Southern Florida," Rural New Yorker, December 18, 1920 quoted in Roland M. Harper, "Natural Resources of South Florida," Eighteenth Annual Report of the Florida State Geological Survey, 61.

26 D. G. Fairchild, The World Was My Garden, 387.

27 John Newhouse, "Memories," I, 25. Newhouse wrote that a tractor used at Gladescrest, on the intersection of the Hillsboro and Bolles Canals, was too busy to be brought to Okeelanta. Gladescrest, about eight miles from Lake Okeechobee, had a population of 200 in 1914 but the settlement disappeared within a few years. Ibid., 2.

to get several acres prepared for cultivation. The conventional four wheeled tractors were not suitable for the soft muck soil. T. E. Will persuaded S. W. Bollinger, a Pittsburgh manufacturer and Everglades land owner, to construct a five ton caterpillar tractor equipped with a revolving cylinder armed with long teeth to comminute the soil.<sup>28</sup>

The machine was too heavy for the soft earth although it did succeed in breaking up a considerable amount of raw saw grass land.

Under the auspices of the United States Department of Agriculture a soil survey was made in the winter of 1915 of a strip two and a half miles wide on each side of the North New River Canal from Ft. Lauderdale to Lake Okeechobee. This reconnoissance, conducted by Mark Baldwin, H. W. Hawker, and Carl Miller, was realistic and not too complimentary to the area examined. The report noted the amount of work necessary to prepare the muck in order to make it arable, the inadequate facilities for drainage and irrigation, the non-utilization of other large muck and peat regions of the world, the high prices of Everglades lands based on unknown production abilities, and the dangers of frosts to winter vegetable crops. The report closed: "It is such land as this, untried for agriculture and a large proportion of it under

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<sup>28</sup> Tropical Sun (Lake Worth), May 18, 1916; John Newhouse, "Memories," I, 43.

water, that . . . is being sold for \$20 to \$65 an acre."

Needless to say the report of the soil survey was quite unpopular and was soon pushed into oblivion. John Newhouse wrote that he was never able to secure a copy, and Lawrence Will of Belle Glade informed the author that all available copies were destroyed in a public fire in Ft. Lauderdale soon after it appeared.

R. E. Rose viewed the soil survey as a part of the campaign of adverse criticism of the Everglades. The state chemist pointed to several chemical tests made from duplicate samples of the South Florida organic soils in which the analyses were concordant but the conclusions drawn were diametrically opposed. Theory and practice did not agree, either.

The non-productiveness of the soil was alleged by the Bureau of Soils (from chemical analyses and classification), while the productiveness of the soil was maintained by the State authorities, (from physical demonstration and by the crops growing on the land at the time of the survey.) 31

Rose directed the attention of his readers to the fact that this was not the first instance that federal soil experts

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29 Baldwin, Hawker, and Miller, 1915 Soil Survey, 40.

30 "It is said--according to rumors--that the soil outside the custard apple and elderberry belts was brown, fibrous peat, which would require 5,000 years to become of value to agriculture. It probably would if left inundated and uncultivated." John Newhouse, "Memories," II, 37.

31 R. E. Rose, "The Swamp and Overflowed Lands of Florida," loc. cit., 134.

had made a wrong guess, and pointed to the condemnation of the soils of the Imperial Valley of California. This land, pronounced worthless in 1902 by the Bureau of Soils in Circular Number Nine, was noted in 1916 as one of the most productive regions of the United States. The climate and soil of the Everglades was believed to be favorable to the introduction of sugar cane on a commercial basis. Newhouse wrote that

The luxurious growth of sugar cane, and the little care and cultivation it required, tempted the Upper Glades residents to plant some of it, even if they did not have a market for it. 32

In 1916, pioneers on Kreamer Island, at Canal Point, and South Bay had thirty acres in sugar cane, and in the war years of 1917, 1918, and 1919 there were 109 cane growers with 433 acres planted in cane. <sup>33</sup> In 1919 one of the Okeelanta settlers planted an acre of cane and talked about nothing but his cane field and the possibilities of making good profits in cane cultivation. This grower got other

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32 John Newhouse, "Memories," III, 117. The Palm Beach County census taker gave credence to the "sugar cane legend" with a narrative of a cane patch planted in 1911 which had produced five crops from the same ratoon. The sixth crop, then maturing, measured favorably with ordinary cane on the best farm lands at two months later in the growing season. Daily Tropical Sun (Ft. Lauderdale), July 22, 1916 as reprinted in Everglades News (Ft. Lauderdale), January 30, 1917.

33 F. D. Stevens, "History of Florida Sugar Operations," 16. Manuscript copy in the possession of F. D. Stevens, Belle Glade, Florida.

members of the community so interested that they bought his whole crop for seed at a cent a foot. John Newhouse must have chuckled when he wrote that this enterprising farmer cleared \$800 on the deal and shortly thereafter left for an unknown destination.<sup>34</sup> Okeelanta had several acres of cane, but no market for it. Crude cane mills were built and the syrup boiled down for home consumption. Some of the cane was sold to the Pennsylvania Sugar Company of Miami for seed, but many of the settlers had to grub the cane roots from their fields.<sup>35</sup>

The mild climate and the heavy growth of grass in the Everglades has intrigued stock fanciers from the earliest days of the drainage project. The soil surveyors of 1915 recorded that it appeared to be the opinion of many of the people interested in the development of this section that the most favorable possibility for its utility would be found in the raising and grazing of live stock.<sup>36</sup> The first stock introduced to Okeelanta was a fine Jersey heifer ferried up the canal in the spring of 1917. The cow was grazed on the native grasses, but gradually weakened and died. Newhouse remembered several similar cases, and it was not until the middle twenties that the State Veterinarians

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34 John Newhouse, "Memories," III, 117.

35 *Ibid.*

36 Baldwin, Hawker, and Miller, 1915 Soil Survey, 40.

determined that the cause of the unhealthfulness of the Everglades was due to "salt sickness." The veterinarians added copper, iron, and other trace elements to the cattle diet and the disease was checked.<sup>37</sup>

A number of stock raising ventures were begun during the war years of 1917 to 1919 in order to capitalize on the high prices. Bright Brothers had been successful in the cattle and hay ranching business on the margin of the Everglades west of Miami. Using the advantages of the twelve months growing season and the warm climate the Brights made thirteen to twenty tons of hay per acre and were able to pasture their cattle on green grass around the calendar.<sup>38</sup> Judge J. C. Gramling of Miami, J. A. Moore of the South Florida Farms Company, James Bright of Bright Brothers, and a number of other investors established a stock farm at Moore Haven in 1917.<sup>39</sup> In 1918, Bert Cheek and others began operations as the Okeelanta Stock Farms Company with pure bred Duroc Jersey hogs. The enterprise prospered until dissension among the stockholders, longworms in the hogs, and low finances caused a dissolution in 1922.<sup>40</sup>

Prior to the building of the railroads and highways,

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<sup>37</sup> John Newhouse, "Memories," V, 197-201.

<sup>38</sup> Miami Herald, November 29, 1916 as quoted in Everglades News (Ft. Lauderdale), January 30, 1917.

<sup>39</sup> Ibid.

<sup>40</sup> John Newhouse, "Memories," III, 87-88.

boats were the only means of transportation or communication in the Everglades. Steamboat and motorboat lines had operated in the Kissimmee-Caloosahatchee waterway off and on since the opening of the Hicpochee Canal by the Disston interests.<sup>41</sup> With the opening of the North New River Canal in 1912 and the Palm Beach Canal in 1916, boats from Ft. Lauderdale and West Palm Beach were added to the existing boat lines through the Caloosahatchee to Ft. Myers. Mail boats, carrying freight and passengers as well as mail made regular trips around the lake shore to the east and west coasts.

John Newhouse recalled that the Everglades pioneers were highly elated in the fall of 1914 over the proposal to construct a railroad from West Palm Beach to the three mile Hicpochee Canal.<sup>42</sup> The Palm Beach Everglades Railroad agreed to pay the Trustees of the Improvement Fund \$500 for each mile of a hundred foot right of way along the Palm Beach Canal and to place the road in operation in two years.<sup>43</sup> In

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<sup>41</sup> Floating down the torturous Kissimmee, W. S. Blatchley came to a division into several channels and was "at a loss which one to take when the steamer 'Osceola' . . . came along. By aid of posts set there for the purpose it snubbed itself around the sharp bend." W. S. Blatchley, In Days Agone, 211.

<sup>42</sup> John Newhouse, "Memories," I, 21. "And," said Mr. Butterworth, one of the promoters of Gladescrest, "when that happens we will raise the price of land to ONE HUNDRED DOLLARS." Ibid.

<sup>43</sup> I.I.B. Minutes, XI, 69-78; Florida Times-Union, April 10, 1915.



June of 1915, after a long delay, a great celebration was held in West Palm Beach to drive the "golden spike." Governor Park Trammell led the speechmakers. Newhouse wrote that the beginning was the end, for that night the spike, rails, and ties were pulled up and placed behind the depot, as "The Palm Beach and Everglades Railroad became history."<sup>44</sup>

The construction of a branch line of the Florida East Coast Railway was begun from Maytown, in 1911, south through the interior of the State, tapping the pine wood and cypress country, and reaching Okeechobee City on the big lake in 1915.<sup>45</sup> The Atlantic Coast Line Railroad extended its Haines City-Sebring branch to J. A. Moore's South Florida Farms development of Moore Haven on the lake shore at the Caloosahatchee Canal in 1918.<sup>46</sup> When J. J. O'Brien and A. C. Clewis began their development at Sand Point, renamed Clewiston, they built the Moore Haven and Clewiston railroad, later bought by the Atlantic Coast Line and extended to Lake Harbor at the Miami Canal.<sup>47</sup> Beginning in 1922 the Florida East Coast surveyed and planned to connect Miami and Okeechobee

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44 John Newhouse, "Memories," I, 24.

45 Florida East Coast Railway, A Brief History of the Florida East Coast Railway, 24; Isham Randolph, "Reclaiming the Everglades," loc. cit., 53. The new road was largely patronized at its terminus by the fishing industry. John Newhouse, "Memories," III, 91.

46 W. S. Blatchley, In Days Agone, 265; E.D.D. "Minutes," II, 95; John Newhouse, "Memories," III, 91.

47 John Newhouse, "Memories," IV, 148-150.

with a branch through the Everglades. The extension reached Canal Point in 1924, Belle Glade in 1926, and Lake Harbor in 1928.<sup>48</sup>

Highways and roads were at first merely raised ridges of muck that often burned up in dry weather and had to be traveled in low gear in wet weather. Travel was slow and uncertain, especially in the rainy season, and very dusty in dry weather. One traveler discovered that "If one rides over the roads he becomes so covered with the black dust of the dry muck that he looks like a negro."<sup>49</sup>

The agitation for roads was one of the vital issues of the Everglades pioneers in their attempts to improve their way of life. In 1916 a special road district was created in Palm Beach County to build roads from the east coast into the lake section. T. E. Will led the Okeelanta settlers in a movement which resulted in a special bond election; differences over the route, however, led to a survey along the

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48 John Newhouse, "Memories," IV, 156-157. Several parties, including the Florida East Coast Railway secured options for using the Landerdale or Miami Canal spoil banks for a railroad from the Magic City to the big lake, but all were allowed to lapse. I.I.B. Minutes, XII, 21, 31, XIV, 155, 159, 196-208, XXI, 41; Florida Times-Union, September 21, 1917.

49 W. S. Blatchley, In Days Agone, 266. Trips to the coast required three days, two for travel and one for business. Ferries across the canals took three men to handle the towing and it was often necessary to swim over when some careless, unknowing person tied the ferry up on the opposite side. In addition, travelers might find the ferry sunk and spend hours pumping the vessel out before using. John Newhouse, "Memories," III, 98-99.

lake shore rather than by way of the Bolles Canal. <sup>50</sup> The Trustees of the Improvement Fund encouraged roads in the Everglades by donating sections of land to be sold which was matched by monies raised locally through subscriptions and bonds of road districts. It was in this manner that the state highway from Miami to Ft. Myers, the Tamiami Trail, was constructed along a canal spoil bank in the early 1920's, as well as numerous other roads and highways in the Everglades. <sup>51</sup>

Located fifty-seven miles from Ft. Lauderdale, the residents of Okeelanta evidenced the news hunger common to all pioneers. Felix A. Forbes ran a regular boat to Lauderdale on Monday and Friday, returning on Tuesday and Saturday about five in the afternoon, though the boat was often delayed on account of motor trouble or navigation problems in times of low water. On these days the settlers, according to John Newhouse, would move toward the landing at Bolles and North New River Canals to meet the boat for supplies and mail amid

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<sup>50</sup> Clippings in Will Collection on roads agitation from Palm Beach Post, October 23, 1915; Miami Metropolis, November 30, 1915; Ft. Lauderdale Tropical Sun, January 27, 1916. R. J. Bolles sought better roads when he appeared before the Palm Beach County Commissioners stating that he paid \$100,000 a year in taxes in that county alone. Ft. Lauderdale Sentinel, January 15, 1915.

<sup>51</sup> I. I. B. Minutes, XI, 157, 177, XII, 20-21, 163-164, 196-198, XIV, 18, 91. John Newhouse, "Memories," II, 49. As late as 1921 travel across Florida was by launch from West Palm Beach to Moore Haven and by bus from Moore Haven to Ft. Myers. Charles Torrey Simpson, Out of Doors in Florida, 70-72.

rain, cold, or mosquitoes. The settlers would return on Monday and Friday mornings with mail and cash for their store orders.

J. F. Baker opened a store at Okeelanta in April of 1915 and J. R. Poland fitted out a grocery store boat which made regular trips around the south shore of the lake. Baker expanded his building to include several guest rooms for sightseers and landowners, later adding boat service to Ritta, on the lake near the Miami Canal entrance, and Gladescrest, on the Hillsboro Canal. For some time Baker ran the only store in the vicinity and settlers came from far and wide.

Settlers on the south lake shore on Kreamer and Torry islands, etc., belonged to the regular customers and to see them rowing in, and back

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52 John Newhouse, "Memories," I, 30-31. "Supplies were obtained for the first several years after my arrival on the lake shore in 1914 from Deerfield on the Hillsboro Canal or from Ft. Lauderdale. Boats carried mail from Ft. Lauderdale to the two post offices then established at Okeelanta and at Ritta, twice a week. Produce made the same trip down the canal from farmers who owned docks to the railroad at Ft. Lauderdale, frequently a 24-hour journey. It was a common occurrence for farmers to harvest produce, put it on their dock, expecting arrival of a regular boat, which might have had motor trouble or run aground in the canal, so that the vegetables might have been harvested three or four days before they were actually on the boat and on the way to the railroad. Facilities for packing were nonexistent, each farmer putting up his own individual pack on his own place and generally with the labor from his own family or such white help as might be obtained from fishermen or neighbors." J. E. Beardsley, 1942 Migration Hearings, 12559.

53 John Newhouse, "Memories," I, 31-32; Gertrude M. Winne, "Early Days on Lake Okeechobee," loc. cit.

was nothing unusual, though most of them had motor boats. Many settlers would take off Sunday and bring their family along for the outing. 54

The Palm Beach County School Board built a one room school house at Okeelanta in 1916, and hired a school boat and school boat driver to transport children from the lake shore. In 1917 schools were also established on Torry and Kreamer Islands, and in 1919 a school was built at Ritta  
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through popular subscription.

Taking stock of Okeelanta at the end of its first year, John Newhouse remembered the establishment of the growers association, post office, school, twelve miles of muck roads, and several tractors. Setbacks from frost, disappointments with the new soil, plant diseases, and other pioneer hardships dulled the optimism of many of the settlers and they left as others came in to take their places. The hardier ones stuck it out and Okeelanta "tackled another season, this time varying their crops with hardier ones, as cabbage,  
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lettuce, etc., and with a slightly better result."

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54 John Newhouse, "Memories," I, 33.

55 Ibid., 40. T. E. Will was a member of the Okeelanta school board and served as supervisor by appointment. See Will Collection for letters and other memoranda on teacher appointments, hiring of school boat pilots, and so forth.

56 Ibid., 42. Many of the pioneers planted citrus, avacados, and other fruit trees, but no general shade trees. Five hundred red eucalyptus trees were planted and did well at first, but soon died. No large scale plantings were tried after that. Ibid., 34-35.

A dry season in 1916 witnessed the big lake's fall to unprecedented low levels. Howard Stowe, who had put up a store on Torry Island, became isolated and moved his business to Rabbit Island nearer the mainland where he enjoyed a good trade from the farmers who were homesteading the dry lake bottom. The homesteaders staked off their claims with crude signs, but in the rains of the following year the lake rose and the squatters were forced off and Stowe moved to the Hillsboro Canal, becoming the first merchant of the present Belle Glade.

"Money was scarce amongst the pioneers, and credit impossible to get." The real estate companies had sold the land on easy payments, but the payments had to be met. The small farmers would be induced to purchase more than they could afford, using the remainder of their cash for building materials, tools, seed, food; and with no cash income for

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57 G. M. Winne, "Early Days on Lake Okeechobee," loc. cit.; John Newhouse, "Memories," II, 60-63. Reporting on June 25, 1917 to the I. I. Trustees, Frederick C. Elliott, who had succeeded J. C. Wright as Chief Drainage Engineer, said with regard to the squatters: "I find that the condition with respect to State lands in the district is one of confusion among the residents as to just what the status is more than anything else; many parties have the idea that they are entitled to use State land in whatever manner they choose without cost to themselves just as long as they can hold it. The idea is also prevalent that some sort of valid claim to the land can be established by occupying, clearing or improving the same." I.I.B. Minutes, XII, 64.

58 John Newhouse, "Memories," II, 67.

the first two or three years plus high freight rates a number of the pioneers found their land sales contracts cancelled after lapsing thirty days on a payment. The Okeelanta group sought to take advantage of the Federal Farm Loan Act of 1916 with a local organization and applied to the regional office at Columbia, South Carolina, but without success.<sup>59</sup>

Richard J. Bolles, the guiding hand of the Okeechobee Fruit Lands Company and the Everglades' earliest private developer, passed to his reward in 1917. Whatever else may be written of Bolles it can be said that he was a man of vision who was unafraid of taking a chance, and had he lived twenty years, would have seen his faith bear dividends along the Okeechobee shore. In the summer of 1917, the Bolles Company laid out the community of South Bay at the lake entrance of the Lauderdale Canal. Moore Haven, Okeelanta, Fruitcrest, and Gladescrest had preceded this development, but they were soon followed by Pahokee at Bacom's Point, and Canal Point further north at the lake entrance of the Palm Beach Canal. Connersville on the Palm Beach Canal likewise began in 1917. Belle Glade and Chosen were established on the Hillsboro Canal, near the lake, in 1919; they were followed by Geerworth, Gladeview, and Community Farms nearer West Palm Beach on the same canal when the cross-state

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<sup>59</sup> John Newhouse, "Memories," II, 67.

highway became passable in 1921. The development of Clewiston was also begun in 1921. The establishment of these townsites, with some two thousand inhabitants, in less than ten years<sup>60</sup> was a tribute to the faith in the Everglades project.

The growth of Moore Haven, already touched upon, was typical of the lakeshore villages. Situated on the navigable Caloosahatchee Canal, near the western edge of the Everglades, the settlement was promoted by a real estate company. By 1916 the community boasted a small hotel and a woman mayor,<sup>61</sup> Mrs. Marian O'Brien. A winter visitor described it as a town of shacks,<sup>62</sup> "but thriving as men with a hoe and the grub get to work." W. S. Blatchley believed the village could muster fifteen hundred residents when he visited it in 1918; he found his friend, who lived on the outskirts in a tent with a board floor, "raising cabbages on land which a few years ago was the home of the turtle and the catfish."<sup>63</sup> Blatchley remarked on Moore Haven's lone cypress which had been at the edge of the lakeshore in 1913, but which was now eight miles inland. By 1920 Moore Haven had become an established shipping point and trading center where good service

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60 John Newhouse, "Memories," II, 64.

61 *Ibid.*, III, 91.

62 Nevin Winter, Florida, The Land of Enchantment, 295; C.T. Simpson, Out of Doors in Florida, 169.

63 W. S. Blatchley, In Days Agone, 262. "Zimmerman cannot dispose of his fine crop of cabbage and is trying to buy barrels and make them into kraut." *Ibid.*, 265.



from the railroad and equitable prices of the merchants, according to John Newhouse, attracted a large share of the upper Everglades and lake shore trade.<sup>64</sup>

During these years there was some development east of the lake. In April, 1917, W. J. Conners, a Buffalo, New York, politician, visited the Everglades and purchased a section of land on the Palm Beach Canal about four miles from Lake Okeechobee. He proposed to cultivate the land and erect warehouses and docks, construct roads, and excavate small drainage canals. Conners was quoted as saying Florida folk did not know enough about good land and needed examples of how to make money in agriculture and allied pursuits.<sup>65</sup> Conners' first operations were in the direction of truck crops, but as these did not pan out so well he resorted to dairying. Registered Holstein and Friesian cows were imported and milk was retailed on the east coast at thirty-five cents a quart; lacking adequate refrigeration facilities this project did not prosper, and Conners shifted his interests to highway construction.<sup>66</sup>

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64 John Newhouse, "Memories," III, 92-93.

65 L. G. Biggers, Managing Secretary of the West Palm Beach Board of Trade, to T. E. Will, April 7, 1917, in Will Collection.

66 John Newhouse, "Memories," III, 85. Another experiment on 'Glades soil, begun in 1917 by the Adams and Moore purchase of 10,000 acres at Gladescrest to raise silk fiber plants, failed in 1921 on account of lack of proper water control and transportation troubles. Several of the silk farm residents remained for a number of years, engaged in raising livestock and truck crops. As late as 1940 the old hotel and store buildings remained as sentinels of the former town. Ibid., VII, 77-78.

Recognition of the upper 'Glades pioneers was made in 1918 when Palm Beach County commissioner districts were re-aligned. Previously the five districts had been east-west divisions from north to south. Under the 1918 distribution the east coast retained four districts and all the rest of the county was given to the Everglades portion. As the main work of the commissioner was to supervise roads, considerable pressure had been brought to bear on the County Commission from the voters in the western end of the county. A paved road reached Loxahatchee Farms in 1918, ten miles from West Palm Beach, and a dirt road followed the canal bank to Twenty Mile Bend. A canal and roadbed stretched from the Palm Beach Canal to the Hillsboro Canal as well as a canal and road from Gladescrest to Okeelanta. A road also followed the canal from Belle Glade to Gladescrest. Ferries were used in place of bridges, the last ferry being placed in 1921. John Newhouse remembered that he made a trip from the east coast to South Bay via Okeelanta in a Ford but that "the trip was still cumbersome and required a whole day's time."<sup>67</sup>

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67 John Newhouse, "Memories," III, 100.

## CHAPTER XI

### SUGAR AND THE SECOND LAND BOOM

#### 1. Growing Pains

In accordance with a law (Chapter 6456) passed by the 1913 session of the legislature, which authorized the Drainage Commissioners to float and sell bonds, an issue of a million dollars payable in thirty years bearing six per cent interest coupons was prepared for sale by virtue of a resolution of July 1, 1914.<sup>1</sup> The Commissioners advertised that the bonds would be sold to the highest bidder on August 20, but on August 5 the sale was called off because of the poor condition of the money market and the financial stringencies of the first World War years.<sup>2</sup>

The state drainage officials were not long deterred by the poor financial situation in their determination to carry on with the South Florida project. In the early months of 1915 a contract was signed by the Internal Improvement Trustees and the officials of the Furst-Clark Construction Company for the execution of the twenty-five mile St. Lucie

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1 E. D. D. "Minutes," II, 63.

2 Ibid.; R. E. Rose, "The Swamp and Overflowed Lands of Florida," loc. cit., 133; "Message of the Governor," Journal of the State Senate of Florida of the Session of 1915, 42. Other attempts were made to sell Everglades Drainage District bonds in 1915 and 1916, with no success. E. D. D. "Minutes," II On January 1, 1917, Spitzer, Rorick and Company of Toledo, Ohio, arranged for the first purchase of \$3,500,000 at 95 and accrued interest, paying \$489,165 for the first \$500,000 on April 23, Ibid., III, 1-8.

Canal.<sup>3</sup> The state officials were thus building a work to carry out the Randolph recommendations of an Okeechobee control canal, which under the terms of the contract would be completed with a dam at the eastern end three hundred fifty feet wide and eighteen feet high. The contractors agreed to accept "in payment for the work small monthly cash payments and notes of the Drainage Board, secured by drainage district bonds for the remainder...."<sup>4</sup>

In his biennial report to the legislature in 1915 Governor Trammell mentioned the handicap under which the Everglades work was progressing in regard to finances, but was optimistic over the collection of drainage taxes and the new construction contract which, ". . . with other work that is planned, no doubt means the ultimate success of the drainage and reclamation of the Everglades."<sup>5</sup> The governor asked the legislature to pass a bill enabling the Internal Improvement Trustees to establish and maintain one or more experiment stations on state lands in the muck soils which would add materially to the development of the state, as well as to the

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<sup>3</sup> I.I.B. Minutes, XI, 39; Florida Times-Union, February 16, March 13, 1915.

<sup>4</sup> Journal of the State Senate of Florida of the Session of 1915, 43; R. E. Rose, "The Swamp and Overflowed Lands of Florida," loc. cit., 135. Rose stated that the contractors accepted notes, secured by bonds, under an agreement that if they were sold settlement would be made at par or 90 per cent of par value.

<sup>5</sup> Journal of the State Senate of Florida of the Session of 1915, 43.

value of public and private lands. Trammell urged the legislature to memorialize Congress for a survey of the drainage canals from Lake Okeechobee to tide water with a view towards incorporating the state cuts into a federal waterway across the state.<sup>6</sup>

At the suggestion of the Florida State Federation of Women's Clubs, the chief executive recommended that the legislature set aside and designate Royal Palm Hammock in Dade County as Royal Palm State Park.<sup>7</sup> This area, including Paradise Key, remained one of the few natural habitats of the royal palm in the state and had long been a cherished retreat of natural scientists and nature lovers. In response to the various requests the lawmakers enacted Chapter 6949, at the 1915 session, of the laws of Florida which made the cession of a section and a half of land for a public park on the provision that the Federation secure 960 additional acres in the same vicinity to be used as an endowment to carry on the maintenance of the domain.<sup>8</sup> This far-sighted act of the State has provided for posterity one of the few truly tropical areas of the United States and will be the nucleus of a proposed Everglades National Park.

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<sup>6</sup> Journal of the State Senate of Florida of the Session of 1915, 43.

<sup>7</sup> Ibid., 50-53

<sup>8</sup> General Acts and Resolutions Adopted by the Legislature of Florida at the Fifteenth Regular Session Under the Constitution of 1885, 337-339.

In a survey of the history of the Everglades drainage scheme and its progress Frederick C. Elliot, chief drainage engineer of the state in 1915, traced the program from its inception as a plank in Broward's platform through the first decade. Putting the problem on a factual basis, Elliot declared that ". . . notwithstanding the many obstacles necessary to overcome, reclamation by drainage has, on its own merits, gradually become one of the fixed policies of the State."<sup>9</sup> With that statement as his background Elliot proceeded to deliver the most lucid and authentic brief of the Everglades program that had been made to that date. The chief engineer pulled no punches in forthrightly proclaiming that none of the canals were fully completed or discharging over a small fraction of their planned capacity. In round numbers Elliot listed 280 miles of open canal representing 21,000,000<sup>10</sup> tons of excavation at a cost of \$2,550,000.

In the drainage of this great inundated prairie there is being developed the most valuable resource which the State of Florida possesses. The Everglades Drainage Project is the greatest work of reclamation being carried on in the world to-day.<sup>11</sup>

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<sup>9</sup> Frederick C. Elliot, "The Everglades," Florida Quarterly Bulletin of the Agricultural Department, XXV (April 1, 1915), 49.

<sup>10</sup> Ibid., 66. "The drainage will not become thoroughly effective, and lands in the Glades cannot be cultivated with entire safety against damage from overflow until the large canal for controlling Lake Okeechobee shall have been constructed, and the main drainage canals traversing the Everglades are well on toward completion. Conditions gradually improve as the work progresses." Ibid., 70.

<sup>11</sup> Ibid., 71.

In spite of the exaggerations of various writers and the sales talks of real estate agents, such as "So much of the vast reclamation has been accomplished that within a year the entire area will be ready for the farmer and the settler,"<sup>12</sup> the enterprise was still in its experimental stages. In response to this and similar statements, F. C. Elliot secured the publication of a retraction in the same magazine in which the above quotation appeared informing the public that the contributor had been guilty of gross misrepresentation. The Florida engineer informed his readers that "the canals now under way are not planned to drain the entire area. . . the drainage of two-thirds of the Everglades has scarcely yet<sup>13</sup> been undertaken."

The year 1917 saw the inauguration of Governor Sidney J. Catts, a former Alabama Baptist preacher, who had beat the bushes of Cracker Florida and had been elected on an anti-Catholic, social leveling platform. Declaring that the governorship had been raped by the Democrats in the first primary, Catts ran on the Prohibition ticket in the general election<sup>14</sup> and won by a small majority. Insofar as the Everglades program was concerned Catts had his hands tied by the commitments

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<sup>12</sup> Day Allen Willey, "Reclaiming the Everglades," Scientific American, CXV (September 16, 1916), 258-259.

<sup>13</sup> "Draining the Everglades-A Retraction," Scientific American, CXVI (January 13, 1917), 61. Elliot wrote the editor of the magazine that only a six mile strip on Okeechobee's south shore and the lower reaches of the New River and Miami Canal banks were ready for cultivation, and that even these sections were subject to overflow.

<sup>14</sup> K. T. Abbey, Florida, Land of Change, 343-344.

of his predecessor in the sale of the three and a half million dollar bond issue in the first few days of January, 1917.<sup>15</sup> The bond sale was contested in the federal courts of the Southern District of Florida by J. B. Showhalter of Pennsylvania. Showhalter sought to throw the drainage district into receivership, forcing the sale of state lands to complete the drainage program, because of alleged bad faith on the part of the Trustees of the Internal Improvement Fund in not doing the job.<sup>16</sup>

On January 18 former Governor Trammell threw some light on the subject when he informed the press that the court fight was being made by several large landholders who had sought to influence the Drainage Board for several years in the proposition of disposing of the lands of the state in order to continue the south Florida work of reclamation.<sup>17</sup> The bond sale in 1917 brought to a head the opposition which had existed in the state to the Everglades proposition. Catts soon found himself in the center of a battle "to bond or not to bond." In a speech delivered in January, 1917, he said:

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<sup>15</sup> Florida Times-Union, January 6, 1917. Along with the announcement of the bond sale was published the news that 6,000,000 cubic yards of material had been excavated in 1916, which was forty per cent more than any previous year.

<sup>16</sup> Ibid.; January 16; 1917.

<sup>17</sup> Ibid., January 18, 1917. On February 22, United States District Judge R. M. Call dismissed the bill of complaint since he held that the lands were vested in the state legislature (in presenti in the State), and that the legislature had not divested swamp land titles from the state into the hands of the Trustees. Ibid., February 23, 1917.



One trouble about the matter is that the people living in other sections of the state are not in sympathy with the drainage of the Everglades as they should be. . . [this bond sale] should put the whole section largely in condition of cultivation, and after the first crop is made on this land you may look for prices to soar until the fabulous prices of California will be nothing to what this, the richest land on earth will bring.<sup>18</sup>

In the years since Broward's election the Everglades had become a disappointment to the people of the state at large. Ranchers and others whose stock roamed the open range were not happy over the prospects of free grazing on state lands being discontinued after it passed into private ownership and was fenced.<sup>19</sup> North and west Florida farmers were hostile to the project on account of threatened competition from the muck soils, and state legislators had made a number of proposals to sell all the state lands below Okeechobee and chuck the drainage program.<sup>20</sup> Within the drainage district itself the residents complained of too much "drainage by mail" and asked for a drainage board of competent engineers who would have their headquarters in the Everglades, "where they will be in direct touch with actual conditions and know the needs of the pioneer farmers of this coming empire."<sup>21</sup>

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<sup>18</sup> Ft. Lauderdale Sentinel, January 5, 1917.

<sup>19</sup> Isham Randolph, "Reclaiming the Everglades of Florida," loc. cit., 67

<sup>20</sup> Edward Howe, "Looking About in the Everglades," Country Gentleman, LXXX (August 23, 1919), 11.

<sup>21</sup> Ft. Lauderdale Sentinel, October 6, 1916, as reprinted in Everglades News (Ft. Lauderdale), January 30, 1917.

In late March and early April two more groups of 'Glades landholders sought to enjoin the Trustees from collecting the drainage tax and selling any bonds, but both suits were decided in favor of the state officials.<sup>22</sup> Faced with the pros and cons and finding himself in the middle, the Governor was so tired of the Everglades battle that when the legislature met in the first week of April he greeted that august body with a brief paragraph on the subject.

In regard to this mooted and restless matter I desire to recommend that the Legislature pass a law putting all of the one million two hundred and fifty thousand acres of land now held by the Internal Improvement Board for sale at from five to eight dollars an acre, and that the same be sold at private or public sale and the amount of money gotten from these sales be, after the debts of the Board have been paid, turned over to the State School Fund, whereby each and every child of the State shall obtain its pro rata share, and allow the drainage of those lands to continue after they pass into the hands of private owners. 23

The reaction to Catts' somewhat abrupt solution was rapid. Meeting a delegation of state legislators from the lower east coast, the Governor maintained his position to sell out the 'Glades lands in accordance with the terms of his biennial message. The members of the delegation sought to rebut Catts' argument by showing the chief executive that to sell out to the State's interest would leave the present owners, who had

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22 Florida Times-Union, March 30, April 7, 1917.

23 Journal of the State House of Representatives of Florida of the Session of 1917, 24. The Florida Times-Union, which had opposed the Everglades project from the start, did not hesitate to play up Catts' message on the 'Glades. Florida Times-Union, April 4, 1917.

bought in the area trusting the honor and integrity of the State to reclaim the district, holding the bag.<sup>24</sup> The question was finally settled for the 1917 session by the completion of the sale of the first bond issue and the creation of the N. B. Broward Drainage District Involving 528,000 acres in the Ft. Lauderdale section. This was a sub-drainage district within the Everglades Drainage District, to give special care to the large acreage.<sup>25</sup>

Roughly a year after the first bond sale, F. C. Elliot, chief drainage engineer, reported that ten dredges were in operation on seven canals, among them the Palm Beach, which was nearing completion and would be offered for acceptance within two months.<sup>26</sup> In reply to numerous questions on the subject of agriculture on imperfectly drained saw grass muck

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<sup>24</sup> Florida Times-Union, April 11, 1917. These men submitted a twelve point plan for the project which included local representation on the drainage board, transfer of state lands to this board, a \$25,000,000 bond issue, applying drainage tax to school lands, carrying out of present contracts, continuing present boundaries of the district, paying commissioners \$3600 each yearly and expenses, and expending \$50,000 for an experiment station with \$5,000 yearly for maintenance.

<sup>25</sup> Ibid., May 25, 1917. Conforming with Senate Concurrent Resolution number 6, the Senate Committee on Public Lands and House Committee on Canals and Drainage held a joint meeting and public hearing on the action to be taken in regard to the Everglades problem on the night of April 17, 1917. Acts and Resolutions Adopted by the Legislature of Florida at the Sixteenth Regular Session Under the 1885 Constitution, 332-333.

<sup>26</sup> Florida Times-Union, March 25, 1918. Elliot added that locks were being constructed on the Caloosahatchee and North New River Canals. The contractors had been forced to change the boilers on one dredge to burn wood, and were afraid two others would have to be converted if the fuel situation did not improve.

land the State Chemist, Rufus E. Rose, wrote in July, 1919, that more perfect drainage was necessary for the vast bulk of the Everglades organic soils.

At the present time, excepting a comparatively narrow belt immediately surrounding Lake Okeechobee, which has been subject to drainage and the circulation of water and air at divers time, since the first State Canals were cut in 1881-82, there is comparatively but little drained land, except the spoil banks of the State Canals, though there are large areas of dried land.<sup>27</sup>

However, the Board of Drainage Commissioners had expressed the belief publicly the previous year that a quarter million acres of 'Glades lands were in a good condition from a drainage standpoint, and that the placing of the finishing touches on the works then under construction would provide main canals  
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for a half million more acres.

There can be no doubt that the Everglades, when opened and developed will present to the world the most magnificent array of rich muck lands that the world now has upon its surface; at the same time the peculiar formation of the Everglades is of such nature that much experimentation must be done before ultimate success will crown the efforts of the men who cast their destinies in these muck soil lands.<sup>29</sup>

With these words Governor Catts, in an "about-face" on the Everglades from his speech to the previous session, requested the legislature to locate experimental farms in the region south of Okeechobee before all the choice lands were

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<sup>27</sup> R. E. Rose, "Drainage Versus Drying of Productive Soils," Florida Quarterly Bulletin of the Agricultural Department, XXIX (July 1, 1919), 88.

<sup>28</sup> Florida Times-Union, August 1, 1918.

<sup>29</sup> Journal of the State Senate of Florida for the Session of 1919,<sup>27</sup>.

taken up by settlers, men of larger means, and corporations. Catts laid particular emphasis on the opportunity for the State to experiment with sugar cane as well as with truck, forage, grain, and citrus crops.

Calling the attention of the legislature to the combustible character of the organic soils of the Everglades, the executive pointed out that the practice of grazing cattle and hogs on the adjacent prairies had led to the custom of stockmen burning the grazing lands over during the spring dry season, which in turn spread to the muck, "destroying in a year millions of dollars of this rich muck composite."<sup>30</sup> Catts recommended "very strongly" that the legislature provide means for fire guards outfitted with "fire-fighting apparatus for the protection of these valuable sections."<sup>31</sup>

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30 Journal of the State Senate of Florida of the Session of 1919, 29. The 1919 legislature enacted Chapter 7362, Laws of Florida, which amended Chapter 6456, 1913, to the extent that the most favorably located lands in the Everglades Drainage District had their drainage tax scale raised to 28¢ an acre through 1920; 30¢ through 1923; and 35¢ through 1927; and the assessment was raised for the majority of the remaining acreage in a like proportion. The act further authorized the Drainage Commissioners to issue negotiable coupon bonds not to exceed \$6,000,000. General Acts and Resolutions Adopted by the Legislature of Florida at its seventeenth Regular Session Under the Constitution of 1885, 154-194. Cited hereafter as 1919 Session Laws.

31 Journal of the State Senate of Florida of the Session of 1919, 29.

The early settlers had not been bothered by high water. When the Palm Beach Drainage and Highway District began ditching, residents on the lake complained that such works lowered the water levels too far. As a result of this complaint excavations in the highway district were dropped for a time. In general, the period from 1918 to 1922 was one of low water and<sup>32</sup> fires burned actively over the Everglades.

The mass of sawgrass and muck soil were a dandy combination for fires. The fires could not be stopped once started as a lot of the land was above water level. The small fires of trappers and campers would smoulder for days until favorable conditions arose for their spreading.<sup>33</sup>

Acting on Gatts' recommendation the 1919 legislature enacted Chapter 7943, Laws of Florida, which made careless, wilful, or malicious setting or neglect of fires in the Everglades Drainage District a misdemeanor punishable by a \$500 fine or six months imprisonment. The second section of the act authorized the employment of one or more fire wardens or patrols and the promulgation and enforcement of fire rules by<sup>34</sup> the Board of Commissioners of the District.

In compliance with Chapter 7943 the Board of Commissioners hired Andrew Carter of Arcadia and Moore Haven as a fire warden at a salary of \$200 a month. Carter appeared before the Board on July 7, 1919, and received his authorization and plans to

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<sup>32</sup> John Newhouse, "Memories," IV, 166.

<sup>33</sup> Ibid., IV, 143.

<sup>34</sup> Laws of Florida, 1919, 327-328.

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combat the muck fires. Six months later Carter was dismissed as the Board decided his services were not needed in the wet season, and A. R. Richardson, assistant drainage engineer for the Board, was given the fire warden's job as collateral duty. John Newhouse commented that the more preventive work done by the wardens and the settlers the worse the fires got. In the spring of 1922 a strong wind blew the fire almost over Okeelanta, and a number of muck roads in the vicinity burned up. After some experience at fighting these fires, the wardens and deputies, according to Newhouse, burned out the dangerous spots.<sup>37</sup>

Another consequence of the drainage and ensuing low water was the subsidence of the soil, greatest at its highest altitude along the lake shore. In the spring of 1921 the Board of Drainage Commissioners discussed the construction of a dike from Moore Haven to Ritta, on the eastern side of the Miami Canal, but because of meager finances no action was taken until the middle of August.<sup>38</sup> At that time the Board contracted with Ben Johnson to excavate and pile muck for a dike from

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35 E. D. D. "Minutes," III, 263

36 Ibid., IV, 4.

37 John Newhouse, "Memories," IV, 144-145. The 1921 legislature amplified the 1919 law by declaring fire a "common enemy" and an informer's reward of \$5 for information leading to the arrest of any intentional or unintentional fire lighter without a permit from a legal warden or deputy was authorized. Chapter 8414, Laws of Florida, 1921.

38 E. D. D. "Minutes," III 30. It was estimated in 1921 that muck soil would shrink up to 50% or more of its depth under drainage and cultivation, and that the deeper the water table in the soil the more the subsidence. F. C. Elliot, "Tests on Run-off from Muck Soil in the Everglades," Engineering News-Record, LXXXVII (July 28, 1921), 157-158.

Moore Haven to Sand Point (Clewiston). <sup>39</sup>

Further evidence of the compaction and shrinkage of Okeechobee's shore, twenty-one feet above sea level, was given in the direction of the Trustee-Commissioners to the chief drainage engineer in 1921. Elliot was authorized by Governor Cary Hardee and his fellow officials to proceed to Washington and contact the War Department engineers regarding a change in the May, 1912, permit setting Okeechobee's level at sixteen feet. The board pointed out a two to four foot drop in the land bordering the shore and, believing that it would settle further, sought to bring the big body of water down to fourteen feet to provide a safe margin. <sup>40</sup> The high water in the latter part of 1922 was sufficient proof of the need of the then unfinished St. Lucie control canal as well as a levee to protect the lake flooded lands of the upper Everglades. An earth and sand levee stretched from Moore Haven to Pelican Bay by 1926 but its irregular height and poor construction did not withstand the wave action of the lake and breaks

<sup>39</sup> E. D. D. "Minutes," III, 143. On December 11, 1922, Homer Vivian of Pahokee sought the aid of the Drainage Board to close Pelican Lake by a dike to protect the Pahokee town-site. The Board agreed to construct the requested work as soon as funds became available. *Ibid.*, IV, 270.

<sup>40</sup> *Ibid.*, III, 63; I. I. B. *Minutes*, IX, 443-445. Lowering of the underground water supply caused the Miami Water Company to petition the Drainage Board for the use of the Miami Canal waters in 1921. E. D. D. "Minutes," III, 183.



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occurred.

The Everglades settlers slowly realized that the State drainage program would have to be supplemented by sub-districts. The creation of the Palm Beach Drainage and Highway District, later incorporated into the South Florida Conservancy District, in 1919 was the first of the sub-drainage districts in the upper Everglades patterned on the N. B. Broward District set up two years earlier. By 1921 eighty miles of ditches had been dug. Although the flood of 1922 slowed up the work there was some progress the following year, but the high waters of 1924 brought the definite conclusion that pumping would form a necessary addition to gravity drainage.<sup>42</sup> The move to add the sub-drainage districts brought a recommendation from Governor Catts in 1919 to the legislature to pass legislation which would guard the interests of the State and other property owners in the matters of bond flotation and taxes.<sup>43</sup> The lawmakers complied with an act, Chapter 7866, Laws of Florida, that required sponsors of proposed sub-districts in the Everglades Drainage District to submit their data to the Board of Commissioners and to a court of the State for a public hearing before approval.<sup>44</sup>

41 John Newhouse, "Memories," IV, 178.

42 Ibid., III, 121. Following the Broward and South Florida Conservancy sub-districts were Gladeview, Geerworth, Disston Island, Pahokee, Pelican, Sugarland, and Brown. The Conservancy District covered 300,000 acres south and southeast of the lake. Its yearly taxes ranged from 50¢ an acre for lake front lands to 10¢ an acre on the back lands. Newhouse wrote that the costs of pumping installations doubled these taxes and that in some ways the area was worse off than ever.

43 Journal of the State Senate of Florida of the Session of 1919, 43.

44 Laws of Florida, 1919, 198-206.

In the spring of both 1921 and 1922 the water table sank to very low levels, only to rise and flood the land with the advance of the rainy season. In 1922 the water got so low that transportation on the Lauderdale Canal was brought to a stop, but the summer rains pushed the water a foot and a half above the farm land at Okeelanta.<sup>45</sup> Drainage and navigation were two major problems in the 'Glades in the early days. The boatmen wanted high water; the farmers wanted low water. F. C. Elliot, the State's chief drainage engineer, tried to settle the controversy by setting up committees from both groups to control the water levels to mutual advantage with the two locks in the North New River Canal.<sup>46</sup> Indeed, 1922 was a black year for the Everglades. The rainfall for the nine months ending September 30 was reported to be more than ten inches in excess of the annual average for the entire year. The towns of Bare Beach, Okeelanta, and Clewiston were all under water and southwest of Moore Haven was a body of water a half mile wide and forty miles long.<sup>47</sup>

Governor Cary A. Hardee made a strong plea to the legislature in his first message in 1921, as had several of his

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<sup>45</sup> John Newhouse, "Memories," IV, 139-140, 169. T. E. Will wrote in 1927 that he was driven from the Everglades in 1921, but that he had since fought for "Water Control and Roads to be followed by Rational, Practical, Planned Settlement and Development." T. E. Will "Confessions of a Conservationist," Memorandum in Will Collection.

<sup>46</sup> John Newhouse, "Memories," IV, 139-140.

<sup>47</sup> Florida Times-Union, October 5, 1922. The Drainage Board had let a contract for the excavation of the Indian Prairie Canal, opening the lands northwest of Lake Okeechobee on March 17, 1922. The prices had gone up to 16¢ a cubic yard for earth and 50¢ a cubic yard for rock from the 1912 levels of 8¢ and 20¢ respectively. E. D. D. "Minutes," IV, 63.

predecessors, for the establishment of an agricultural experiment station in the Everglades. Hardee stated that the solution of water removal was without question, but that the problem of reclamation would not be solved until agriculture was placed on a sound basis, and that the entire justification for drainage rested on the assumption that soil when drained would be available for agriculture.<sup>48</sup> The governor informed the legislature that the Drainage Board had recently made a trip through the 'Glades and was impressed with the possibilities, progress, and work accomplished.

With the passage of Chapter 8442, Laws of Florida, pursuant to Hardee's request the long sought experiment station was born. The South Florida station was incorporated into the Florida experiment station organization under the State Boards of Control and Education, with an appropriation of \$10,000 annually for the years 1922 and 1923 and \$5,000 annually thereafter from the Board of Commissioners of the Everglades Drainage District and like sums from the general fund of the State Treasury.<sup>49</sup>

In the following September at a meeting of the Boards of Control and Education, Wilmon Newell, director of the Florida

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<sup>48</sup> Journal of the State Senate of Florida of the Session of 1921, 19-20. Newhouse recorded in his reminiscences that T. J. Campbell of West Palm Beach had been elected to the State Senate in 1920 and had pushed the bill through the 1921 legislature. John Newhouse, "Memories," IV, 155.

<sup>49</sup> Laws of Florida, 1921, 154-157. In accordance with Chapter 8842 the Trustees deeded section 3, Township 44 South, Range 37 East to the State Boards of Control and Education on August 24, 1921. I.I.B. Minutes, XIV, 77-78.

Experiment Stations, and F. C. Elliot, chief drainage engineer, were made a committee to visit the site four miles east of Belle Glade on the Hillsboro Canal and make recommendations. Later, in November at a joint meeting of the above two boards and the Internal Improvement Trustees, it was agreed to proceed with the building program of ditching, docks, and housing under the direction of the Board of Commissioners of the Everglades Drainage District. The work progressed slowly on account of the floods of 1922; however, by August 28, 1923, the Drainage Board had drained the section and constructed two frame buildings of two stories each which it turned over to the State Board of Education.<sup>50</sup>

The sale of \$2,500,000 worth of bonds to Spitzer, Rorick, and Company of Toledo, Ohio, on July 22, 1920, closed out the \$6,000,000 total authorized by the legislature in 1917. The construction expenses in 1920 were averaging \$100,000 a month and it was the plan of the Drainage Board to have the bonds taken up at about that rate.<sup>51</sup> At that time the St. Lucie

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50 I.I.B. Minutes, XV, 112; University of Florida Agricultural Experiment Station, Report for the Fiscal Year Ending June 30, 1922, 18R-21R; Bureau of Immigration, State of Florida Department of Agriculture, All Florida, 47.

51 E. D. D. "Minutes," III, 76-90, 99. Chapter 8413, Laws of Florida, 1921 again amended the basic 1913 drainage district act, Chapter 6456, in raising assessments and authorizing a total of \$7,750,000 in bonds to be issued. Laws of Florida, 1921, 64-103. The same legislature also levied a one mill maintenance tax on all real and personal property in the Everglades Drainage District, Chapter 8412. Ibid, 63-64. On January 21, 1922; the Drainage Board issued more bonds to the extent of \$1,750,000. E. D. D. "Minutes," IV, 15.

Canal was about forty-five per cent complete, and the opinion was expressed that

When this amount is expended it is expected that all property of the Everglades between the Miami Canal and the St. Lucie Canal will be drained, with the exception that farm ditches will have to be constructed to make it ready for cultivation. 52

In the fifteen years from 1908 through 1922 the Internal Improvement Trustees had grossed \$2,449,486.29 on land sales, less the twenty-five percent due the State School Fund. 53

The Internal Improvement Trustees had certain lands on the southern shore of Lake Okeechobee platted and these they advertised for sale in 1917 in five to thirty acre tracts ranging in price from \$30 to \$125 an acre. Two years later the Trustees offered Okeechobee custard apple lands at not less than \$35 an acre in 40 acre lots, one to a purchaser. 54

## 2. Sugar and the Land Boom

Results obtained so far indicate that the large outlay required for the purpose of carrying on this great work was fully justified, as the drained lands are producing large crops without the use of fertilizers of any kind, and the property is being rapidly purchased at good prices by substantial settlers . . .

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52 Florida Times-Union, July 26, 1920.

53 E. D. D. "Minutes," XI, 385, XII, 150, 307, XIII, 147, 310, XIV, 135, 281.

54 I.I.B. Minutes, XI, 354-355, XIII, 84. In 1917, the Trustees established a policy of leasing not more than 20 acres to a person at \$4 per acre per year. Ibid., XII, 139.

there is little doubt that in the near future the Country surrounding Lake Okeechobee will be producing vast quantities of sugar. . . .<sup>55</sup>

The settlement of the upper Everglades continued; after the war many of the newcomers were veterans seeking a new start. General business prosperity and the first rumblings of the coming real-estate boom were felt in the Everglades in the early 1920's.

The farmers flocked into the lake area after the war, seeking cheap, highly productive land, and began the foundation of the present commercial vegetable industry. They continued to hang on, notwithstanding the tremendous losses generally suffered by the flood of '22 and subsequent bank failure at Moore Haven, the flood of '24 when the territory generally had 19 inches of rain in 3 days in October. . . .<sup>56</sup>

The post-war depression of agriculture which affected most of the nation had little reflection in the truck gardens of South Florida. With the establishment of truck produce, improved cropping methods, shorter water hauls to Clewiston and West Palm Beach, good prices, a new bank at Canal Point, better houses instead of tar-paper shacks, the residents of the upper 'Glades were convinced that the large profits from the winter vegetables would more than compensate for the money needed in preparing the soil, heavy drainage taxes, and the expenses incurred in farming the organic soil.<sup>57</sup>

"The hard struggles of a pioneering terri-

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<sup>55</sup> George F. Miles, Manufacturer's Record quoted in Literary Digest, LXII (August 9, 1919), 23-24.

<sup>56</sup> Testimony of J. E. Beardsley, 1942 Migration Hearings, 12560.

<sup>57</sup> John Newhouse, "Memories," IV, 166.

tory seemed to be almost past. . . Nevermore would land have to be broken or cultivated by hand,"<sup>58</sup>

Interest in the use of 'Glades land for sugar cane production came to a definite focus in the last years of the first World War when sugar was retailed as high as thirty cents a pound, which was sufficient impetus for the farmers who had formerly had only a small patch of cane to put their plantings on a commercial basis.<sup>59</sup> In a pamphlet issued in the promotion of sugar cane growth in the Jacksonville area in 1918, the author pointed to the relative costs of producing an average of thirty-five tons of cane on muck soils of Florida for \$16.66 an acre as compared with \$20.56 for Cuba, \$37.95 for Hawaii, \$41.68 for Puerto Rico, and \$60.18 for Louisiana.<sup>60</sup> During the 1918-1919 season Bell and Johnson and S. W. Bollinger harvested 120 acres of Otaheite cane in the Pelican Bay section on the eastern shore of Lake Okeechobee; the cane was hauled to Canal Point, then barged to Okeechobee, and shipped by railroad to the Stevens Syrup Mill at Jacksonville.<sup>61</sup>

<sup>58</sup> John Newhouse, "Memories," IV, 169.

<sup>59</sup> Ibid., III, 118.

<sup>60</sup> C. Lyman Spencer, The Sugar Situation, 64. These figures were based on an average of 14% sucrose or 240 pounds of sugar to a ton of cane. Ibid.

<sup>61</sup> F. D. Stevens, "History of Florida Sugar Operations," 18. R. A. Conkling, Palm Beach County Agent, wrote in November, 1919: "I am convinced that trucking should be a side issue and that cane should be the main crop. . . From twenty to forty tons can be grown on land in the Lake Worth Drainage District, if properly prepared and cultivated." Prospectus of Florida Sugar and Food Products Company, 13.

A commercial planting of sugar cane was begun in 1920 east of Moore Haven at what is now known as Benbow by Judge John C. Gramling of Miami where he had bought several hundred acres of custard apple muck for \$6,000.<sup>62</sup> Gramling had gone to Louisiana and bought some equipment which turned out to be for syrup making rather than sugar refining. The planting consisted of 125 acres and it was expected to purchase the product of 50 acres in addition from chicken-yard patches along the shore line. Lack of water control, high prices paid for the land, and insufficient capital investment were responsible for the failure of the enterprise.

There were about 200 acres of cane actually planted and a mill was operated for at least one season. The Martha Washington Candy Company subsequently acquired the property but the project was abandoned.<sup>63</sup>

Prospects for sugar production in Florida took a decided turn when the Pennsylvania Sugar Company of Philadelphia set out an experimental planting in the fall of 1919 which was increased to 700 acres in 1920.<sup>64</sup> The plantings were later extended and a \$500,000, 1,500 ton sugar mill was placed in operation. Ernest R. Graham, manager of the holdings sixteen

<sup>62</sup> F. D. Stevens, "History of Florida Sugar Operations," 18.

<sup>63</sup> J. E. Beardsley, Testimony, 1942 Migration Hearings, 12563. In a survey made in 1920 from South Bay twelve miles west to the county line Beardsley had counted seven syrup mills on as many farms. Ibid:

<sup>64</sup> I.I.B. Minutes, XIII, 105-109, 239-243, XIV, 81-83. John Newhouse remembered that the Pennsylvania Sugar Company had bought some of its seed from the Okeelanta settlers. John Newhouse, "Memories," III, 117.



miles northwest of Miami on the Miami Canal, fought high water for several years before the project was given up.

It is now known that soil deficiencies and the shallow depth of the muck in that locality were also contributing factors in the decision of the sugar company to abandon sugar cane for truck cropping and cattle grazing on its lands west of

Hialeah.<sup>65</sup> The Pensuco mill later became the nucleus for the present Clewiston sugar house.<sup>66</sup>

Wilmon Newell, speaking for the Florida Experiment Stations, requested help from the Internal Improvement Trustees in 1920 to the extent of \$1,000 to fight the mosaic disease then beginning to infest the South Florida cane fields, but was advised that the Board had no statutory authority to make such a grant.<sup>67</sup> For this and other reasons including the mild climate, the United States Department of Agriculture established a sugar cane breeding station at Canal Point in 1920.

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<sup>65</sup> Howard Sharp, "Sugar Industry in South Florida is Now Established," Fort Lauderdale Sentinel, September 9, 1924; I. I. B. Minutes, XVI, 476; E. R. Lloyd, "Agricultural Possibilities of the Everglades," Senate Documents, Number 85, 71 Congress, 2 Session, 15-16.

<sup>66</sup> F. D. Stevens, "History of Florida Sugar Operations," 20.

<sup>67</sup> I. I. B. Minutes, XIII, 165.

Here were tested thousands of cane varieties, as well as types of soil best adapted to sugar cultivation. Cane cuttings resistant to frost, mosaic, and various root diseases were developed and distributed. 68

About this time F. E. Bryant and E. T. Anderson, of the firm of Bryant and Anderson which had been dealing in Everglades lands for eleven years, organized the Florida Sugar and Food Products Company, incorporated under the laws of Massachusetts,

. . . to develop a sugar, syrup and food products industry of South Florida, by establishing first of all a plant for the manufacture of cane syrup and the manufacture also of guava-jelly, guava, orange and grapefruit marmalades, kumquat preserves, crushed pineapple, and other tropical products for which there is a big demand at highly profitable prices. The final aim of the company is the manufacture of plantation refined sugar to be used in connection with its food product business and for sale to dealers. The sugar operation will be reached as fast as the acreage planted to cane and financing will permit. 69

The company planted enough cane in 1920 to furnish seed to local farmers and promised to purchase their crops to grind for syrup. This outfit sought a goal of 5,000 acres in cane in

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68 Fritzie P. Manuel, "Sugar Production in Florida," 1942 Migration Hearings, 12957. The Canal Point station, situated at the lake entrance of the Palm Beach Canal, was reputed to be the most northerly cane breeding station in the world. Everglades News (Canal Point), October 17, 1924.

69 Prospectus of Florida Sugar and Food Products Company, 3. The Okeechobee Sugar Corporation was organized in 1920 and sought to float a bond issue to purchase 35,000 acres in Lee and De Soto Counties stretching from Sand Point on the lake shore to an eight mile frontage on the Hicpochee Nine Mile Canal. This corporation proposed to plant sugar cane and erect a syrup mill to process the product of the fields. With some smooth figuring the corporation planned to net \$762,000 for the 1920-1921 season on 2,000 acres of cane, including harvesting 32,000 tons of its own product for seed. Prospectus of Okeechobee Sugar Corporation, 1.

three years. The usual glowing figures were quoted to show the great profits which would accrue from syrup and sugar milling. Upon completion of their proposed financing, Bryant and Anderson planned to capitalize at \$1,000,000, and were seeking \$400,000 in 1920 in eight per cent \$5 common stocks to be converted into preferred stock at a later date.<sup>70</sup>

In August, 1921, Bryant appeared before the Trustees of the Improvement Fund relative to a transfer and purchase of lands owned and sought by his company. Bryant was able to consolidate his holdings into acreage along the Palm Beach Canal about four miles from Canal Point.<sup>71</sup> The Bryant Company agreed to construct a \$200,000 sugar mill of at least 400 tons daily capacity within twenty months and posted a \$5,000 faith bond. The Trustees were advised on May 14, 1923, that the mill had been finished as required in the articles of the 1921 agreement.<sup>72</sup>

The Florida Sugar and Food Products Company hired Anthony R. McLane, a well-recommended sugar land expert and engineer with twenty-four years experience in Cuba, Puerto Rico, and Hawaii, to make a survey and report of the lands between Canal Point and Sand Point in the summer of 1921. After spending three and a half months in the Everglades, during which he walked from the Atlantic Ocean to the Gulf of Mexico, McLane

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<sup>70</sup> Prospectus of Florida Sugar and Food Products Company, 10-12.

<sup>71</sup> I. I. B. Minutes, XV, 72-76.

<sup>72</sup> Ibid., XV, 49

submitted his findings on October 21.

McLane began his report by noting that sugar cane growing had long since passed the experimental stage around Lake Okeechobee, that fields planted in 1913 were still producing from the original ratoon. There were some 800 acres in cane, including 125 belonging to the Bryant Company, on or near the eastern and southern shores of the lake. <sup>74</sup> The sugar engineer and agricultural consultant was enthusiastic over the fact that frosts had never killed Everglades cane, that no fertilizer was required in the deep muck soils, and that there was no necessity for irrigation. The treeless, level land was ideal, in his opinion, for machine cultivation and the volunteering of individual land owners to plant as high as 1,000 acres was a godsend which would relieve the company of financing the first crop. <sup>75</sup> McLane viewed the long dry winter season as extremely beneficial thus permitting a harvest season of 180 days, yet with cool enough weather to bring the sucrose content up to sixteen per cent. This expert found that on a basis of

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73 Anthony R. McLane, "Report on the Lands on the east side of Lake Okeechobee between Canal Point and Sand Point in Palm Beach County, Florida and the Florida Sugar and Food Products Company Lands at Canal Point on the West Palm Beach Canal and its Proposed Sugar Estate Development," 1, 10. Loaned to the author, in unpublished manuscript form by F. E. Bryant, Azucar, Florida. Hereinafter cited as "McLane Sugar Report."

74 *Ibid.*; 1-2.

75 *Ibid.*, 3. "The farmers in the district are all industrious and intelligent workers and are eager to see the new enterprise a success. Their efforts and funds will solve labor and finance in some degree for the company."

comparative costs Everglades lands should produce sugar five to ten per cent cheaper than any other area in the world.

I recommend to anyone who will consider making an investment in a sugar plantation and mill, the area embraced in this report in preference to Cuba, Hawaii, or Porto Rico, as in my opinion his investment will be safer and financial returns larger than could be obtained from any one of these countries. 76

In a letter to the stockholders of the Florida Sugar and Food Products Company, dated July 24, 1922, the officers reported satisfactory progress in planting and construction of the mill, which by this time had been changed to an outright sugar factory since "the opportunity for a larger and more profitable undertaking is so apparent. . . ." <sup>77</sup> In order to finance the various operations the sugar company announced that it was seeking a \$100,000 loan, which was open to stockholders, and would not increase the stock until the mill was in full operation, "when a better deal can be secured from brokers." <sup>78</sup>

In the spring of 1922 W. S. Blatchley revisited the points on Lake Okeechobee he had first seen in 1911. Taking a train from Lakeland to Moore Haven, he mused over the voyage he had made down the Kissimmee River years before. Moore

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76 Anthony R. McLane, "McLane Sugar Report," 12. "Sugar grown in the district reported on will meet the competition of sugar grown in any of the countries from which our supply is now drawn, and in my opinion, returning a greater profit, without tariff protection." Ibid.

77 F. E. Bryant and E. T. Anderson, Letter to The Stockholders of the Florida Sugar and Food Products Company, 2-3.

78 Ibid., 3.

Haven, he found, was now twelve miles from the lake shore  
 where once the waves had lapped.<sup>79</sup> The former Indiana state  
 geologist observed that

In spite of the five big canals, much of the  
 land in this region which is used for truck gardens  
 is overflowed during the rainy season and the set-  
 tlers have to move out until the water disappears.  
 During the winter and spring the muck surface often  
 becomes so dry that only deep rooted plants can  
 survive. 80

The winter and spring drouth of 1922 was followed by a  
 rainy season which saw the water rise in September and Octo-  
 ber and remain until February and March of 1923, putting many  
 men along the lake shore out of work.<sup>81</sup> Matured sugar cane  
 losses ran from ten to fifty per cent with considerable dam-  
 age to the young cane, and destruction generally to avacado  
 and vegetable plantings. The Everglades Drainage District  
 Commissioners felt that the residents of the area knew that  
 the region would not be entirely safe until the program was  
 complete, but that "the conditions" get worse as the "infor-  
 mation" traveled away from the big lake.<sup>82</sup>

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79 W. S. Blatchley, In Days Agone, 317. Blatchley found  
 the lake area cooler than the sandy ridge section to the north.  
 "Frost occurs here often when the higher areas are not affected  
 by it."

80 Ibid., 319

81 John Newhouse, "Memories," IV, 171.

82 E. D. D. "Minutes," IV, 1-2. The 1922 rains were the  
 heaviest since the records were begun in 1888.

There was no flood in 1923 but the water again became too high for farming. W. A. McRae, Florida Commissioner of Agriculture, reported: "I wish to say that gloom seems to be on every hand among men who have heretofore stood by the board loyally, and who in the face of everything were optimistic."<sup>83</sup> The trouble was explained by the heavy rains of 1923 which followed the highest recorded precipitation of 1922, and which could be solved only by larger canals. McRae found the Hillsboro Canal incomplete and discharging but a small amount of water, while the area southwest of Moore Haven was in a deplorable condition. McRae urged the Internal Improvement Board to lend the Drainage Board a hand as further delays were seen to be fraught with danger to public and private interests.<sup>84</sup>

October of 1924 brought heavy rainfall to such an extent that Lake Okeechobee at Ritta rose seven and a half feet in five days.<sup>85</sup> The October rains, pushed higher by strong winds, made the water knee deep at Okeelanta and all agricultural enterprise was flooded out.<sup>86</sup>

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<sup>83</sup> I. I. B. Minutes, XV, 120.

<sup>84</sup> Ibid., XV, 121

<sup>85</sup> Everglades News (Canal Point), October 31, 1924. Hereinafter cited as Everglades News following cessation of Ft. Lauderdale publication of same name.

<sup>86</sup> John Newhouse, "Memories," IV, 172. All through these wet periods the Everglades News asked that the Palm Beach and other canals be blasted and excavated to permit water to flow into the ocean and not into the lake. In December, 1924 the paper stated that the Everglades were all right, but that the administration was all wrong, and that the canals should be made deep enough to avoid such floods as those of 1922, 1923, and 1924. Everglades News, December 12, 1924.

The inability of the Drainage Board to provide better main canal drainage brought about the conviction that the only hope for the 'Glades lay in mechanical pumping systems.<sup>87</sup> Within fourteen months such plants were installed or on order by all the sub-drainage districts around Lake Okeechobee.<sup>88</sup>

During the first few days of the 1923 legislature the Trustee-Commissioners invited several representatives from Palm Beach, Broward, St. Lucie counties, and the lower east coast to meet with them and consider the inclusion of the coastal area from Stuart to Miami in the Everglades Drainage District. It was decided to draw up a bill for a one mill ad valorem property tax and have the legislators submit it to their voters for discussion prior to introduction into the legislature.<sup>89</sup>

The 1923 legislature upped the annual drainage tax assessments to eighty-two cents for zone one lands through 1926, and ninety-two cents thereafter, with other zones except marginal areas coming in for a proportionate raise. The legislature also upped the bond limits for the district to

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<sup>87</sup> Everglades News, May 1, 1926. "In view of the refusal of the Everglades Drainage District to take the rock out of the canals, the only hopes of the 'Glades are pumping systems."

<sup>88</sup> Everglades News, July 30, 1926. The Gladeview development installed the first pumping system in 1922. John Newhouse, "Memories," III; 123.

<sup>89</sup> E. D. D. "Minutes" IV, 58.



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 \$11,250,000. By virtue of Chapter 10,026, Laws of Florida, 1925, the drainage taxes for zone one lands in the district were set at \$1.25 for 1925 and 1926 and \$1.50 thereafter, while the taxes in other zones, except certain lands exempted in the act, were similarly raised. The act also authorized the Drain-<sup>91</sup>age Commissioners to borrow up to \$14,250,000 in bonds. Spitzer, Rorick, and Company on June 16, 1925, took up the \$1,250,000 increase in new bonds, and also a \$8,950,000 re-<sup>92</sup>funding issue for maturing bonds.

Governor John W. Martin had, in his message of April 8, 1925, informed the legislature that he believed Florida was definitely committed to the reclamation of the Everglades, and although millions of dollars had been expended in the undertaking and many more would be required before it was<sup>93</sup> finished, "there can be no turning back."

If the first worry of the Everglades pioneers was the water table, their second was transportation. Mail, freight,

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90 Chapter 9119, Laws of Florida, 1923, 9-27. This act was approved on May 25, 1923. On May 26 the Drainage Commissioners authorized the issue of \$3,500,000 additional drainage bonds. E. D. D. "Minutes," IV, 77.

91 Laws of Florida, 1925, 15-39. The same body set up a board of fire wardens for the Everglades Drainage District and enacted into law a penalty of one year imprisonment or a \$5,000 fine for fire setting or refusal to carry out a legitimate order by a warden. Ibid., 191, 194-196.

92 E. D. D. "Minutes," V, 122.

93 Journal of the State Senate of Florida of the Session of 1925, 17.

and passenger boats were prospering on Lake Okeechobee and its connecting waterways as late as 1926, but the muck roads slowly gave way to hard surfaced highways and railroads in

the 1920's.<sup>94</sup> W. J. Conners, the Buffalo, New York, politician who had successfully tried his hand at truck cropping and dairying along the Palm Beach Canal, turned to highway building in 1923. Conners and his associates met with the Trustee-Commissioners on March 17 and secured a contract to construct a toll road from Okeechobee City around the north-eastern shore of the lake to the bend in the Palm Beach Canal.

<sup>95</sup> Construction on the fifty mile highway began on April 23, 1923, and the strip was opened to traffic on July 4, 1924. Two thousand cars passed the toll houses, and a gala celebration was held at Okeechobee City with Governor Hardee, Governor-elect Martin, and Justice Rivers Buford of the State Supreme Court as speakers.<sup>96</sup> The procedure used in building the road was an innovation, in that marl was piled four feet deep and thirty feet wide on top of the muck to form the

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<sup>94</sup> For mail boat and other boat service see the Everglades News, November 6, 1925; W. S. Blatchley, In Days Agone, 316; John Newhouse, "Memories," III, 100.

<sup>95</sup> I. I. B. Minutes, XV, 24. The Trustees agreed to a 66 foot easement along the canal bank and to pay for 50% of the cost of excavating the necessary rock for the road bed. Conners agreed to build a hard surfaced road fifteen feet wide and to construct drawbridges over all canals 40' x 10' or larger. Ibid.; E. D. D. "Minutes," IV, 56-57.

<sup>96</sup> Everglades News, March 11, 1924; John Newhouse, "Memories," V, 181-184. The Conners Highway costing approximately \$1,000,000, was leased in 1930 at \$35,000 a year to Palm Beach County, and was bought by the State in 1931.

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roadbed.

Although a cross-state highway was opened in December, 1923, from West Palm Beach to Ft. Myers it was not until 1928 that hard surfacing of the road had been completed. Prior to its macadamization the road had almost always been negotiable, at least in low gear.<sup>98</sup> A somewhat more publicized highway than the road along Okeechobee's south shore was the Tamiami Trail. William Stuart Mill, news editor of the Miami Herald, enlisted the interest of James F. Jaudon, tax assessor of Dade County, in the early 1920's. Jaudon was something of an authority on road construction as well as an enthusiast over the Everglades.<sup>99</sup> Lee, Dade, and Collier counties were induced by Jaudon and Mill to spend \$500,000 as a starter on about sixty miles of rough road, beginning in 1916. The State Road Department took over in 1924 and completed the Miami-Ft. Myers road, digging a canal and using the rock therefrom for the road bed.<sup>100</sup> The Tamiami Trail was opened in April, 1928, having cost \$9,000,000; 3,000,000

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97 For details of its construction see "Unique Floating Toll Road Across the Everglades of Florida," Engineering News-Record, XCIII (September 11, 1924), 412-417.

98 John Newhouse, "Memories," III, 100; Everglades News, September 4, 1925, February 4, 1927, March 9, 1928; E. D. D. Minutes, V, 34, 37. In January, 1927, traffic was permitted on the Belle Glade-Pahokee road and South Bay Okeelanta Road. Everglades News, January 28, 1927. In 1926, "A ferry for automobiles from Canal Point to Clewiston supplies the missing link in the cross-state highway until it can be completed." Frank Parker Stockbridge and Frank Holliday Parker, Florida in the Making, 236.

99 Federal Writers Project, "The Everglades," Florida Highways, IX (July, 1941), 38.

100 Miami Metropolis, April 9, 1918; Miami Daily News, April 22, 1928.

pounds of dynamite were used in securing rock. This road reduced what had been a ten day journey in 1926 to a six hour ride in 1928.<sup>101</sup>

Railroad construction in the Everglades occupied no small place in the development of the lakeshore region. In 1925 the Atlantic Coast Line Railroad purchased the Moore Haven and Clewiston Railroad, and then added an extension to Lake Harbor at the Miami Canal.<sup>102</sup> Beginning in 1924, the Florida East Coast Railway extended its Maytown-Okeechobee branch to Canal Point, and the first refrigerated vegetable freight car left that place on February 20, 1925, for northern markets.<sup>103</sup> The East Coast reached Belle Glade in 1926, and met the Atlantic Coast Line at Lake Harbor in 1928.<sup>104</sup>

The first railroad across South Florida came as a result of a \$7,000,000 bond issue by the Seaboard Air Line Railroad under the leadership of S. Davies Warfield. The Seaboard laid 238 miles of track in 1924 and 1925 when it extended its line from Coleman to Miami for what was called the fastest record ever made in railroad

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101 Miami Daily News, April 22, 1928; Federal Writers Project, "The Everglades," loc. cit., 38.

102 Everglades News, January 9, 1925.

103 Ibid.; February 20, 1925.

104 Ibid., September 14, 1928; E. D. D. "Minutes," V. 8-10; VII, 23.

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 construction. The Seaboard passed through the northern margin of the Everglades and real estate activities were sponsored by the railroad as a method of selling its land. The carrier organized the Land Company of Florida to handle 160,000 acres which accrued "through advancement coming from the development of the railroad."<sup>106</sup>

Indicative of the trend of land use in the Everglades after the first World War was the venture undertaken by Brown Company, a Portland, Maine, paper manufacturing corporation. In connection with the company's pulp mill, a chemical mill was operated to produce chlorine to bleach the pulp, but a by-product in the form of hydrogen gas was used to treat cottonseed and peanut oils, thus producing vegetable table and cooking fats.<sup>107</sup> The war cut off supplies of vegetable oil, and later a tariff placed on such oils forced the Brown

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105 "The First Railroad Across Florida," Literary Digest, LXXXIV (March 7, 1925), 82. The first Seaboard passenger Service into West Palm Beach was a train with Warfield and Governor John W. Martin aboard which arrived on January 30, 1925. Everglades News, January 30, 1925. The Seaboard secured a number of options on canal bank rights of way to establish branch lines into the Everglades, but it allowed them to lapse. E. D. D. "Minutes," V, 235; VI, 78-91.

106 "The First Railroad Across Florida," loc. cit., 82. Shares of stock in the railroad land company was given as a bonus for the purchase of the Seaboard's bonds to finance the Palm Beach-Miami extension. Homer B. Vanderblue, "The Florida Land Boom," Journal of Land and Public Utility Economics, III (August, 1927), 263.

107 S. Davies Warfield, editor, Conference on Florida Everglades Reclamation, 1927, 82. Hereinafter cited as 1927 Baltimore Everglades Conference.

Company to seek a cheaper supply. J. C. Sherman, a Brown official, spending a winter on the lower east coast, became intrigued with the possibilities offered by the Everglades to raise peanuts and on returning to Maine interested O. B. Brown. The latter rented a farm in the lower 'Glades and produced eight very satisfactory crops, after which J. C. Sherman approached the Florida Improvement Trustees and purchased several thousand acres on the Hillsboro Canal, fourteen miles from Lake Okeechobee.

This company cleared 1,300 acres of land and by 1927 had it under cultivation, but the high water and hurricane flooded the peanut plantings out. Under scientific direction twenty-six crops were tried, including cotton, tobacco, celery, and sugar cane, successfully. The plan was to raise truck crops through the winter and peanuts in the summer. A peanut planting machine and other innovations including smudge pots and overhead irrigation were introduced.

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108 I.I.B: Minutes, IV, 29, 42-43, 64-67; John Newhouse, "Memories," IV, 161. Newhouse stated that the Brown Company established "Shawano" (plantation name) in 1922 with the purchase of 10,000 acres.

109 S. D. Warfield, ed., 1927 Baltimore Everglades Conference, 83-84; John Newhouse, "Memories," IV, 161-162. The "reclaiming disease" got the 1926 crop, and those peanuts dug were left in the field to be blown away by the hurricane. In 1927 the thousand acres were replanted and copper added to the soil resulting in a good crop in 1928, though this crop was harvested in the wet season. "The Brown Company went along slowly and surely in its development," and gave employment to many workers after the collapse of the 1928 boom, but when the 1929-32 depression came, the Brown Company shut down its 'Glades' agricultural pursuit. John Newhouse, "Memories," IV, 162-164.

O. B. Brown became so engrossed in the Everglades and its problems that he made two trips to Holland and checked on four hundred years of drainage; he found great similarity between Florida and Dutch situations. The Maine Manufacturer was adamant in his stand that the control of the water level through drainage was essential, and that "until that is done a man has no business to be in those Glades at all, because he cannot tell from one six months to another whatever he puts in is going to be a total failure or not." 110

Notwithstanding the high waters and floods of the rainy seasons of 1922, 1923, and 1924, cropping on the muck on the lake shore and along the eastern edge of the Everglades had been profitable to some.

During the last three years progress has been very great. Scores of truck farms have sprung up on the reclaimed lands. The reclaimed section around the southern end of Lake Okeechobee from January to June [1923] shipped \$4,000,000 worth of vegetable products. A little branch line railroad shipped out 1200 carloads of products for the North. 111

The Everglades News estimated that \$1,000,000 had been grossed from the ten mile stretch on the eastern shore of the big lake from Canal Point to Bacon's Point in the winter of 1924. Twelve hundred acres of tomatoes produced one thousand

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110 S. D. Warfield, ed., 1927 Baltimore Everglades Conference, 85.

111 Christian Science Monitor, January 11, 1924. A tomato canning plant was installed at Canal Point in the spring of 1925 and made a test run before the rains stopped the tomato picking. The cannery began regular runs in the spring of 1926. Everglades News, May 22, December 4, 1925.

car loads, averaging \$600 a car, while the remainder of the crop was made up of English peas, peppers, beans, and potatoes.<sup>112</sup> In March of 1925 a thousand hampers of beans averaged \$3.25 to \$3.50, and tomatoes sold for \$1.15 a crate.<sup>113</sup> January, 1926, saw beans go to \$5.00 a hamper as ten cars moved from Canal Point in two weeks.<sup>114</sup>

The report of the director of the Everglades Experiment Station near Belle Glade for the year ending in June, 1925, however, provided dismal reading. Floods of October had continued for sixty days killing two acres of orchard plantings which included pears, tung, avacados, bananas, figs, and citrus.<sup>115</sup> The high waters destroyed plantings of fifty different grasses, sugar cane, and beans. Valuable records, however, had been collected on the height for the water table

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<sup>112</sup> Everglades News, March 21, 1924. The Okeechobee fishing industry, from October 1, 1923, to May 1, 1924, dressed 6,500,000 pounds of fish which brought close to \$1,000,000 gross to four wholesale fish houses in Okeechobee City whose combined investments would not run over \$325,000. Some 32,000 barrels and 6,000 tons of ice were used in the fish packing houses. These figures did not include those of Moore Haven's two fish houses. Everglades News, May 16, 1924.

<sup>113</sup> Ibid.; March 11, 1925.

<sup>114</sup> Ibid., January 8, 1926.

<sup>115</sup> University of Florida Agricultural Experiment Station, Report for the Fiscal Year Ending June 30, 1925, 91R-95R. Dr. A. L. S. Shealy, Professor of Veterinary Science at the University of Florida, spent three of the summer months of 1924 at the Everglades station working on sterility and other stock troubles of the area. Ibid., 96R; Everglades News, June 27, 1924. John Newhouse recalled these early stock troubles and remarked on how many were cured with the addition of copper, iron, and other minerals to stock feed. John Newhouse, "Memories," V, 201.



and pumping statistics, together with daily records of temperature, humidity, canal levels, evaporation, frosts, and wind.

The report of the director of the station for 1925-1926 called attention to the completion of an area 160 acres in extent which had been completely diked. All drowned plantings had been reset and experiments had been made on a large variety of crops but with no conclusive results. Soil studies had proven, in the short time of the station's existence, that a two foot water table was to be favored in general over other heights. <sup>116</sup> The appointment of Robert V. Allison, former chemist and soil biologist of the Tropical Plant Research Foundation in Cuba, as a specialist at the Everglades station in 1926 was in line with the Board of Control's policy to enlighten Florida agriculturists on organic soil problems. <sup>117</sup>

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<sup>116</sup> University of Florida Agricultural Experiment Station, Report for the Fiscal Year Ending June 30, 1926, 112R-125R. Hereinafter cited as Experiment Station Annual Report, 1926. Charles A. Walsh, of Davie, reported in 1924 on a ten acre citrus grove on Everglades muck which had produced its first crop in 1918. No cultivation, except a grass mower, and no fertilizer were used to 1924, when Walsh's crop averaged 4½ boxes per tree. Verna B. Vaniman, Florida Grower (Tampa), August 2, 1924.

<sup>117</sup> Everglades News, July 30, 1926. Everglades profits may be illustrated by the experience of W. F. Buchanan, of Canal Point, who "planted string beans in December and marketed them in February and March, obtaining an average of \$5.50 a bushel for 340 bushels. . . . In December he started his tomato seed bed, transplanting from it in February, after the beans had been harvested, and sold his tomato crop from the same acre for \$550. At the same time he grew on the same land fifty bushels of corn, worth \$1.25 a bushel. This gave him a total cash income from one acre of land of \$2,482.50, in a single short season. He could have grown another crop or two on the same land, but thought he was justified in taking things easy the rest of the year." F. P. Stockbridge and J. H. Perry, Florida in the Making, 230.

The heavy rains of 1922 had damaged the sugar cane plantings of the Florida Sugar and Food Products Company on the Palm Beach Canal and had forced the digging of extra ditches, the construction of dikes, and the installation of pumps. In 1923 the company produced the first white sugar ever made in South Florida.<sup>118</sup> It was reported that the Canal Point Company was cutting an average of sixty tons of cane per acre from its fields and seeking to buy cane from private growers. In 1924 a State Plant Board inspector located only 900 acres of cane around the southern and eastern shores of Okeechobee, a decrease of several hundred acres from previous years caused by the heavy rains of 1923.<sup>119</sup>

The vicissitudes of poor water control, rising expenses, poor transportation facilities, world sugar market conditions, and financial troubles combined to cause the Canal Point Company to practically cease operating in early 1925.<sup>120</sup> The resources of this company were taken over by the Celotex Company of Chicago, Illinois, which became interested in the Everglades in 1925 as a possible location for the growth of sugar cane to provide a source of the bagasse used in the manufacture of wallboard.<sup>121</sup>

118 "Cane Sugar at Canal Point," Florida Department of Agriculture Bulletin, XXI (1923), No. 3.

119 Everglades News, March 21, 1924. The Canal Point Company reported an average of 177.4 pounds of 96% sugar from each ton of cane ground through May. Ibid., May 23, 1924.

120 F. P. Manuel, "Sugar Production in Florida," loc. cit., 12957; John E. Dalton, Sugar: A Case Study in Government Control, 42-52. Hereinafter cited as Sugar.

121 Statement of J. E. Beardsley, 1942 Migration Hearings, 12560.

Engineers made the surveys in May, 1925, following which the Dahlberg interests purchased and leased land south and east of the lake until control over 160,000 acres of the muck lands was obtained. In June, 1925, drainage operations and a pumping station were contracted for at Clewiston and in December the Celotex manufacturer and his business associates absorbed the Florida Sugar and Food Products holdings at Canal Point. 122

The Dahlberg interests were incorporated as the Southern Sugar Company, but did not

. . . undertake to produce raw sugar commercially until a period of trial had demonstrated its feasibility. Experiments in drainage control were carried out on 35,000 acres by means of canals, ditches, and reversible pumps, and some 500 acres of seed cane were raised and tested before planting on a large scale. 123

In a review of the situation of the Everglades in 1927, the chief drainage engineer for the state emphasized that the value of the investments of private enterprise was then larger than the cost of all the drainage work to that date. It was estimated that the resident population of the drainage district approached 25,000 and that the income of the Okeechobee section of the Everglades approached fifty to sixty thousand dollars a day in the peak four weeks of the vegetable

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122 Everglades News, May 29, June 19, December 4, 25, 1925. F. P. Stockbridge and F. H. Perry, Florida in the Making, 127

123 F. P. Manuel, "Sugar Production in Florida," loc. cit., 12958.

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 season. The drainage engineer estimated the value of the state's Improvement Fund and School Lands in the drainage district at \$15,000,000 on which \$235,000 was being spent in drainage taxes each year.<sup>125</sup>

The land boom which had been budding in Florida in the years following the first World War broke into full bloom in 1924 and 1925. In 1924 the Clewiston townsite, aggregating 2,800 acres, which had been platted by Clewis and C'Brien at the beginning of the decade was sold for \$300,000 to J. T. Cook and others of St. Louis.<sup>126</sup> In May, 1924, F. E. Bryant, president of the Florida Sugar and Food Products outfit at Canal Point, remarked that good land in the Everglades would soon be selling for \$1,000 an acre; six months later the editor of the Everglades News wrote that the area should be settled in five and ten acre tracts.

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124 F. C. Elliot, "Draining the Everglades," reprint from The Florida Magazine, (July, 1924), 7.

125. Ibid., 11. The proposed Disston Island Drainage District, near Moore Haven, reported 200 farms with approximately 4,000 acres in cultivation, valued at \$250 an acre in 1924, plus 11,700 acres of uncultivated land valued at \$200 an acre. Everglades News, March 11, 1924.

126 Everglades News, October 10, 1924. The townsite was sold to the Dahlberg interests a short time after this. For a scholarly survey of the facts, figures, and fanfare which surrounded the Florida land boom of the early 1920's see Homer B. Vanderblue, "The Florida Land Boom," Journal of Land and Public Utility Economics, III (May and August, 1927), 113-131, 252-269, which in turn cites a vast number of other articles and literature on the subject.

All of Palm Beach County can be settled like this. There can be 10,000 homes in localities where there isn't a house now--50,000 population, and ten million dollars wealth where now the land is assessed at under \$5.00 an acre. 127

The year 1925, in addition to being remembered as the big year of the real estate boom, was free from heavy rains and high waters and turned out to be a period of good markets for produce. 128 J. S. Phipps, W. J. Conners, and others secured a large tract extending along the south bank of the St. Lucie Canal and down the eastern shore of Lake Okeechobee in 1925 which was to be expanded into a model city of industry and trade. 129

Taking advantage of the activity in real estate, the trustees of the Internal Improvement Fund were asking \$500 an acre for lake front land along Okeechobee's southern and eastern shores, especially in the Pahokee section. Land away from the lake in the same section was priced at \$300 an acre. 120 A forty acre tract just outside of Ft. Lauderdale brought \$750

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127 Everglades News, May 23, December 19, 1924. Howard Sharp, a reporter on the Palm Beach Post, established the South Florida Developer on the east coast in 1921. He moved to Canal Point in March, 1924, where he began and edited the Everglades News. The paper never missed an issue, through high water or hurricane, and Sharp became a militant force in the fight of the people of the upper Everglades to develop the muckland. John Newhouse, "Memories," IV; 151, 159-160.

128 John Newhouse, "Memories," IV, 172.

129 E. D. D. "Minutes," V, 209; Everglades News, January 15, 1926.

130 I.I.B. Minutes, XVI, 134 (July 7, 1925).

an acre on August 11, 1925.<sup>131</sup> The 900,000 acres of Everglades lands held by the Trustees in 1926 were appraised by two writers at \$13,000,000, or \$15 an acre, whereas it was pointed out that the entire acreage of the district before 1905, or twenty years previous, had not been worth \$750,000.<sup>132</sup>

The policy of the Internal Improvement Board, however, is to sell none of the reclaimed land at less than one hundred and fifty dollars an acre [in 1926], and at that and higher figures every parcel offered for sale under the administration of Governor Martin has been eagerly bought.<sup>133</sup>

The Florida land boom reached its peak in the late fall of 1925; a reaction set in during the spring of 1926, but the collapse was evident in the summer of 1926, and acknowledged that fall. A student of the economics of the boom wrote in 1927 that recovery would be certain, but very gradual.

The two great assets of the state--a mild climate and relative proximity to the densely populated sections of the country--promise that, over a period of years, the recovery from the present depression will be both certain and substantial.<sup>134</sup>

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131. I.I.B. Minutes, XVI, 156. Everglades land sales made by the I.I. Trustees in 1925-26 aggregated 52,328 acres for \$1,052,661 or roughly \$20 an acre. Everglades News, January 7, 1930.

132 F. P. Stockbridge and J. H. Perry, Florida in the Making, 225.

133 Ibid., 228

134 H. B. Vanderblue, "The Florida Land Boom," loc. cit.,

## CHAPTER XII

### THE 1926 HURRICANE AND THE MARTIN BOND PROPOSAL

#### 1. The Hurricane

The fact that 1925 had been a relatively dry year was particularly evident in the first months of 1926 when the earth literally burned in the Everglades. Fires sweeping through the tinder-dry saw grass on February 20 near the Everglades Experiment Station endangered the buildings and the locality was backfired to save the property.<sup>1</sup> Six days later it was reported that a fire at Okeelanta, lighted from the flames of burning grass and muck, had consumed six houses, one of which belonged to T. E. Will. "For weeks the nightly glare of burning sawgrass reminded the settlers of their danger."<sup>2</sup>

In an endeavor to provide measures of protection and aid in saving the land and property of the Okeechobee mucklands the Internal Improvement Trustees adopted a \$156,000 budget for the Everglades Fire Control Board in March, 1926.<sup>3</sup>

Seasoned Evergladers--not swivel chair Everglades amateurs--learned some time back that "drainage" is by no means one grand panacea for all Everglades ills. They learned, in fact, that drainage--much vaunted--may prove a curse rather than a blessing. They learned that thoroughly drained but inaccessible Glades lands. . . . are in a case for worse than Glades lands covered with water.

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1 Florida Experiment Station, Annual Report, 1926, 125R.

2 Everglades News, February 26, 1926. The fires of that year were blamed on grass growth during previous years of high water and consequent inability to plow the lands, fine weather, and lower water. Strange as it may seem, Howard Sharp had castigated Chief Engineer F. C. Elliot, two weeks before this for not deepening the Palm Beach Canal or other large canals like the St. Lucie. Ibid., February 12, 1926.

3 I.I.B. Minutes, XVI, 358-359, 364.

The reason is that lands thus dried out, have been converted into a tinder-heap and will burn like a wood pile. By the side of this menace, excess water is no foe at all. It is the one best friend of the neglected, misunderstood and largely abandoned Glades country.<sup>4</sup>

An issue which raged between the upper Everglades residents and those along the lower reaches of the Miami and North New River Canals was the matter of damming these waterways. Under the poor drainage conditions water flooded the lower reaches for days on end after a heavy rainfall, merely draining the unsettled areas between Okeelanta, five miles south of the lake, and the Ft. Lauderdale area, fifty miles south. Dams were thrown across the Miami Canal in 1925 to hold back the lake waters and were later ordered removed by the Drainage Commissioners. The Dade County settlers refused to do this, so in October settlers from the lake region destroyed one of the dams.<sup>5</sup> As an outcome of hearings held at Ft. Lauderdale in 1926, the Commissioners issued permits for the establishment of dams in both of the long diagonal canals. This move was made to the disgust and chagrin of the upper Everglades residents.<sup>6</sup>

Spring and summer rains put out the muck fires and, as seen above, created high waters that fed fuel to the dam argument. On September first Lake Okeechobee reached a level

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4 T. E. Will, "Letter to editor," Fort Lauderdale Call, June 18, 1926. Clipping in Will Collection.

5 Memorandum in T. E. Will Collection.

6 E. D. D. "Minutes," VI, 117, 123, 127, 169, 170, 221. Several typed manuscripts, five to ten pages each, castigating state officials for allowing or participating in the damming of canals are to be found in the Will Collection.



of 13.7 feet, a very high level at a bad season and sufficient motive for the editor of the Everglades News to telegraph the Board of Drainage Commissioners at Tallahassee to do something about the situation.<sup>7</sup> Almost three weeks later on September 17 a hurricane, first observed near St. Kitts Island on September 14, reached the coast of Florida. Traveling 125 miles per day, the storm passed over Miami with winds reaching a velocity of 140 miles an hour and the barometer falling 27.62 inches.<sup>8</sup>

High winds reached Lake Okeechobee during the evening hours and had reached hurricane strength by daybreak. The wind action backed the waters into the southwest corner of the lake, an area that had been flooded in 1922 but was supposedly protected by dikes begun in 1924. A "Day of death follow[ed] a night of horror when the hurricane [broke] the frail dike on the Moore Haven lake front."<sup>9</sup> The outstanding tragedy of the storm occurred when a wall of water, said to have been ten to fifteen feet high, swept in from the lake drowning 130 people and causing heavy property losses.<sup>10</sup> The water remained over the Moore Haven area for many weeks and made reconstruction impossible; the final decline of the flood

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<sup>7</sup> Everglades News, September 24, 1926. Sharp wrote, "No action was taken."

<sup>8</sup> E. E. Slosson, "The Florida Hurricane," Scientific Monthly, XXXIII (November, 1926), 480.

<sup>9</sup> Everglades News, September 24, 1926.

<sup>10</sup> American National Red Cross, The Florida Hurricane; 8. Over the state 327 people were killed by the storm. Ibid., 27.

left the muck too soggy to return houses carried away by the waves. "Destruction in this section was exceptionally severe and awards to families therefore averaged higher than those in other sections."<sup>11</sup>

The Board of Commissioners of the Everglades Drainage District was deluged with letters and telegrams seeking action in flood relief. The Board resolved on September 29 to restore the dikes and levees at once. Governor Martin inspected the area and reported that repairs were being pushed with all possible speed.<sup>12</sup> Martin became the target of castigation by the Miami Daily News for refusing to call an extraordinary session of the legislature for the purpose of appropriating several million dollars for relief.<sup>13</sup>

Reaction to the storm tragedy on the lake shore was indicated by Howard Sharp's editorial in his first issue after the

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<sup>11</sup> American National Red Cross, The Florida Hurricane, 33; John Barton Payne, chairman of the American Red Cross, was embarrassed by the attempts of his organization to raise relief funds when telegrams from the mayor of Miami minimizing the disaster were published in the press. Peter O. Knight, prominent Tampa lawyer and financier, acknowledged that 17,000 people in Florida needed aid, but he was fearful lest the American Red Cross in its zeal to raise funds would "do more damage permanently to Florida than would be offset by the funds received." H. B. Vanderblue, "The Florida Land Boom," loc. cit., 114.

<sup>12</sup> E. D. D. "Minutes," VI, 175, 178, 189. The Board put up \$2,500 for emergency work in the Moore Haven area. Ibid., VI, 194.

<sup>13</sup> Joe Hugh Reese, Florida's Greatest Hurricane, 59; Kenneth L. Roberts, "In the Wake of the Hurricane," Saturday Evening Post, XCCIX (November 27, 1926), 6-7.

hurricane entitled "The Dead Accuse." Sharp held that the Moore Haven disaster had been due to the unnecessarily high level of the lake and the deceased persons came to their death through the culpable negligence of the Commissioners of the Everglades Drainage District.<sup>14</sup> But it should be remembered that the Randolph Report of 1913 had stated:

In the Everglades violent floods are inconceivable; the very flatness of the country and the absence of tributary uplands of high slope makes it certain that overflows occur by the quiet and gradual rise of water without torrential characteristics.<sup>15</sup>

In the controversy which raged as to whether the Moore Haven deaths could have been avoided, it was pointed out that frequent complaints had been made to the Drainage Board that the canal locks at the lake should not be kept closed but no heed was given. As a result of this agitation the Secretary of War directed army engineers to survey the Caloosahatchee River with a view to establishing flood control measures. Strangely enough, Representative Herbert L. Drane, whose district composed the lake shore, had secured passage of an act authorizing the survey in February, 1925, but no action had

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<sup>14</sup> Everglades News, September 24, 1926. Sharp had been reminded by R. E. Rose in 1924 that J. O. Wright was responsible for the drainage system when the latter had been appointed in 1910 on the recommendation of six land companies with immense holdings. Rose cited the I.I.B. Minutes, VIII, 301-311 as his authority. Ibid., November 28, 1924.

<sup>15</sup> Senate Documents, Number 379, 63 Congress, 2 Session 54.

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been taken.

The Moore Haven catastrophe awoke the people of Florida to the fact that the valuable Everglades area was a hodge-podge attempt at drainage. The Miami Daily News, a severe critic of Governor Martin's attitude on storm relief, found state politics were whipsawing Everglades policies. The newspaper noted that the muck farmers were paying state drainage taxes up to \$1.25 an acre, and up to \$5 an acre for the same purpose to sub-drainage districts, for which the state had pledged itself to protect the residents from high water and drain the land.

Yet, the governor who claimed the legislature was powerless to relieve storm suffering was the governor who diverted internal improvement funds /\$700,000/ to make additions to the state penitentiary plant. . . maneuvering to keep down a state millage that must otherwise have been increased. 17

Probably no one had more to do with bringing the state affairs in the Everglades to general public attention than Governor Martin. Although abuse became his lot and rumor marked his step, Martin at least had a plan. Tired of hearing

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16 J. H. Reese, Florida's Greatest Hurricane, 58.

17 Miami Daily News, October 16, 1926. Clewiston residents adopted a "Peoples Resolution" on October 19, 1926, which they forwarded to Governor Martin. It included as salient points: confidence in the Everglades, 15-17 foot lake levels for good drainage, sale of Internal Improvement mortgages for drainage funds, use of Internal Improvement Funds for drainage, survey of the Everglades project by a recognized engineer, special session of the legislature to secure a resident drainage board, and a new chief drainage engineer to reside in the Everglades. Everglades News, February 17, 1928.

the complaints and receiving the verbal chastisement of the residents and press of South Florida, the chief executive led the Drainage Board to West Palm Beach, where a public meeting was held on the future of the Everglades. Martin made the key speech, taking his stand on the 1913 Randolph Plan, and defended his predecessors.

The question has been repeatedly asked why the Lake was permitted to reach such a high level recently. The answer to this question is that the Board did not permit it, but could not help it; it went there against all of the efforts to reduce it because God sent the rain and the storm and the Board had not sufficient funds with which to finish this canal St. Lucie in time to head off the storm and the rain. 18

The governor analyzed the protests he had received on the Everglades and remarked that less than a year before the storm he was bitterly criticised because there was not enough water in the lake or on the Glades to stop the fires. Martin told his audience that he was not in favor of a resident board and would not ask for one from the legislature. The chairman of the Drainage Board sought cooperation from the citizens of the area and financial assistance through the issuance of more bonds.<sup>19</sup> Howard Sharp attended the West Palm Beach conference and acidly charged Governor Martin and the Drainage Board with

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18 John W. Martin, Address of John W. Martin, Governor of Florida on the Everglades and the Drainage Problem, West Palm Beach, October 28, 1926, 18.

19 Ibid., 23-27.

draining nothing but the treasury; he said that the board should be given to the people of the Everglades Drainage District for their local benefit.<sup>20</sup>

The Drainage Commissioners decided on November 9, 1926, that it was to the best interests of the Board to call a conference on the Everglades at Tallahassee on December first.<sup>21</sup> The meeting came off as scheduled and, after long discussion, the conferees decided to seek an enlargement of the Everglades Drainage District to include east coast areas, wider and more equitable taxation in the district, a state-wide one-half mill Everglades drainage levy, a citizen's advisory committee of five to work with the board, the establishment of drainage headquarters with a resident engineer in the Everglades, and an engineering review board composed of three engineers. Each of these requests was embodied in a resolution for use in preparing for the 1927 session of the state legislature.<sup>22</sup>

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<sup>20</sup> Everglades News; November 5, 1926.

<sup>21</sup> E.D.D. "Minutes," VI, 201. Among others the Board invited the following prominent citizens of South Florida to the meeting: Frank B. Shutts, banker, J. W. Watson, state senator, and Lon Worth Crow, real estate dealer, all of Dade County; W. C. Kyle, banker, and H. C. Stilwell, publisher, of Broward County; George F. Bensel, chamber of commerce; D. H. Conklin, publisher, and Alfred H. Wagg, state senator, of Palm Beach County; L. W. Jennings, state senator, of Okeechobee County; E. J. Ethredge, state senator, of Highlands County; A. O. Kanner, lawyer, Martin County; Ed Lambright, editor of the Tampa Tribune, of Hillsborough County. H. C. Rorick of Spitzer, Rorick, and Company of Toledo, Ohio, and representative of the only bondhouse ever to handle E.D.D. bonds was also invited; also Peter O. Knight, banker, and D. B. McKay, editor of the Tampa Times of Hillsborough County. Ibid., 209.

<sup>22</sup> Ibid., VI, 224.

## 2. The Twenty Million Dollar Bond Issue

Governor Martin met the 1927 session of the legislature with two lengthy reports. The first of these was F. C. Elliot's Biennial Report as Chief Engineer of the Board of Drainage Commissioners of the Everglades Drainage District for 1925-1926. F. C. Elliot's report contained a summary of the drainage work to 1927: canals, levees, locks, expenses, and proposals for new construction and taxation. <sup>23</sup> The total drainage expense of operations and maintenance to 1927 was set at \$14,903,584. The amount of money to be expended on proposed new canals was estimated at \$13,704,515 and the cost of necessary work to complete old canals was set at \$5,022,825. The area included in Elliot's estimates may be stated in general terms as that part of the district north and east of the Miami Canal and a belt around Lake Okeechobee. The chief engineer recommended that steps be taken at once to prevent a repetition of the 1926 storm disaster by building <sup>25</sup> a levee on the southern shores of the lake.

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23 F. C. Elliot, Biennial Report of the Engineering Department of the Everglades Drainage District, 1925-1926, 3. Hereinafter cited as Elliot's 1927 Report.

24 Ibid.; 9-10

25 Ibid., 14. Elliot suggested a high embankment, 150 to 250 feet wide on top, "which will afford attractive home sites for the Everglades section." Twenty-six miles of levee divided into building lots 90 feet wide with a 60 foot right-of-way every quarter mile would provide 56 lots per mile valued at \$500 a lot totaling \$582,000; at \$750 a lot, \$873,000. Ibid., 14, 17, 18.

Elliot advocated the cutting of new canals on an east-west basis rather than the diagonal plan of the 1913 Randolph Report; the east-west canal routes would follow the shortest route to the ocean and take advantage of a faster gradient and easier excavation along those lines. The total estimated cost for new canals, existing canals, control works, and the Okeechobee levee was appraised at \$20,583,438.<sup>26</sup> The proposed work, the chief engineer believed, should be carried out in blocks allowing eight years for final completion of main drainage works to drain 2,300,000 acres. The assessed valuation of property in the Everglades Drainage District was set at \$52,404,416 in 1926, with taxes set at \$1,636,490. Total drainage bonds outstanding as of January 1, 1927, were \$10,255,000, with \$497,862 owed to private construction interests and \$298,000 due on loans from the Trustees of the Internal Improvement Fund.<sup>27</sup>

Martin's second document was an engineering report made by a board of three recognized reclamation authorities. In the middle of November, 1926, the Drainage Board had instructed the secretary of the Commissioners to employ engineers to

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<sup>26</sup> Elliot's 1927 Report, 28.

<sup>27</sup> Ibid., 72-73. Elliot estimated the population of the district in 1927 at 46,000 and the real value of property in the district at \$262,000,000 or five times the assessed value. On January 18, 1927, Howard Sharp sought Elliot's removal as chief drainage engineer. Sharp contended that Elliot was the controlling force of the Everglades drainage rather than the Commissioners. Everglades News, January 18, 1927.



criticise the operation of 1913 Randolph scheme and "to examine the drainage works of the Everglades Drainage District reviewing present plans and make recommendations for continuance of the district. . . ." <sup>28</sup> On March 22, 1927, the board made an agreement with Anson Marston, dean of the College of Engineering of Iowa State College, Samuel H. McCrory, chief of the Division of Rural Engineering, Bureau of Public Roads, United States Department of Agriculture, and George B. Hills, a consulting engineer of Jacksonville, Florida, and secretary of the 1913 Isham Randolph Commission. <sup>29</sup> Howard Sharp, who felt that the engineers should have been selected without the knowledge of the chief drainage engineer, wrote that Elliot was "to select the jury to try the case against him." <sup>30</sup> Sharp quoted Kenneth Ballinger, a well-versed feature writer of the Miami Herald, to the effect that the board of review would approve the "present" system of drainage; the Canal Point editor added that the forthcoming report would whitewash Elliot. <sup>31</sup>

The Board of Commissioners of the Everglades Drainage District instructed this Engineering Board of Review to check carefully to find if the 1913 Randolph design had been followed,

<sup>28</sup> E.D.D. "Minutes," VI, 209, and entry for February 15, 1917, with no pagination.

<sup>29</sup> "Everglades Drainage Plan Endorsed With Minor Changes," Engineering News-Record, XCIX (August 4, 1927), 187. The members of the engineering board of review were paid \$7,500 each for their services of two months duration. E.D.D. "Minutes," March 23, 1927, no pagination.

<sup>30</sup> Everglades News, January 26, 1927.

<sup>31</sup> Ibid., February 4, 18, March 25, 1926.

to ascertain whether or not the 1913 plan was the proper one to follow, and to report on the correctness of the work already done. The engineers were further instructed to make recommendations for the future, to investigate the economy with which previous work had been done, to decide whether to drain as a whole or by units, and, finally, to get all the information which might aid the Board in the reclamation of the 'Glades.<sup>32</sup> The Board of Review prefaced its report with the following statement:

These instructions and our conference with you prescribed that our work was to be that of an engineering board of review, confining its attention to the engineering features of the Everglades drainage.<sup>33</sup>

The Board spent two weeks inspecting the Everglades and several weeks in Tallahassee examining a mass of records and data collected by the staff of the drainage district engineer. Marston, McCrory, and Hills advised the Drainage Commissioners to adopt a revised plan of drainage embodying three features: (1) independent control of Lake Okeechobee; (2) a system of east-west main drainage canals; (3) progressive drainage of the region by unit areas.<sup>34</sup>

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32 State of Florida, Everglades Drainage District, Report of Everglades Engineering Board of Review to Board of Commissioners of Everglades Drainage District, 1-3. Hereinafter cited as E. E. B. R. Report.

33 Ibid., 3

34 Ibid., 6.

The Board of Review recommended that the outlet canal of Lake Okeechobee be immediately increased to a capacity flow of 7,500 cubic feet per second and an ultimate flow of 10,000 cubic feet per second. The Board criticized the Randolph plan for the use of drainage canals through the Everglades for emergency control of the lake levels; it held that these canals were for the exclusive purpose of draining adjacent lands.<sup>35</sup> It recommended enlargement and improvement of the Caloosahatchee and St. Lucie canals for the flood control of the big lake as the fastest and most economical methods of managing the height of the lake. As a safeguard to life and property around the lake shore, it urged that an enlarged levee be built to a height of twenty-seven feet above sea level on the southeastern, southern, and southwestern edges of the lake.<sup>36</sup>

Marston, McCrory, and Hills criticized the long diagonal main drainage canals through the Everglades and advocated a new or supplemental system of eighteen east-west canals, spaced at intervals of six to eight miles from north to south below Lake Okeechobee to provide drainage of the muck lands. They suggested that the spoil banks be molded into continuous levees so as "to prevent free draining off of wet weather

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35 E.E.B.R. Report, 8, 49, 85.

36 Ibid., 8-10. In conjunction with the levee it was further urged that the Drainage Board request permission to hold the height of the water between 14 and 17 feet. Ibid., 7-8.

accumulations of water from all excepting lands under actual development, and to make possible an increase in canal capacity for emergency use.

This Board of Review suggested that the drainage program be carried out in successive sections insofar as conditions of settlement and development would permit. The Board of Review found that the 1913 Randolph plan was being followed in 1927, that \$14,903,854 had been spent on all operations to 1927, and that the work had been done with praiseworthy economy.

The existing drainage works have removed the year-round standing water from vast areas of land, have brought Lake Okeechobee to the point where its levels can be successfully controlled in most years, have brought a considerable number of settlers into the Everglades Drainage District, have interested capital for agricultural developments on large tracts whenever adequate drainage can be assured. 38

In its conclusions the Everglades Engineering Board of Review noted that the 1913 Randolph plan had stated that the progressive scheme of drainage was preferable, but that Randolph, Leighton, and Perkins had laid out designs to reclaim the whole area between the West Palm Beach and the Miami Canals. The Board declared that

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37 E.E.B.R. Report, 83. Elliot had previously recommended east-west canals to take advantage of shorter distances to tide water, steeper grade, and softer rock. See infra.

38 Ibid., 45.

Actual experience since 1913 in carrying out this policy has demonstrated that very much greater areas of Everglades land would have been brought into use by 1927 if money available for main canal construction from year to year had been in close accordance with a wise progressive plan. <sup>39</sup>

Marston, McCrory, and Hills found that Randolph, Leighton, and Perkins had made a very poor guess on their 1913 calculation of an eight inch subsidence of the organic Everglades soils. There had actually been three to five feet shrinkage on the Okeechobee shore since 1913. The 1927 board called attention to the fact that this subsidence had already seriously impaired the effectiveness of the drainage canals, and insisted that provisions should definitely be made for further shrinkage of the muck soils in the following decade. <sup>40</sup>

The projected revisions and new plans advocated by the 1927 Board of Review were estimated to cost immediately from \$5,000,000 to \$8,000,000, with \$3,000,000 of that sum being allotted to the expense of increasing the Okeechobee outlet capacity by fifty per cent. <sup>41</sup> The cost of the whole revision was estimated at \$26,000,000. The Board declared that this sum would reclaim from two to three million acres of South Florida lands. <sup>42</sup>

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<sup>39</sup> E.E.B:R. Report, 48.

<sup>40</sup> Ibid., 32, 74. It was suggested that the Board of Commissioners reorganize the administrative, engineering, and operations departments of the district and that offices and a resident engineer be maintained in the Everglades. Ibid., 24-26.

<sup>41</sup> "Everglades Drainage Plan Endorsed with Minor Changes," Engineering News-Record, XCIX (August 4, 1927), 187.

<sup>42</sup> "Board of Review Reports on Everglades Drainage," Engineering News Record, XCVIII (May 19, 1927), 833.

The subsidence in the Everglades reported by the 1927 Board of Review prompted study of the problem, and an article was published which analyzed the causes of subsidence in muck soils. They were: (1) the removal of the supporting value of ground water on the lowering of the water table; (2) compaction due to agricultural cultivation; and (3) the gradual escape of volatile constituents. The maximum shrinkage in such soils was that recorded in the English Fens of ten feet in eighty-seven years on muck eighteen feet deep. The 1927 inspecting engineers had recommended that the Everglades canals be cut on the basis of an eventual fifty per cent subsidence of the Everglades soils.<sup>43</sup>

Following his address on the Everglades and the drainage problem made at West Palm Beach in October, 1926, Governor Martin made thirty-two speeches in South Florida using the same subject matter, or variations of it. On January 10, 1927, he spoke before the Miami Chamber of Commerce recounting the history of the drainage project, the condition in which he found the Drainage Board when he was inaugurated, what had been done in the first half of his administration, and his plans for the future.<sup>44</sup> He said: "My desire is to see the Everglades properly financed and put under way that it may ulti-

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<sup>43</sup> "Muck Subsidence Under Drainage in the Everglades," Engineer and Contractor, LXVI (November, 1927), 511.

<sup>44</sup> Orlando Morning Sentinel, January 11, 1927. Martin related that he had found the drainage district assessed at \$15,000,000 in 1925 and saddled with \$11,000,000 bonded debt; that \$400,000 had been borrowed from the I.I. Fund and that a sum of \$425,000 was due the Arundel Corporation.

mately be cultivated and made into the most productive re-  
 gion on earth."<sup>45</sup> The governor stated that he would lay the  
 problem before the legislature, but that the people of Flori-  
 da should pull together, and that \$15,000,000 to \$25,000,000  
 expended in finishing the Everglades project would not in-  
 jure the merchants along the lower east coast.

Howard Sharp, commenting on Governor Martin's address  
 of January 10, tabbed it "Miami propaganda"; he noted that  
 Martin rejected any part of a local board of commissioners  
 for the district, and was unwilling to change any part of  
 the 1927 set-up of five state officials. Despite his speech-  
 es, Sharp continued, Martin had never cooperated with the  
 people of the Everglades in any way.<sup>47</sup>

Within two weeks after the legislature convened in April,  
 1927, Governor Martin delivered a special message to that

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<sup>45</sup> Orlando Morning Sentinel, January 11, 1927. Martin  
 noted the difference between the Trustees of the I.I. Fund and  
 the Board of Commissioners of the Everglades Drainage District  
 by telling his audience that the funds of the former belonged  
 to all the state, and that the 'Glades area should not expect  
 returns from the I.I. Fund. Martin's reasoning was a little  
 specious since W. S. Jennings had secured the Everglades pat-  
 ent in 1903 when such land as was in the Fund at that time  
 was being contested by land grantees.

<sup>46</sup> Ibid. Modifying his West Palm Beach stand, when he had  
 held out against any change in the personnel of the Drainage  
 Board, Martin stated that if the people would rather have an  
 independent Everglades board, the legislature should enact a  
 new bill which would put the headquarters and membership in-  
 side the area.

<sup>47</sup> Everglades News, January 14, 1927.

body in which he presented his plan for a \$20,000,000 bond issue. The Governor laid a great deal of emphasis on the fact that the everlasting trouble with Everglades reclamation since Jennings' administration had been the lack of sufficient funds, and he declared that had his predecessors been properly financed the project would have been completed years before.<sup>48</sup> The Everglades could be drained and the soil was productive; and, added the governor, if the area was worth draining it should stand the expense. Martin noted that \$3,000,000 worth of bonds authorized by the 1925 legislature could not be sold, but he declared if the measure he proposed were enacted into law New York bond-houses were willing to put up \$20,000,000 to do the job once and for all.<sup>49</sup>

The chief executive pointed out that with the issuing of the proposed bonds, all of the drainage tax would be used to retire the obligations. In addition, the proposed measure authorized the levying of an ad valorem tax if the drainage tax was not enough. Martin declared that the Everglades voters would rather handle their problems with a local board, and he would leave it to the legislature to decide whether or

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<sup>48</sup> Journal of the State Senate of Florida of the Session of 1927, 305-307.

<sup>49</sup> Ibid., 308-309. "I am advised that during the year 1925, of all the bonds issued in the United States of America, Florida issued 35 per cent of them." Address of John W. Martin, Governor of Florida on the Everglades and the Drainage Problem, West Palm Beach, October 28, 1926, 9.



not to remove the Drainage Board from the hands of state officials. The governor warned, however, that the New York bondhouses would not handle the deal if the Everglades proposition were removed from the hands of the commissioners as created in 1913.<sup>50</sup>

Eight days later the legislature incorporated the governor's recommendations into a law, by which the Drainage Commissioners were authorized to issue the additional bonds to complete the reclamation of the Everglades.<sup>51</sup> The Martin bond law became a political issue in the state. Many leaders in business, politics, and the press supported Martin's plan, but others opposed it. The state of Florida, especially the more southerly part, had experienced a real estate boom that had been accompanied by a large amount of county and municipal bonding. The collapse of the boom in 1926 had left bitter memories in the minds of some and gave doubts in others. Howard Sharp, the sage of Canal Point, told his readers that the law bought a "pig in a poke" since the 'Glades were without roads. He said it was a waste of money; that private landowners were paying the cost of draining the state's school lands but had no local control of or representation on the

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<sup>50</sup> Journal of the State Senate of Florida of the Session of 1925, 310-311.

<sup>51</sup> Chapter 12016, Laws of Florida, 1927. Chapter 11842, passed at the same session, appropriated a loan of \$30,000 for the relief of Glades County, scene of most of the storm damage of 1926, to be repaid in twelve years. Ibid.

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Drainage Board.

On May 24, 1927, the Board of Drainage Commissioners discussed the matter of the sale of bonds and decided that it would be some time before any bonds could be issued; consequently, the chief drainage engineer was ordered to discontinue all construction on June first.

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The most vocal of Martin's opponents on the Everglades bond subject was Herman A. Dann, prominent political aspirant and president of the state chamber of commerce. Dann charged that the commissioners had made a bond deal with Dillon, Read, and Company and Eldredge and Company, New York bond houses, in which they agreed to accept ninety-one cents on the dollar when Martin had been offered ninety-eight by other buyers.

Dann also charged that state responsibility in the Everglades ceased with flood control, that the Everglades citizens should work out their own plans without interference from Tallahassee, that the proposed addition of a million acres of land would be uneconomic and wasteful to reclaim since it would increase the overhead expenses, and, finally, that there were many

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52 Everglades News, April 22, 1927.

53 E.D.D. "Minutes," VI, May 24, 1927. On June 7 the Board found their debts totalled \$1,500,000, and with no funds available the May 24th order was repeated in a resolution to be effective June 15. Ibid., June 7, 1927. Martin blamed his opponents for the "drainage mess" and told the press it would not be his fault if the "work" shut down. Everglades News, June 10, 1927.

54 Orlando Morning Sentinel, July 17, 1927.

large areas of the muck soils in condition for cultivation  
 that had never been placed under the plow.<sup>55</sup> "We have not  
 reached the Mussolini stage when the acts of executives are  
 undebatable," Dann said; he concluded by stating that the  
 whole scheme looked like a plan to sell land rather than to  
 promote its use, and that the burden would fall on Coral  
 Gables, Hialeah, Opa Locka, and Coconut Grove.<sup>56</sup>

On the same day that Dann spoke at St. Petersburg, the  
 editor of the Miami Herald analyzed the bond proposition and  
 concluded with the question and answer, "Is it worth the price?  
 The Herald thinks so."<sup>57</sup> Believing that the prospect of in-  
 creased taxes was at the root of most of the opposition of the  
 lower east coast to the Martin design for future reclamation  
 of the Everglades, the newspaper presented facts obtained from  
 the Trustee-Drainage Commissioners so that the taxpayers of  
 that county "may better judge whether or not the returns  
 from a back country drained and safeguarded against floods

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<sup>55</sup> Orlando Morning Sentinel, July 17, 1927. Dann quoted  
 the Dade County Agricultural Agent to the effect that of the  
 36,000 acres of drained tillable land in Dade County only  
 3,000 were in production. Dann also stated that only 3,000  
 of 20,000 acres in the Disston Island District and 9,000 of  
 the 57,000 in the area from Pahokee to Ritta were in culti-  
 vation.

<sup>56</sup> Ibid.

<sup>57</sup> Miami Herald, July 16, 1927.

floods is worth the expense." <sup>58</sup> The editor pointed out that the ad valorem tax, if assessed, would be laid as a safeguard to the new bond issue to insure against any shortage in the Internal Improvement Fund. This Fund, paying drainage taxes on its lands, was fed by the sale of state lands and used each year to buy in tax redemption certificates on land where the drainage taxes were not paid and where there were no other bidders. Thus, in 1925, \$118,255.77 was paid by the Trustees of the Improvement Fund to the Commissioners of the Everglades Drainage District to make up for unpaid taxes on lands bid in-

<sup>59</sup> to the Fund. The editorial summed up the advantages of finishing the drainage project as follows: protection from flood waters, agricultural industry for the back country, and tonnage from diversified crops necessary to make Miami harbor an important shipping center.

The Everglades Drainage District as originally created included an area close to, and just west and south of, the town of Miami. Metropolitan suburbs had developed in this area; since the disputed bond law of 1927 provided for unlimited ad valorem taxes, if needed, it was quite natural that property owners would oppose the law. In the early summer of 1927

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<sup>58</sup> Miami Herald, July 16, 1927. The assessed value of the Everglades Drainage District in 1926 was \$52,500,000 of which \$31,021,978 was placed in Miami west of 27th Avenue West, Coral Gables, and unincorporated Dade County.

<sup>59</sup> Ibid.

F. H. Arthur, Glenn H. Curtiss, Rodney B. Burdine, J. C. DuPuis, and twenty-four other citizens with property in the affected section of Dade County issued The Taxpayer's Answer to Governor Martin: An Analysis of the \$20,000,000 Bond Issue. This twenty-four page pamphlet contrasted the Dade County complainants' position, the State obligations, and also the bond houses' construction of the responsibilities of the other two.

Never in the history of Florida has there been offered for sale a bond with the security behind it that these bonds will have. First, an unlimited taxing power and an unlimited liability upon every parcel of land within the District; second, an unlimited personal liability upon every owner of land within the District; and third, an unlimited State endorsement or guaranty, and the big thing in the mind of the bond buyers is the last. 60

The taxpayers declared that this was no political controversy with Governor Martin, but that they were interested in the development of the Everglades along sane and conservative lines, and that efforts were being made to get the Courts to pass upon the legality of the law, "because we believe its provisions to be burdensome upon the taxpayers, and unfair and unjust in their operation." 61

On July 18, 1927, a conference on "Florida Everglades Reclamation" met in Baltimore, Maryland, at the written invita-

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60 P. H. Arthur, et.al., The Taxpayers' Answer to Governor Martin: An Analysis of the \$20,000,000 Bond Issue, 23  
61 Ibid., 24

tion of S. Davies Warfield, president of the Seaboard Air-line Railway, Warfield declared that he had called the conference

In the endeavor to clarify and to lay before Florida's citizens and those interested in her welfare questions that have arisen in connection with that great territory within her borders known as the Everglades the successful reclamation of which by drainage means so much to her future. . . .<sup>62</sup>

Warfield opened the conference with the remark that the Baltimore meeting grew out of a conversation between the railroad executive and George E. Merrick, prominent Miami citizen and developer of Coral Gables, in New York the preceding month in which the Floridian had expressed misconceptions of the purpose of those who had assisted in the financing of the Everglades reclamation undertaking. The Maryland meeting was held at Merrick's suggestion, although he was absent on account of business pressures.<sup>63</sup>

Warfield deplored statements in the press that the Seaboard had gotten various rights of way along canal banks in

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<sup>62</sup> 1927 Baltimore Everglades Conference, 1. The list of attendants at the conference included Governor Martin, B. G. Dahlberg; Herman Dann, F. E. Bryant, F. C. Elliot, S. Davies Warfield, and thirty-eight other representatives of banks, legal firms, construction companies, land corporations, manufacturers, wholesalers, merchants, and several state senators and one congressman.

<sup>63</sup> Ibid., 6. Warfield made it quite clear that if the Seaboard had believed the people on the lower east and west coasts of Florida were content to rely solely on the tourist business and existing conditions his railroad would not have extended its lines below West Palm Beach or to Ft. Myers and Naples. "Chief Drainage Engineer Elliot, before the Seaboard extension from Coleman to West Palm Beach was constructed, discussed Everglades reclamation with me and had suggested that the Seaboard should look into the desirability of running tributary lines into the Everglades lands." Ibid., 7.

the Everglades for help in financing the bonds of the area and Merrick's information that the Seaboard official had<sup>64</sup> actually drawn up Martin's 1927 bond bill. The rail-roader went on to tell how he had introduced Martin to representatives of Dillon, Read, and Company so that Florida might benefit by the experience of the carrier in distributing bonds to investors, rather than lower the price by placing them on the market in blocks. After posing questions of methods of financing, taxation, drainage plans, and organization, Warfield asked for a roundtable discussion on

Whether it is desired to continue the policy of carrying out the contract which was made when the Everglades lands were taken over from the national government by the State, that they were to be drained or whether that contract is to be repudiated.<sup>65</sup>

The conference was in session for two days during which time F. C. Elliot, Frank B. Shutts, B. G. Dahlberg, John W. Martin, Herman Dann, O. A. Brown, F. E. Bryant, and several others discussed at length various phases of the Everglades program. Dann was the only member of the group to oppose the Martin plan; he voiced the same views he had given in his St. Petersburg speech, especially emphasizing the obligation as-<sup>66</sup>sumed by the state under the 1927 law.

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<sup>64</sup> 1927 Baltimore Everglades Conference, S. Warfield said he had never seen the bill and knew nothing of it until it was a law.

<sup>65</sup> Ibid., 15  
<sup>66</sup> Ibid., 51-52; 63-67. Dann briefed the "bulwarks" provided the new bondholders as (1) drainage tax, (2) ad valorem tax, (3) funds of the I.I. Board through delinquent tax sales, and (4) legislative appropriations of funds to pay off the bonds.

Walter F. Lineberger, a member of the United States House of Representatives from California, was present at the conference and broached the subject of federal aid to Florida on the problem of flood control. As a member of the Rivers and Harbors Committee, Lineberger spoke with some authority when he said that the house chairmen of the rivers and harbors committee, the reclamation committee, and the chief of the army engineering corps were all sympathetic to the national government's contemplated study of the peninsula's flood control problems.<sup>67</sup>

The remarks made by H. C. Sebring, a real estate operator of Sebring, Florida, shed light on one aspect of the Everglades reclamation program. Sebring stated that he would like two things to come out of the conference: (1) a change in the sentiment of the Florida press on the problem; (2) a diminution of sectionalism within the state. Sebring denied the accusation of a Florida newspaper that Martin had bargained with Warfield on the bond-canal bank deal. "We all know that a newspaper very rarely retracts. . . there ought to be something come out of this meeting to make the paper making any such statement retract it."<sup>68</sup> On the second point, Sebring voiced

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<sup>67</sup> 1927 Baltimore Everglades Conference, 76-78.  
<sup>68</sup> Ibid., 86-87.



the opinion that strife between the northern and southern sections of the state since 1910 might be fatal to the commonwealth if continued, and that the drainage of the Everglades should be made a state obligation for the benefit of the whole peninsula.

The conference adopted seven resolutions approving the Martin plan and pledging full support to a renewed attack on the problems of drainage, reclamation, and settlement of the Everglades.<sup>69</sup> L. W. Jennings, state senator from Okeechobee City, in the closing address, emphasized the necessity of harmonizing the discordant elements of the state behind the drainage program. Jennings felt that it was unfortunate that George E. Merrick, Glenn H. Curtiss, and James H. Bright, Dade County residents and opponents of the Martin plan, could not have been present. He praised Dann for his courageous stand.<sup>70</sup>

During the late summer and fall of 1927 suits were instituted in the courts of Florida to restrain the Board of Commissioners of the Drainage District from carrying through the bond delivery, and litigation continued into 1928.

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<sup>69</sup> 1927 Baltimore Everglades Conference, 91-97.

<sup>70</sup> Ibid., 101-104. Howard Sharp wrote that the Dann-Martin debate on the Everglades found Dann on top, that F. C. Elliot was still the "drainage boss," and that the Warfield-Martin bond deal was a good thing for those in on it since the governor was for the "big fellow." Everglades News, July 22, 1927.

### 3. The Dayton Morgan Report

Lying north and west of Miami in Dade County, along both banks of the Miami Canal, the Dade Drainage District formed one of the sub-districts of the Everglades group. In the late summer of 1927 the supervisors of this sub-district secured the services of Arthur E. Morgan to advise them on the problem of their bailiwick.<sup>71</sup> Morgan, president of the Dayton Morgan Engineering Company, it will be remembered, had had a prominent part in the Moss Committee Hearings on the Everglades in 1912 when he had taken the J. O. Wright report apart and disclosed its errors.

In the years between 1912 and 1927, Morgan had earned an excellent reputation in the field of hydraulic engineering and flood control in the Miami-Ohio Conservancy District, the Pueblo-Colorado flood control project, the Rio Grande Valley project, as consulting engineer on the Boulder Dam design, and as a vice-president of the American Society of Civil Engineers.<sup>72</sup>

The Dayton Morgan Company sent its report, with a letter of transmittal, to the Sub-district Board on October 3, 1927, with the statement that

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<sup>71</sup> Dayton Morgan Engineering Company, Report to Board of Supervisors of Dade Drainage District on Reclamation of the Everglades, 3. Hereinafter cited as Dayton Morgan Report.

<sup>72</sup> Everglades News, November 4, 1927.

In advising your board on the problems of the Dade Drainage District it is necessary to consider the plans and policies of the Everglades Drainage District, because success for the Dade District is dependent, in a large measure, upon the adoption of an intelligent and adequate policy for the Everglades as a whole. 73.

Morgan recognized and set down four fundamental conditions upon which the success of the Everglades scheme of reclamation depended. They were as follows: (1) modern, well designed legislation; (2) thorough and effective engineering design; (3) adequate financing; and (4) the consideration of the Everglades as a practical problem of reclamation and development rather than as a matter of politics. 74

If other conditions are met, satisfactory financing will follow, almost as a matter of course. Investment money is more abundant in America than ever before, and is eagerly hunting for sound investment opportunities. If money is hard to secure, or if unusual terms must be offered, it is almost conclusive evidence that the development is unsound, or that its management is bad. 75.

The hydraulics engineer prefaced his discussion by noting that any reclamation plan must be based on sound legislation. To him, the laws of the Everglades Drainage District were ". . . about the most primitive, unfair, and inadequate of all the reclamation laws now in use in America." 76 Morgan drew his readers' attention to the skill of drafting statutes for drainage in Florida to escape being held unconstitutional, a fact which did not mean that the legislation would be suitable.

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73 Dayton Morgan Report, 3  
 74 Ibid., 3  
 75 Ibid., 3  
 76 Ibid., 4

The economy of assessments apportioned against the lands of the district, according to this consultant, were

. . . an inequitable, antiquated system arbitrarily fixed by the Legislature. . . the failure of the Everglades project, partly because of poor laws, almost entirely lacking in sound, effective policies has not been accidental or necessary; but a natural and inevitable outcome of bad laws and bad policies. 77

As a specific example, Morgan observed that while the Everglades Engineering Board of Review was at work in the spring of 1927, the legislature was laying assessments on the area west of the Miami Canal, which the board proceeded to lay off as swamp and marginal land for indefinite abandonment. Thus, such an area, cut off from any chance of improvements, would have borne drainage taxes throughout the life of the bonds.  
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Lack of a definite plan of improvement, unsound distribution and inadequate estimates of the costs, and the policy of the drainage of large areas before needed were, according to Morgan, the primary defects of the Everglades Drainage District laws and policies. Morgan believed that the failure to adopt an adequate and authoritative plan with proper and equitable assessments was the cause of much of the continued unsuccessfulness of the Everglades project. The great illusion

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77 Dayton Morgan Report, 5. "Unless laws and policies are improved, the borrowing of further large sums will only delay and make more difficult the ultimate reclamation. . . ."

78 Ibid., 6.

of low costs for the necessary works in the district was broken wide open by the Dayton Morgan Report. Even the estimates of the 1927 Board of Review of \$26,000,000 for the area east and north of the Miami Canal, the Chief Drainage Engineer's estimate of \$26,000,000 more for the lands west of the Miami Canal plus the \$15,000,000 expended by 1927 would not provide complete reclamation, only main outlets.

Complete reclamation will cost \$100,000,000 or more. Throughout the whole history of the Everglades project, reclamation has been promised at a cost impossibly small. The report of Mead, Metcalf and Hazen in 1912, was a straight forward attempt to look the facts in the face, but it was largely neutralized by the report of Randolph, Leighton and Ferkins in 1913. 79

In commenting on the Randolph Plan, Morgan wrote that the commission erred in its conclusions that drainage could be had at a small cost per acre, in its figures for navigation and power development, in the size of a control canal for Lake Okeechobee, and in the recommendation of the expeditious construction of additional long diagonal canals. Furthermore, Randolph and his associates were largely silent on the vitally important issues of economic, financial, and administrative policies upon which the success of the Everglades Drainage District depended.

If, therefore, the Randolph report has constituted the main guide and plan of the Everglades Drainage District, we are forced to the opinion that its guidance has been inadequate, unsound and inefficient. 80

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79 Dayton Morgan Report, 7.

80 Ibid., 9.

The Dayton Morgan engineers examined the report of the 1927 Everglades Engineering Board of Review and discovered that this report likewise made no mention, worthy of the name, of legal machinery, organization, or engineering management of or for the South Florida district. "If such a board of review fails to advise on these matters of fundamental importance, then how shall the District obtain such counsel?"<sup>81</sup> Morgan singled out the instructions given to the 1927 board and reported that he had questioned the personnel of the Board of Review as to why they had not entered into and advised on matters of policy. Their reply was that Governor John W. Martin confined them to engineering matters.

He said he considered engineers incompetent to pass on matters of policy. They should confine their attention to the surveys, he said, and he would determine policies. The report of the Engineering Board of Review seems to confirm the Governor's estimate of their status. 82

To the Ohio engineer this was practical heresy.

A thorough consideration of the economic features must necessarily have great effect on the design of engineering features, thus in failing to face the main controlling issues the Engineering Board of Review has failed to lift the project from the tangle of legislative, financial, administrative, and engineering difficulties which have long impeded its progress. 83

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81 Dayton Morgan Report, 10.

82 Ibid.; 12.

83 Ibid., Morgan was very pointed in his comparison of the statement of the 1927 board of review which, with due caution to unavoidable uncertainties, found nothing to indicate that the money expended for Everglades construction had been spent otherwise than economically. "This seems to contradict their own recommendation for the practical abandonment of the long diagonal canals constructed by the district. . . ." Ibid., 14.

Both the 1913 and 1927 engineering reports, especially the latter, suggested progressive drainage as the best plan, but Morgan observed that ". . . at the same time [they were] recommending a system of canals for millions of acres to be constructed immediately at the expense of the entire district." <sup>84</sup> There were, according to the consultant of the Dade District, many excellent features in the 1927 report that should not be minimized because it represented faithful study of engineering data and was a very great improvement over the one of 1913.

The Dayton Morgan report closed with suggestions for a sound and effective Everglades drainage plan. Among them were the following: divorce from the state administration, actual home rule for the district, public review of plans, thorough study of economic and agricultural as well as engineering problems, deeding of the state lands in the district to the new district upon its creation, immediate reclamation by the sub-districts under supervision of the general district, and the <sup>85</sup> maintenance of a general experiment and research station.

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84 Dayton Morgan Report, 15. "The similarity in method of treating the Everglades problems in the report of the Engineering Board of Review and that of the engineering commission of 1913 may be due in part to the fact that one of the engineers was a member of both boards."

85 Ibid., 19-21. Morgan laid heavy stress on the ". . . main function of the sub-districts and local units [which] should be the actual reclamation and development of the lands of the Everglades. This . . . will require diking and pumping as well as the construction of canals, and can best be accomplished by organizing the work in relatively small units, making it possible to get complete reclamation on limited areas without delay, so these areas will be able to bear the cost of financing the work." Ibid., 21

At some time the Everglades Drainage District will have to recognize and liquidate past mismanagement, and begin over again. We believe it is better to do that now than when another ten or twenty million dollars has been committed. . . .

The Everglades can and should be reclaimed. At a recent informal conference at Baltimore much discussion was had as to whether the reclamation of the Everglades should be abandoned or continued. That is beside the point. . . . The present Everglades Drainage District may cease to exist, yet the reclamation of the Everglades may go on. Present agricultural operations in the district clearly demonstrate the desirability of reclamation. The character of the soil and climate afford an attractive prospect, and some owners of land will continue to develop their holdings as best they can under any conditions that may prevail. 86

With well worked-out administrative, economic, financial, and engineering policies the Everglades could reach a high state of development and become one of the chief resources of the state. The technical difficulties were great, concluded Morgan, and "unless the whole project is directed by a quality of management and statesmanship that is not yet in evidence, the troubles of the Everglades have only just begun."<sup>87</sup>

Shortly after Aurthur E. Morgan transmitted his company's report to the Board of Supervisors of the Dade Drainage District, Howard Sharp wrote a long editorial on the twenty-four page pamphlet. Sharp declared that the members of the 1927 legislature might disregard the Morgan analysis of the

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86 Dayton Morgan Report, 22-23

87 Ibid., 24.



Everglades, but that Morgan's reputation throughout the United States insured a nation-wide audience for the critical light which had been brought to bear on the morass south of Lake Okeechobee.

Mr. Morgan's high integrity, coupled with his exceptional ability and rugged frankness in setting forth his findings without fear or favor, makes his services much sought after by those desiring to learn the plain, unvarnished truth about their reclamation projects. 88

In September, 1927, a month before the release of the Morgan Report, the Dade Muck Land Company brought suit against the Board of Commissioners of the Everglades Drainage District to enjoin the sale of the Martin bonds issued under the authority of the 1927 law. <sup>89</sup> The state circuit court held that the powers granted the Drainage Commissioners to sell drainage bonds and to levy an ad valorem tax on all the real property in the district constituted a valid exercise of the legislative power, and that the statute in question was in accord with the purpose of the grant by Congress of the swamp and overflowed lands to the state. <sup>90</sup> In December of the same year the Drainage Commissioners lost their case on the 1927 bond and tax law in a suit brought by the M. B. Carris

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88 Everglades News, November 4, 1927. "Bonds were supposedly sold for the improvement, but the bond holders insisted that the purchase be contingent on my approval. I considered the project to be without engineering merit and did not give my approval. The bonds were never sold." Letter of Arthur E. Morgan to the author, March 9, 1946.

89 Everglades News, September 2, 1927.

90 95 Florida 538; see also Southern Digest, 1940, 150.

Properties before Judge E. C. Lane in the state circuit court at Quincy, Florida, but the case was appealed to the state Supreme Court where the decision of the lower court was re-<sup>91</sup>versed in May, 1928.

With the upholding of the 1927 bond law by the Florida Supreme Court, the Drainage Commissioners ordered their secretary to proceed with the sale of the first bonds on June 1, 1928, but two weeks later Spitzer, Rorick, and Company began suit in the United States District Court at Pensacola on the grounds that the new bond issue violated the 1927 law and prejudiced the rights of holders of the old drainage bonds.<sup>92</sup> During the first week of July, 1928, the federal court at Pensacola issued an injunction which restrained the Drainage Board from selling any more bonds. The court held that the new bonds were an impairment of the obligation of the old bond contracts.<sup>93</sup> Howard Sharp, the Canal Point editor, added the benediction to the fight over the bonds when he wrote: "The Everglades is benefitted, not hurt, by the failure of

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<sup>91</sup> Everglades News; December 23, 1927, February 17, 1928; E. D. D. "Minutes," VII, May 31, 1928; The appeal of M. B. Garris. et. al. versus John W. Martin, et. al. was dismissed on Per Curiam for lack of jurisdiction on the ground that the decree sought to be reviewed was not a final one. 49 Florida Supreme Court 25.

<sup>92</sup> Everglades News, June 15, 1928. On July 3, 1928, Nathan Mayo, Commissioner of Agriculture and member of the Drainage Board refused to place his signature on any bonds pending the outcome of the litigation in the federal court. E. D. D. "Minutes", July 5, 1928.

<sup>93</sup> E. D. D. "Minutes," VII, July 10, 1928.

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Martin's bond deal."

The major objection of the Everglades landowners to the bond issue had been the ad valorem tax feature. In the previous January the Drainage Board had met in a session at West Palm Beach to hear protests against valuations and tax levies under the provision of the 1927 law. The majority of the complaints were against the levy of a one-fifth mill ad valorem tax, and the protestants included the Florida East Coast Railway, City of Coral Gables, Atlantic Coast Line Railroad, Model Land Company, and a number of others.

Drainage operations had been suspended in June of 1927, and on July 7, 1928, the Trustee-Commissioners meeting in joint session decided that because of the inability of the Drainage Board to secure further funds and the small amount of land transactions of the Trustees they would cut even clerical help to a minimum. F. C. Elliot was made Secretary to the Trustees as well as Chief Drainage Engineer for the Drainage Board. On December 11, 1928, Elliot called the attention of the Drainage Board to the fact that interest was due on drainage bonds

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94 Everglades News, July 20, 1928.

95 E. D. D. "Minutes," VII, January 12, 1928. A. E. Morgan called this 1/5 mill ad valorem tax "An illustration of the wasteful and inefficient methods used" in the district. "The drainage board maintains that the collection is necessary in order to establish the principle that such ad valorem tax can be collected if necessary to protect the bond issue." Dayton Morgan Report, 5.

96 I. I. B. Minutes; XVII, 275-276; see also E. D. D. "Minutes," VII, July 3, 1928.

to the amount of \$275,142; that the Board had funds on hand of \$273,897; and that the Drainage Board owed the Trustees of the Improvement Fund \$277,000. The tax certificates struck off to the Trustees by the Commissioners, however amounted to \$546,304. On motion the Board of Drainage Commissioners drew a warrant on the Improvement Trustees for \$200,000, and the remaining sum owed by the Commissioners to the Trustees was placed in one note.<sup>97</sup> This transaction graphically depicts the condition of the finances of both Boards and the methods used to settle their mutual debts.

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97 E.D.D. "Minutes," VI, December 11, 1928.

## CHAPTER XIII

### THE 1928 HURRICANE AND FEDERAL PARTICIPATION

#### 1. The Hurricane

The high waters of 1926 receded slowly through the fall, and the winter of 1927 proved dry enough to be a good season for farming.<sup>1</sup> By February 11, 1927, 32,000 hampers of beans had been moved out of the Canal Point area at prices ranging from \$7 to \$8.50 for each unit.<sup>2</sup> Three thousand farmers cultivating 9,000 acres of upper 'Glades lands from January to June had produced 3,000 carloads of fresh vegetables which brought approximately \$3,000,000.<sup>3</sup>

The use of various trace elements in the soil studies at the Everglades Experiment Station in 1926 began to produce results in 1927. R. V. Allison, O. C. Bryan, and J. H. Hunter published a paper on the outcome of their experiments on the muck soils near Lake Okeechobee. Tracing the brief history of recorded attempts to produce crops on the raw saw grass muck, the scientists related their observations of plant response in soils to which copper sulphate had been accidentally

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1 John Newhouse, "Memories," IV, 173.

2 Everglades News, February 11, 1927. Three thousand acres were being prepared in October for the fall crop. Ibid., October 7, 1927.

3 Florida Review, II (September 19, 1927), 6.

added when it had been sprayed on as an insecticide.<sup>4</sup> They suspected that copper compounds were valuable, and in the spring of 1927 planted seventy-six plots in which fifteen various elements were used. The results demonstrated that thirty to fifty pounds of copper sulphate gave as good a start to plants as larger quantities. The conclusion was drawn that plant responses to materials of this nature were indicative of definite deficiencies of these elements in an available form in the organic soils.<sup>5</sup> This discovery had far-reaching significance to the Everglades in that normal crops could now be grown on the raw peat soils with the addition of this trace element.

The dry seasons of 1927 and 1928 enabled the farmers in the Everglades to enjoy a degree of prosperity that few had previously known on the organic soils. The cautious words of Nathan Mayo, Commissioner of Agriculture, that the

. . . instances of astonishing results. . . had lent a halo of romance around the magic word "Everglades" and many who failed to investigate and who had no previous experience thought they had a rainbow with its proverbial pot of gold, and of course suffered disillusionment. . .

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<sup>4</sup> R. V. Allison, O. C. Bryan, and J. H. Hunter, "The Stimulation of Plant Responses on the Raw Peat Soils of the Florida Everglades through the Use of Copper Sulphate and Other Chemicals," Bulletin 190, University of Florida Agricultural Experiment Station, 35-42. Hereinafter cited as "Stimulation of Plants by Copper Sulphate."

<sup>5</sup> Ibid., 78 The trace metals are used in sulphate form. See L. R. Ender, "Fertilizing Crops with Metals," Review of Reviews, LXXVIII (October, 1928), 416-417.

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went unheeded.

The rainy season of 1927 had been lighter than usual for the previous half decade and as a consequence saw grass and muck fires became dangerous in the late spring of 1928. In March a number of buildings were burned at the settlement of Geerworth, having been in the path of a roaring fire through the grass.<sup>7</sup> Coincident with the dry seasons of 1927 and early 1928 were the warnings in 1927 by several of the staff of the Everglades Experiment Station on the important problem of the shrinkage and excessive drying of the peat soils. "If the Everglades is to develop into a durable agricultural project more importance should be placed on this than any other consideration."<sup>8</sup> The scientists cautioned that absolute water control was necessary since drought alone

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6 Nathan Mayo, "Possibilities of the Everglades," Florida Quarterly Bulletin of the Department of Agriculture, XXXVII (October, 1926), 22. "Men who are use to hard work on the farm and are not looking for a soft snap, who exercise common sense in selecting their land, and are willing to put the same amount of labor and money into an investment in the Everglades that they do in other lands will do well there. On the other hand, if they expect to find their holdings a honey pond with pan cakes hanging from the trees growing around the edge, they are doomed to disappointment and failure."

7 Everglades News, March 9, 1928. Zane Grey vividly recalled an Everglades grass fire set by hunters for the purpose of driving out deer and other game to shoot. ". . . I considered it a cruel and unsportsmanlike way to hunt. Again I had forced on me the appalling crudeness of the majority of men who seek diversion in remote and wild places." Zane Grey, Tales of Southern Rivers, 72-73.

8 R. V. Allison, O. C. Bryan, and J. H. Hunter, "Stimulation of plants by Copper Sulphates," loc. cit., 80.

accelerated oxidation in the organic soils. The point was made that excessive drying was a problem of agricultural research in coordinating crops and rotating them with the movement of the water table so as to afford protection against losses. Illustrating the question with the example of the tremendous losses in the Fens of England, the Florida experts quickly added that the Everglades were underlaid with limestone rock and not the clay found in the case of their illustration.<sup>9</sup>

The extended dry months were broken on August 8, 1928, by heavy rains and strong winds which raised water levels high enough to handicap field operations.<sup>10</sup> Perhaps the greatest damage was the washing of 50,000 cubic yards of sand and the forming of a sand bar in the St. Lucie Canal at Indiantown, a factor which imperiled the efficiency of the canal for control of Lake Okeechobee.<sup>11</sup>

During August and early September 1928, three feet of rain fell on the lake and on the Glades. The half dozen canals from Okeechobee ran bank-full. The lake waters crept closer and closer to the crest of the muck and sand levees.<sup>12</sup>

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<sup>9</sup> Allison, Bryan, and Hunter, "Stimulation of Plants with Copper Sulphate," loc. cit., 80. "Ultimately a large area of the Everglades will be converted into impounding reservoirs to conserve the water for use during the dry season, and especially during years of minimum rainfall." A. M. Munn, "Drainage of the Everglades," The Miamian, VII (June, 1927), 30-31.

<sup>10</sup> University of Florida Agricultural Experiment Station, Annual Report, 1929; 85.

<sup>11</sup> E. D. D. "Minutes," VII, August 10, 1928.

<sup>12</sup> Ralph Wallace, "Death in the Everglades," Reader's Digest, XLVII (October, 1945), 34-35, condensed from the St. Louis Post-Dispatch, September 23, 1945.



Despite the heavy rains of the late summer, the fall of 1928 found the Everglades enjoying an influx of farmers and laborers surpassing any previous year. The early plantings had attracted an estimated 5,000 migrant farmers and field hands, many of whom lived in tents and tar-paper shacks along the roads and canal banks.<sup>13</sup>

The 1928 storm, the most violent and destructive of the century, probably originated near the Cape Verde Islands in the early days of September and passed over the island of Puerto Rico on September 13. "The center moved over the Florida coast line near Palm Beach early in the night of September 16, crossed the Lake Okeechobee region and turned northward with diminishing force."<sup>14</sup> Ralph Wallace, feature writer for the St. Louis Post-Dispatch, described the "night of unforgettable horror" which occurred on the southern and southeastern shores of Lake Okeechobee when the winds reached a velocity of 125 to 135 miles per hour.<sup>15</sup>

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<sup>13</sup> Ralph Wallace, "Death in the Everglades," loc. cit., 34. The impermanency of the new frontier, the character of the muck soils, and the transportation difficulties had brought many houseboats or other vessels on which cafes, drink stands, barber shops, laundries, and so forth were conducting business while tied up along the canal banks of the Everglades waterways. In February, 1926, the Drainage Board had directed that such occupancy of the State canals be prohibited. E. D. D. "Minutes," VI, 24.

<sup>14</sup> Ivan Ray Tannehill, Hurricanes: Their Nature and History, 197.

<sup>15</sup> Ralph Wallace, "Death in the Everglades," loc. cit., 34-37. "No such flood catastrophe had occurred in America since the Johnstown flood of 1889." F. P. Stockbridge and J. H. Perry, So This is Florida, 109. There was a greater loss of life in the Galveston, Texas, storm of 1900. J. H. Reese, Florida's Greatest Hurricane, 83-84.

The strong winds blew the water out of Lake Okeechobee into the pocket at the southeastern end of the lake. The damage and loss of life was greatest in the towns of Pelican Bay, Pahokee, Canal Point, Belle Glade, Chosen, and South Bay. The 450 inhabitants of Pelican Bay all perished during the night of September 16. "Residents <sup>16</sup> [of the Glades] estimated that 2500 had perished."

Reaction to the tragedy throughout the state and nation was an overwhelming urge to aid the suffering and to repair the ravages of the storm. Governor Martin and several members of his staff toured the area from Pahokee to South Bay in a survey of the damage. The Drainage Board made all of the district's equipment available, while the Southern Sugar Company advanced \$50,000 in taxes to aid in repairing the drainage works. <sup>17</sup> By September 21 the recorded death toll had reached 800, by September 28, 1500. Howard Sharp traversed the area and pictured the great damage for his readers, but wrote that out of the tragedy the 'Glades would <sup>18</sup> rise again.

The American Red Cross mobilized its forces and rushed aid and relief to the area. Communications were maintained

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16 Ralph Wallace, "Death in the Everglades," loc. cit., 37.

17 E. D. D. "Minutes," VII, September 19, October 3, 1928. The Arundel Corporation gave up a \$50,000 tax priority to enable the money to be spent on repairs: Ibid., October 9, 1928.

18 Everglades News, September 21, 23, 1928. A hundred residents of South Bay rode out the wild night on a barge anchored to the concrete locks of the Lauderdale Canal by heavy cable.

by the establishment of a radio station at Belle Glade, and railroads transported refugees and freight at no cost. The total family registration in the Everglades area for relief reached 2,126, of whom eighty per cent were given assistance; the Red Cross spent \$2,702,463 in storm relief in Florida.<sup>19</sup> The rehabilitation extended beyond repair and refurnishing of homes as the flood waters prohibited any form of agriculture. The water stood on the muck for several weeks until the dikes had been repaired and pumping could effectively help uncover the land.<sup>20</sup>

Illustrative of the force and fury of the 1928 storm was the damage inflicted at the Everglades Experiment Station, eight miles from Lake Okeechobee and four miles from Belle Glade. The station's anemometer was destroyed when it registered ninety-two miles per hour; the director estimated that the velocity continued to rise as high as 125 miles per hour.<sup>21</sup> A breach in the station dike caused the flooding of the whole area to a depth of three feet, and it was not until December

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<sup>19</sup> American National Red Cross, The West Indies Hurricane Disaster of September 1928, 65-90. Hereinafter cited as 1928 Storm.

<sup>20</sup> Ibid., 73: The emergency relief program furnished the farmers with seed, fertilizer, feed for stock, and fuel for farm machinery. The Ford Motor Company sent two trucks and mechanics with spare parts to repair 150 Fordson tractors. The Palm Beach County Farm Loan Fund lent approximately \$100,000 in sums up to \$300 at 5% to farmers in the Everglades area. Ibid., 73-74.

<sup>21</sup> University of Florida Experiment Station, Annual Report, 1929, 85. The Station measured the rainfall on September 16-17 at 11.35 inches but it was doubtful that this height was accurate since the top rain gauge had been blown away.

4 that the land was all out of the water. One five room house, two cabins, a garage, and half of the greenhouse were destroyed, and a two story building was so weakened that it had to be torn down. All field work in progress was destroyed and a number of experiments had to be abandoned. Surprisingly enough, not all the sugar cane was lost, the Coimbatore plantings withstanding the flood conditions.<sup>22</sup>

Following the precedent established in 1927, the Board of Drainage Commissioners of the Everglades Drainage District published the biennial report of the Chief Drainage Engineer on the work of the two year period with recommendations for the guidance of the Board in preparation for the April meeting of the legislature.<sup>23</sup> Governor Doyle Carlton had been elected in 1928 on a platform which, in part, promised home rule to the Everglades as well as the adoption of a policy of putting the large South Florida drainage district on a "pay as you go basis." It became increasingly obvious that

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<sup>22</sup> University of Florida Experiment Station, Annual Report, 1929, 92.

<sup>23</sup> F. C. Elliot, Chief Drainage Engineer, Biennial Report, 1927-1928 to Board of Commissioners of Everglades Drainage District, 3-4. A resolution of the Board adopted in June, 1927, had instructed the engineer to prepare a brief historical sketch for the Commissioners on the subject of operations, work, general conditions, taxes and finances, advancement of the district, its condition, status, and future development. Elliot brought his report of 1927 to the Commissioners up to date since the time of the previous report. Ibid., 4. Cited hereinafter as 1927-1928 Report.

the old order which had prevailed in the Everglades drainage operations, particularly under the administration of John W. Martin, would change when Carlton won the Democratic nomination in the 1928 spring primaries. For this reason the Chief Drainage Engineer summarized the work of the district since its inception and accentuated the work of the previous governor's term.

To January, 1929, Elliot noted that \$14,871,185 had been spent for canal excavation, \$2,005,157 for canal control works, \$691,434 for levees, and \$358,325 for other expenses, a total of \$17,926,103.<sup>24</sup> The 1927-1928 report called attention to the one of two years previous, issued by the same officers, which had placed emphasis on the need for lakeshore levees. In the report under scrutiny the Chief Engineer again demanded levee construction as imperative to the protection of human life in the lakeshore areas, pointing to the estimated damage of \$3,800,000 and the loss of approximately 2,000 lives from the storm of the preceding September.<sup>25</sup>

Other suggestions in the 1927-1928 report included increased discharge outflow capacity, for Okeechobee's control, in the St. Lucie or Caloosahatchee Canals. Elliot cited the

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24 F. C. Elliot, 1927-1928 Report, 19. Distribution of these costs as made by Elliot were for drainage \$9,775,390; for flood control \$6,066,748; for navigation \$2,083,964.

25 Ibid., 24. "It is here emphasized that the levees proposed are for flood protection under hurricane conditions, and not for holding water in the lake at high levels under non-hurricane conditions."

fact that the inflow into Okeechobee in the ninety day period before and after the 1928 storm was greater than for any other year of record, and that had an outlet discharge of 7,500 cubic feet per second existed, the damage on September 16 and 17 would have been minimized.<sup>26</sup> The engineer recommended that 2,500 cubic feet per second discharge capacity be added in the Caloosahatchee Canal rather than in the St. Lucie Canal so that ". . . if one of these waterways received damage which reduced its discharge capacity from the lake, the other will escape and will be intact for its full capacity."<sup>27</sup>

The Chief Engineer recommended that a sum of \$4,000,000 be raised by the State to be spent at a rate of \$1,000,000 a year for the drainage of limited areas, partly as evidence that the state government was sufficiently interested in the Everglades to invite participation and aid from the federal government in flood control assistance.<sup>28</sup> Elliot drew the attention of his readers to the value of the outstanding bonds of the district, totaling \$10,141,000, as against the Board's assessment of the property and improvements in the district, set at \$106,000,000 in 1928.<sup>29</sup> In the period covered by the report the prices paid for state lands averaged from \$68 to \$92 per acre, and on the basis of acreage sold in 1927 Elliot

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26 F. C. Elliot, 1927-1928 Report, 45-46

27 Ibid.; 47

28 Ibid.; 55-58

29 Ibid., 76.

valued state lands in the district at \$350,500,000. The estimated population of the district was set at 48,000; paved roads at 586 miles; railroads at 210 miles; and acres under cultivation at 92,000.<sup>30</sup>

Comparing values of lands in the Everglades Drainage District in 1905 with those in 1927, the state official found the former figure to be \$5,591,000 and the latter \$350,500,000. With the total cost of drainage to 1929 figured at \$18,000,000, it was possible to see that for each million dollars spent for operations in the district, the land and other property values had increased over sixteen times. The Chief Drainage Engineer stressed the fact that other than paying taxes on its lands and contributing some of the proceeds from the sale of lands granted to the state in 1850, Florida had never given any money to the Everglades reclamation proposition.<sup>31</sup>

Elliot sought to draw the local, state, and national interests in the Everglades proposition to a head and to show how, by a common participation, the three could jointly complete the job begun with the cession of the lands to Florida in 1850. Local interests were concerned in local drainage

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30 F. C. Elliot; 1927-1928 Report, 76  
31 Ibid., 79-81, 85.

to make the lands fit for settlement and cultivation and the consequent improvement of property and benefits therefrom. State interests involved the carrying out of the obligations assumed with the 1850 grant, the enhancement of state lands, the development of a natural resource for tax benefits, securing new citizens, and insuring the safety of the territory for habitation. Federal interests extended to protection of life, national promotion of navigable waterways, and "the obligation on the part of the United States to permit the said State to carry out that condition."<sup>32</sup>

## 2. Federal Participation

There were no records of any hurricanes passing through the lake section prior to 1926, but on the basis of the subsidence of the muck soils on Okeechobee's shore F. C. Elliot, chief drainage engineer, had recognized the need for levees on the lakeshore to guard against flooding as early as 1920.<sup>33</sup> Beginning in that year the Everglades Drainage District started the construction of combination muck, sand, and rock levees around the south shore between Bacom Point and Fisheating Creek. And "Following the storm of 1926 an attempt was made to interest the Federal government in the reclamation of the [Everglades] area and particularly in providing protection against such storms as had occurred."<sup>34</sup>

<sup>32</sup> F. C. Elliot, 1927-1928 Report, 84.

<sup>33</sup> Ben Herr; "Origin of Lake Flood Control," Belle Glade (Florida) Herald; November 1, 1940.

<sup>34</sup> Ben Herr, "Caloosahatchee and Lake Okeechobee Drainage Areas, Florida," The Soil Science Society of Florida, Proceedings, V-A (1943), 136. Hereinafter cited as "Caloosa-Okeechobee Drainage Areas."



The second session of the Sixty-eighth Congress passed an act providing for a preliminary examination of the Caloosahatchee River in Florida with a view to the control of flooding from high waters.<sup>35</sup> In making a report on the examination the United States District Engineer wrote that he believed flood control, navigation, and drainage in the Caloosahatchee River drainage area and in connection with Lake Okeechobee were correlative problems,

. . . and that, since the United States functions in regard to navigation in the Caloosahatchee River and Lake Okeechobee, it should cooperate at least to the extent of making a survey for flood control and drainage. 36

The district engineer recommended a survey of the Caloosahatchee and Okeechobee drainage areas toward the end of flood control at a cost of \$20,000 and \$25,000 respectively. His recommendation was approved by both the Board of Engineers for Rivers and Harbors and the Chief of Engineers of the United States Army, and later was transmitted to the Speaker of the House of Representatives on February 5, 1927, by the Secretary of War.<sup>37</sup>

Acting on the suggestion of the army engineers, Congress

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<sup>35</sup> House of Representatives Documents, Number 690, 69 Congress, 2 Session, 1, 3, 6.

<sup>36</sup> Ibid., 6.

<sup>37</sup> Ibid., 1-3, 3-6. An act of the Florida legislature of the 1925 session set up the "Caloosahatchee Improvement District, comprising 353,900 acres of the 697,000 acres in the drainage area." The Commissioners of this district had sold a \$500,000 bond issue and employed George B. Hills, of Jacksonville, "to make a survey, plans, and recommendations for the improvement of the district, the improvement to consist almost entirely of flood control and drainage." Ibid., 10-11.

authorized the Caloosahatchee-Okeechobee flood survey within ten days of the receipt of Secretary of War Davis' transmittal of the servicemen's report. <sup>38</sup> Congress also authorized the engineering corps to survey the two South Florida drainage areas and determine what control works were necessary for navigation and flood control from the Atlantic Ocean to the Gulf of Mexico and along Okeechobee's shores; the engineers were to consider such factors as outlets, diking, and dredging. <sup>39</sup>

In their report the army engineers noted that the federal government maintained a channel in the Caloosahatchee River one hundred feet wide and four feet deep from Ft. Myers to Ft. Thompson under previous authorization; that the Everglades Drainage District maintained a channel forty feet wide and four feet deep to Okeechobee, and one eighty feet wide and six feet deep from the big lake to the south branch of the St. Lucie River. <sup>40</sup> The Intracoastal Waterway along the Florida east coast was planned for a seventy-five foot width and an eight feet depth, while the federal project in the Kissimmee River provided a channel thirty feet wide and three

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<sup>38</sup> House of Representatives Documents, Number 215, 70 Congress, 1 Session, 1.

<sup>39</sup> Ibid., 1-2. This survey was completed under the provisions of section 3 of a Rivers and Harbors Act of March 1, 1917, authorized by the Rivers and Harbors Act of January 21, 1927, and approved February 14, 1927. Ibid., 5.

<sup>40</sup> Ibid., 2.

feet deep from Lake Tohopekaliga to Ft. Bassenger.

On April 9, 1928, the Secretary of War sent the report of the survey of the Caloosahatchee-Okeechobee area to the House of Representatives Committee on Rivers and Harbors, together with the recommendation of the Chief of Army Engineers that,

In view of the benefits to navigation and interstate commerce, it appears proper that the United States assume the cost of providing a channel 80 feet wide in the Caloosahatchee River if a channel of similar dimensions is provided by local interests within the boundaries of the Everglades drainage district. 42

No action was taken on the recommendations for an improved and deepened channel in the Caloosahatchee River, which would have provided a 2,500 cubic feet per second discharge from Lake Okeechobee, before the 1928 hurricane swept the waters of the big lake out of its southeastern pocket with the consequent loss of life and property. In December following the storm Senator Duncan U. Fletcher introduced a

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41 House of Representatives Documents, Number 215, 70 Congress, 1 Session, 2. The report added that the controlling depth in the improved section of the Kissimmee River was two feet, but that the lower stretches of the river were choked with hyacinths and not navigable.

42 Ibid., 6. "With some additional dredging in the St. Lucie River and the Caloosahatchee River the proposed work would provide a 6 foot waterway across the state. Such a waterway . . . would, in the opinion of the district engineer, result in annual savings in transportation costs which might eventually reach about \$2,000,000." Ibid., 4. Public hearings in connection with the survey were held at Pahokee and Moore Haven in October, 1927, ibid., 21. F. C. Elliot had notified Howard Sharp in late November that the army engineers had completed their surveys and that federal aid might be forthcoming for flood control and navigation in the areas surveyed. Everglades News, November 25, 1927.

flood control bill in the Senate calling for the improvement of navigation and the control of floods of the Caloosahatchee River and Lake Okeechobee and its drainage area.<sup>43</sup> Fletcher called attention to the reports of the 1927 Everglades Engineering Board of Review and of the army engineers in House of Representatives Document Number 215, 70 Congress, 1 Session. He asked that the joint recommendations of these two groups be carried out on the basis of half the cost being paid by the State of Florida and half by the federal government.<sup>44</sup>

This land, to which the people are flocking back as fast as the waters can be taken off and it can be made habitable, is as rich and fine and fertile as can be found anywhere in the world. The evidence of that is that people had to be restrained from going upon the land too quickly after this flood came. All kinds of vegetables, citrus fruits and other fruits . . . grow there with such rapidity and such perfection that the people are willing to risk their lives by hastening back to begin the work on their farms in this area, and they ought to be protected. They are being taxed for drainage purposes more than they can stand, really, unless some protection is given them.<sup>45</sup>

The Fletcher bill proposed that the State of Florida

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<sup>43</sup> Congressional Record, LXX (December 5, 1928), 60-62.

<sup>44</sup> Ibid., 60.

<sup>45</sup> Ibid. Senator Fletcher urged federal participation on the basis of navigation and flood control, "as it has done in the Sacramento Valley, as it has done in the Mississippi Valley, as the precedents now show, in the construction of . . . levees and canals, for the purpose of developing waterways and at the same time giving flood control." Ibid. The Senator asked inclusion of resolutions and letters from the commissioners of the Everglades Drainage District, President T. E. Will of the South Florida Development League, and Mayor E. G. Sewell of Miami. Ibid., 60-62.

provide \$5,000,000 as its share of the cost of executing the recommendations of the 1927 Board of Review and the 1928 survey of the army engineers. Senator Wesley L. Jones, chairman of the Senate Committee, addressed the chief of the army engineers on the following day requesting the Board of Engineers for Rivers and Harbors to review the report contained in House Document 215, "with a view to determining whether any modification is advisable in that report, particularly in the light of the flood of September 1928. . . ." <sup>46</sup>

The subsequent report of the engineers found in Senate Documents Number 213, 70 Congress, 2 Session, February 1, 1929, endorsed the following suggestions for flood control and navigation in the localities concerned: an eighty by six foot channel in the Caloosahatchee Canal and River; a sixty by six foot channel in Taylor's Creek at the northern end of Lake Okeechobee; and north and south shore levees thirty-one feet high to be constructed of earth capped with stone. The army engineers proposed that the State of Florida or other local interests furnish \$6,740,000 and the United States \$4,000,000, the maintenance of all works except the Caloosahatchee channel to be provided by Florida interests. <sup>47</sup>

- <sup>46</sup> Senate Documents, Number 213, 70 Congress, 2 Session, 1.
- <sup>47</sup> Ibid., 7. The army engineers recommended a 31 foot levee as against the 27 foot levee advocated by the 1927 Board of Review to secure the lakeshore against a repetition of the probable wind tide of 29.6 feet of September, 1928. Protection must be designed for the extraordinary and the unexpected. . . as the area becomes more thickly settled greater loss of life and larger property damage might result from failure of the levees." Ibid., 6.

Commercial and agricultural activity in the Everglades and on the east coast motivated various interests in South Florida to secure a hearing in the Munitions Building Offices of the Board of Engineers for Rivers and Harbors on May 1-2, 1928, regarding the development of Port Everglades. This port, a deep water harbor in Lake Mable below Ft. Lauderdale, was sponsored by the Broward County Port Authority.<sup>48</sup> The meeting, presided over by Wallace S. Dempsey, Chairman of the House Committee on Rivers and Harbors, emphasized the need for a federal appropriation for the east coast port. The Broward port authority had sought aid on the basis of the need for a deep water harbor for the commerce of the Everglades back country, but their plea on this point was negated by the presentation of the 1927 Board of Review's plan for east-west canals and the damming of the long diagonals such as the North New River. A discussion between Chairman Dempsey and George B. Hills, one of the port authority's engineers, led to a telegram from F. C. Elliot, Florida's chief drainage engineer, that the 1927 report "had not been adopted as official plan for the development of the Everglades and I have no idea it will be."<sup>49</sup> T. E. Will, who owned acreage at Okeelanta on

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<sup>48</sup> "Munitions Building Hearing on Port Everglades, May 1-2, 1928," 1, typed manuscript copy in Will Collection, Senator Fletcher, Commander C. S. Root of the U. S. Coast Guard, W. F. Lineberger as engineer for the port authority, T. E. Will, and a number of Florida citizens were present.

<sup>49</sup> Ibid., 2.

the Lauderdale Canal and had sought to improve the waterway for boat and barge traffic, wrote that Elliot's wire to Hills came "when needed" because of the feeling at Port Everglades and in Ft. Lauderdale, but

. . . when the storm blew over, the N. Canal was left as dead as ever; and the government is led to believe that the St. Lucie is the Be-all and End-all of the Everglades; on which delusion they are right now working. 50

Beginning on January 10, and lasting through February 1, 1929, hearings on flood control in Florida and elsewhere were held by the United States House of Representatives Committee on Flood Control. 51 The first witness to make a statement to the flood control group was Senator Fletcher of Florida, who reviewed the history of the Everglades from the swamp land grant act of 1850 through the disaster of the 1928 storm. 52 Senator Park Trammell, Congressman William J. Sears, and

50 "Munitions Building Hearing on Port Everglades, May 1-2, 1928," 3. Preliminary examination of waterways from Port Everglades to the Caloosahatchee River and North New River Canal and Lake Okeechobee drainage area reported on by the army engineers on March 3, 1932, and July 18, 1933, were both unfavorably recommended. House of Representatives Documents, Number 896, 76 Congress, 3 Session, 15. See also Hearings before the Committee on Rivers and Harbors, House of Representatives, 70 Congress, 1 Session of the Subject of the Improvement of the Caloosahatchee River, North New River Canal, St. Lucie River and Canal and Lake Okeechobee, Florida, May 19, 1928.

51 Everglades News, January 11, 1929; House of Representatives Committee on Flood Control, Hearings before the Committee on Flood Control, House of Representatives, 70 Congress, 1 Session, Florida Control in Florida and Elsewhere, January 10, to February 1, 1929, 1-3. Cited hereinafter as 1929 Flood Control Hearings.

52 Ibid., 42-53. Fletcher set the loss of life at 1,800, injured, 1,800; homes and buildings destroyed, 31,615; families affected, 18,000; and property damage at \$100,000. The loss of life was almost entirely in the upper Everglades area.

Herbert J. Drane, with Senator Fletcher headed a long list of Floridians who went before the committee seeking federal aid for Florida's flood control. H. T. Frierson and John S. Cottrell of Moore Haven described the horrors of both storms for the committee, particularly the force of the wall of wind-driven water which killed and drowned some 2,500 people in 1926 and 1938.<sup>53</sup> Bror G. Dahlberg, Walter F. Linberger, F. C. Elliot, and Attorney-General Fred Davis each testified to the need for flood control, and the latter two dwelt on the inability of the region to pay out the money needed for such large-scale improvements. Major General Edward Jadwin, Chief of the Army Engineers, repeated his recommendations made in Senate Documents, Number 213, 70 Congress, 2 Session.

The testimony of Congressman Herbert J. Drane, in whose district the Caloosahatchee River rose and emptied into the Gulf, brought out the story that the Florida representative had been working since 1924 for flood control in the area, but that it took two major catastrophes to get the army engineers to make one move.<sup>54</sup> Drane declared that Florida could not meet the \$6,740,000 share, not even on a proportional basis because of the state's great diversity of

<sup>53</sup> 1929 Flood Control Hearings, 77-78, 83-87, 87-95.

<sup>54</sup> Ibid., 245-254. Drane said: "I would rather have my name attached to this piece of legislation than to the tallest monument that could be builded by the hand of man." Ibid., 249.



sectional interests. Two members of the committee were in agreement that Jadwin's plan called for too large a contribution by the state or local interests.<sup>55</sup>

Early in 1929, the Florida Flood Control Association was organized to promote local, state, and national aid for the lands of the southern end of the peninsula. F. L. Williamson, an executive of the Southern Sugar Company of Clewiston, became president of the association which sought private and public funds in its program of importuning the state and national legislatures to undertake a program of protection for the Everglades in case of future wind and water disturbances.<sup>56</sup>

In line with the work of Senator Fletcher and other members of the Florida congressional delegation, the state legislature passed a law at the 1929 session, Chapter 13,711, Laws of Florida, creating the Okeechobee Flood Control District. This district covered the entire southern end of the state, less the offshore islands, south of the northern boundaries of Martin and Lee counties.<sup>57</sup> The Board of Commissioners for the district was to be composed of the governor

<sup>55</sup> 1929 Flood Control Hearings, 251.

<sup>56</sup> Benn Herr, "Origin of Lake Flood Control," loc. cit.

<sup>57</sup> Laws of Florida, 1929, 386-406. The Okeechobee Flood Control District "has no responsibilities, duties or authority over matters of drainage problems, all of which remain with the Everglades Drainage District." Ben Herr, "Caloosa-Lake Okeechobee Drainage Areas," loc. cit., 137.

and the same members of his cabinet as served on the Internal Improvement Fund and Everglades Drainage District Boards, and five landowners of the district no two of whom were to reside in the same county. The officials of the district were charged with the responsibility of water control and navigation in all of the Okeechobee, Caloosahatchee, and Everglades region and were given power to levy taxes, borrow money, issue bonds, exercise eminent domain, and other powers of a corporate body.<sup>58</sup> Section five of Chapter 13,711 authorized the Flood Control Board to contract with and to seek the cooperation of the United States government.

"Immediately upon its creation and organization the district took over the work of the Florida Flood Control Association and other agencies that had been engaged in attempting to secure federal assistance."<sup>59</sup> George B. Hills, of the Jacksonville engineering firm of Hills, Youngberg, and Luce, was employed to correlate all pertinent information on the South Florida problem of water control, and he prepared a comprehensive report for submission to the federal government. In order to place the authoritative data in an accessible and convenient form Hill's report was presented to the

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<sup>58</sup> Laws of Florida, 1929, 386-389. The Florida Constitution of 1885 prohibits the issuance of state bonds, hence, it has been the practice of the legislature to create quasi-public corporations for this purpose.

<sup>59</sup> Ben Herr, "Origin of Lake Flood Control," loc. cit.

Joint Committee on Printing and published as Senate Documents, Number 225, 71 Congress, 3 Session in 1930.

The Okeechobee Flood Control Board was organized in September, 1929, under the leadership of Governor Doyle E. Carlton with resident members from Palm Beach, Glades, Broward, Dade, and Okeechobee counties. The first meeting was held in West Palm Beach, in conjunction with the Commissioners of the Everglades Drainage District, on September 4, 1929.<sup>60</sup> A second joint meeting was held in Miami on October 23 to investigate flood conditions in Dade County, and \$50,000 was voted for flood relief in the Everglades.<sup>61</sup> A third meeting of the Okeechobee District Commissioners was held at La Belle, on the headwaters of the Caloosahatchee River, on October 31, 1929, again relative to flood control, and ended in a general discussion of the problem.<sup>62</sup>

The report submitted by Hills to the Florida flood control district, later published by Congress, explained why the state sought the aid of the national government to promote a cross-state canal and secure the additional benefits to be derived from added lake discharge with adequate depth in

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<sup>60</sup> "Minutes of the Board of Commissioners of the Okeechobee Flood Control District," I, 11-18. Filed in the office of the secretary, West Palm Beach, Florida. Cited herein after as O.F.C.D. "Minutes;" E. D. D. "Minutes," VII, September 4, 1929. F. L. Williamson, T. E. Will, Glen B. Skipper, and others addressed the two boards on flood control and related matters at this meeting.

<sup>61</sup> O.F.C.D. "Minutes," I, 25.

<sup>62</sup> Ibid., 29.

a waterway.<sup>63</sup> The Jacksonville engineer, who had been a member of the 1913 Randolph Commission and the 1927 Engineering Board of Review, was on familiar ground and built an excellent case for the state. Hills noted that the expenditures of the Everglades Drainage District, as agent of the State of Florida, to December 1, 1929, were \$18,017,333.79 while special tax districts in the area had spent another \$11,584,777 for local drainage.<sup>64</sup> Hills showed that for thirteen years, from 1913 to 1925, Everglades tax collections had averaged ninety-seven percent of the levy but that the percentage fell to eighty-nine in 1926-1927. These figures, said he, "are significant in relation to projects for flood control, for the session is attributable to lack of flood control, and the incidental uncertainties as to the future of the Everglades."<sup>65</sup>

After a series of hearings and reviews in late 1929 and early 1930, the Army Chief of Engineers recommended on March 15, 1930, the expenditure of \$9,692,000 in the Okeechobee-Calcoosahatchee drainage areas for channels, levees, and other works of navigation and flood control.<sup>66</sup> The recommendation was conditioned on the provision that Florida or other local

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<sup>63</sup> Senate Documents, Number 225, 71 Congress, 3 Session, 1-86.

<sup>64</sup> Ibid.; 88-89.

<sup>65</sup> Ibid.; 87.

<sup>66</sup> Senate Documents, Number 115, 71 Congress, 2 Session, 5.

interests give \$3,812,000 and construct a north shore levee on Lake Okeechobee as well as furnish all lands needed for operations and provide maintenance after the projects were finished. The proposal included: (1) a 2,500 cubic feet per second discharge channel in the Caloosahatchee from Okeechobee to the Gulf--6 by 80 feet; (2) a 6 by 60 foot channel in Taylor's Creek to Okeechobee City; (3) a 31 foot levee and 6 by 80 foot navigation channel along the south shore of Okeechobee; (4) a 31 foot levee on north shore of Okeechobee; (5) a 6 by 80 foot channel in the St. Lucie Canal; (6) protective works in St. Lucie Canal.

During the first two weeks of May, 1930, hearings were held on rivers and harbors matters before the Senate Committee on Commerce. At several of the hearings members of the Florida congressional delegation, engineers of the Okeechobee Flood Control District, and other Florida citizens testified to the need of federal assistance on flood control and financial aid to the drainage and flood control districts.

<sup>67</sup> Senate Documents, Number 115, 71 Congress, 2 Session, 5. On November 15, 1929, A. W. Young was employed as joint secretary of the Okeechobee Flood Control and Everglades Drainage Districts. O.F.C.D. "Minutes," I, 31-32. On January 2, 1930, the Jacksonville engineering firm of Hills, Youngberg, and Luce were engaged by the Commissioners of the Okeechobee Flood Control District to represent the Board in matters of flood control legislation. Young and Hills made several trips to the national capital regarding proposed federal activity in the district. Ibid., 39.

<sup>68</sup> Rivers and Harbors Hearings before the Committee on Commerce, United States Senate, Seventy-First Congress, Second

The Floridians sought a modification of the share of the state's cost in the proposed project on the ground that

. . . about \$80,000,000 is in bonded indebtedness through the Everglades drainage district and other similar drainage bodies, while another \$80,000,000 has already been expended [for works of reclamation, navigation, and flood control]. 69

The Rivers and Harbors Act, passed by Congress and approved on July 3, 1930, authorized the Secretary of War to begin the work in the Calcosahatchee-Everglades drainage areas, but required the United States to build the Lake Okechobee levees

. . . to an elevation of thirty-one feet above sea level instead of thirty-four feet above sea level and shall be built so as to be capable of being raised an additional three feet. . . . Provided, that the State of Florida or other local interests shall contribute \$2,000,000 toward the cost of the above improvements: . . . And provided further, That no

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Session on H. R. 11781, 179-209. Senator Trammell requested the committee to include a proviso in the bill to allow the Florida flood control district to present its bonds in lieu of cash for the State's share because South Florida had suffered so many disasters the bonds could not be sold. Ibid., 182. George B. Hills stressed the fact that local interests had borne all the financial burden of the reclamation project. Ibid., 184.

69 Ibid., 192. Howard Selby, West Palm Beach banker and vice-chairman of the Board of Commissioners of the Florida flood control district, stated that the people of the Everglades were afraid to go ahead with improvements, but that the proposals of the bill would restore confidence in the area. Ibid., 192-193.

expense shall be incurred for the acquirement of any lands necessary for the purpose of this improvement. 70

On October 22, 1930, the Commissioners of the Okeechobee Flood Control District made a contract with the United States whereby the former assumed the obligations of the State or local interests under the 1930 act;<sup>71</sup> and the War Department began construction work on the flood control project in November, 1930.<sup>72</sup>

In 1935, Senator Fletcher and other members of the Florida Congressional delegation secured the passage of a Rivers and Harbors Act that declared:

The existing project is hereby modified to provide that the United States shall maintain all project works when completed and shall bear the cost of all drainage structures heretofore or hereafter constructed in connection with said project: Provided, that the total cash contribution required of local interests toward the

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70 Public Number 520 (H. R. 11781), 71 Congress, 9. The same law provided for inland waterway surveys from Stuart to Ft. Myers via the St. Lucie River and Canal, Lake Okeechobee, and the Caloosahatchee River; from Miami to the Gulf of Mexico via the Miami River and the Tamiami Canal; and from Port Everglades to Lake Okeechobee via the New River and the North New River Canal. *Ibid.*, 23-24.

71 Ben Herr, "Caloosa-Okeechobee Drainage Areas," *loc. cit.*, 139. On the same date the Commissioners of the Everglades Drainage District transferred the St. Lucie Canal, Caloosahatchee Canal, and all the canal channels in Lake Okeechobee as well as lakeshore locks and dams to the Okeechobee Flood Control District. E. D. D. "Minutes," VIII, October 22, 1930.

72 *Ibid.*, 139. The residents of the Everglades were well pleased with the federal assumption of the control work and felt that if the "government" were doing the job it would be done right. Everglades News, June 5, 1931.

cost of the project shall be \$500,000. <sup>73</sup>

The flood control and navigation improvements from 1930 through 1942 cost approximately \$20,000,000, including construction and maintenance. <sup>74</sup> Included in the project were eighty-five miles of levee, thirty-four to thirty-eight feet above sea level along the north and south shores of the big lake, modern storm gates at canal entrances, culvert drainage structures through the levee, locks and spillways on the St. Lucie and Caloosahatchee Canals, a six by eighty foot channel from Stuart to Ft. Myers, and sundry other similar works. <sup>75</sup>

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<sup>73</sup> Section of 1935 Rivers and Harbors Act quoted in Ben Herr, "Caloosa-Okeechobee Drainage Areas," loc. cit., 139. A resolution of thanks from the Commissioners of the Okeechobee Flood Control District was sent to Senator Fletcher and other members of the Congressional delegation for reducing the maintenance of the flood control works. August 30, 1935. O.F.C.D. "Minutes," II, 159.

<sup>74</sup> Ibid., 143-144.

<sup>75</sup> Senate Documents, Number 115, 71 Congress, 2 Session; House of Representatives Documents, Number 28, 75 Congress, 1 Session; Number 489, 76 Congress, 1 Session; and Number 696, 76 Congress, 3 session.



The cross-state waterway from Stuart to Ft. Myers was opened on March 25, 1937, with the arrival of seventy-five yachts at the latter place. Secretary of Commerce Daniel Roper, Senator Claude Pepper, and other public figures joined in the celebration marking the official opening of the Okeechobee-Caloo-Sahatchee flood control project.<sup>76</sup> In April, 1941, the Navy Department recommended to the War Department the improvement of the Stuart to Ft. Myers waterway to a controlling depth of eight feet in order to allow the operation of small naval vessels through the canal.<sup>77</sup>

Writing in 1943 on the need for responsible agencies with definite plans of operation, the Engineer and Secretary of the Okeechobee Flood Control District said:

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<sup>76</sup> Everglades News, March 26, 1937. For an excellent verbal and pictorial survey of the whole system of federal works in the project, see: Corps of Engineers, U. S. Army, Jacksonville, Florida District, "The Lake Okeechobee Florida Project," (unpublished document, located in Army Engineers office, Jacksonville, Florida), 1-22. A depth of eight feet and a width of eighty feet throughout were recommended by the Chief of Engineers, U. S. Army, in 1940. House of Representatives Document, Number 696, 76 Congress, 3 Session, 3-4.

<sup>77</sup> Orlando Morning Sentinel, April 25, 1941

If some one authority could be provided to assemble all of the information now available on the various features of reclamation in the Everglades and to prepare a comprehensive plan or program of reclamation, there is every reason to believe that it would be of great assistance to the War Department in its present activities and would be of even greater assistance in bringing about further interest and cooperation on the part of the United States. 78

The value of the lake levees and control structures of the Caloosahatchee-Okeechobee areas in the drainage of the Everglades cannot be underestimated in the over-all picture of the reclamation project. The principle established by the Isham Randolph Commission in 1913 of handling the two problems of lake control as a reservoir and land drainage by ditching has been proven to be accurate through the intervening years. <sup>79</sup> The works of the army engineers has supplemented the work of the drainage district to a point where the first problem has been mastered. This fact has become increasingly noticeable

. . . since the year 1931 when the U. S. Engineers assumed responsibility for the rehabilitation of the Lake Control in the interest of navigation and flood control. . . . Federal administration has increased the stability of levees and has planned for control of lake stages between fourteen and seventeen feet above mean sea level and, since 1913, has rather consistently controlled lake stages at about sixteen feet above sea level.

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78 Ben Herr, "Caloosa-Okeechobee Drainage Areas," loc. cit., 143.

79 H. A. Bestor, "Reclamation Problems of Sub-Drainage Districts Adjacent to Lake Okeechobee," The Soil Science Society of Florida, Proceedings, V-A (1943), 158. "Although this is commonly referred to as the Randolph Plan of Everglades Reclamation, it is actually only an Engineer's Report." Ibid., 159.

Prior to 1931, arterial canals were usually overburdened by high lake stages and their contiguous land waters. Since 1931, these arterial canals have had more opportunity to remove water from the lands adjacent to them because of consistently maintained low lake stages combined with distribution of rains and absence of severe storms. 80

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80 H. A. Bestor, "Reclamation Problems of Sub-Drainage Districts Adjacent to Lake Okeechobee," loc. cit., 159.

## CHAPTER XIV

### HOME RULE

#### 1. Default of the Bonds

Opposition to the Everglades drainage program, alive and active since the turn of the twentieth century, was strong enough in the last years of the third decade to achieve some notoriety. An observer, writing in 1927, found the Everglades situation to be the most controversial subject in the state.

Some Floridians outside the 'Glades will privately admit [sic] regarding it as a millstone hung around the neck of Florida by Nature and misplaced zeal. . . . A feeling exists in the 'Glades that the people living there do not have adequate voice or representation in the direction of their destinies. 1

Another writer found that the problem of the Everglades was relegated entirely to the southern end of the state as the northern section took little interest in the Everglades.<sup>2</sup> During the flood control hearings before the house committee in January, 1929, Florida's attorney-general Fred H. Davis, when answering a question as to why the state

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1 E. H. Taylor, "Florida's Question Marks," Country Gentleman, XCII (October, 1927), 20-21. To illustrate his point the writer cited the John W. Martin-Herman E. Dann argument over the liabilities of the state in the 1927 bond bill.

2 Edward Howe, "Looking About in the Everglades," loc. cit., 11.

of Florida could not amend its constitution so as to openly and actually aid in the solving of Everglades problems, testified that

. . . a vast number of the people that come down into this particular territory are people who come from other states and settle in this territory, and it is mighty hard to get people in other parts of the State interested in whether they perish or not. . . . They feel this way: I heard it advocated in certain districts of Florida that what the people ought to do is to build a wall down there and keep the military there to keep the people from coming in there. 3

In the fall of 1927 the political pot in Florida began to simmer with hopeful candidates touring the state aspiring to win the governor's chair in the spring primaries of 1928. Among the candidates was Doyle E. Carlton, a Tampa lawyer, who made "home rule" for the Everglades one of his major platform planks. Capitalizing on the unpopularity of the Martin bond deal and the Tallahassee direction of the 'Glades works, Carlton promised, if elected, to remove the drainage administration from politics and make it an engineering and business problem, to give the district true home rule, and to complete the reclamation of the Everglades without a bond issue.<sup>4</sup>

Howard Sharp wrote an editorial on the powers of the governor to appoint and suspend state officials. From this aspect, he believed Carlton's promises sounded the best of any offered by the various candidates. The editor compared

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3 Statement of F. H. Davis, Hearings before the Committee on Rivers and Harbors, House of Representatives, May 11, 1928, 145-146.

4 Everglades News, October 21, 1927.

the affairs of the drainage unit with those of the District of Columbia insofar as home rule was concerned.<sup>5</sup>

Carlton was successful in the two Democratic primaries of 1928 and the general election in the fall. He called a series of meetings between the Commissioners of the Everglades Drainage District and delegations of landowners from the area. On March 11, 1929, the Board and its guests met in Tallahassee to discuss the situation south of Lake Okeechobee and the legislation to be taken up in the 1929 session of the legislature.<sup>6</sup> The joint meeting adopted a set of recommendations calling for a law that would provide more equitable bases, more planning and accord between bonding and subsequent construction, local fire control, thirty foot levee and 2,500 cubic feet per second additional discharge, repeal of the 1927 law and all ad valorem taxes, and concerted effort to secure federal aid. Unanimous assent to the retention of the constituted State Board was expressed, but it was urged that an advisory board be set up from residents of the district.<sup>7</sup>

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<sup>5</sup> Everglades News, October 21, 1927.

<sup>6</sup> E.D.D. "Minutes" VII, March 11, 1929. A committee of the landowners, including Jules M. Burguieres of the Southern Sugar Company, John C. Sherman of the Brown Company, J. D. White of the Seaboard Land Company, George F. Bensel of the Southern States Land and Timber Company, G. B. Gorman of the Model Land Company, and R. A. Henderson of the Baron Collier interests, submitted a thirteen point program for consideration.

<sup>7</sup> Ibid. Other meetings were held on April 10 and 18, at which the proposed new law was read and discussed. At the first meeting Carlton made a brief speech outlining the two problems of federal aid and legislation. Ibid., VII, April 10, 1929.

In his message to the legislature on the condition of the state, made on April 3, Carlton pointed out that the Everglades problem had developed into a national as well as a state matter with a promise from the United States of cooperation which would insure the completion of the project in the proper manner. The governor suggested that it would be well to authorize the Board of Drainage Commissioners to deal with Congress should the expected federal help be forthcoming.<sup>8</sup> The chief executive further suggested that the people of the Everglades be brought in closer contact with the drainage operations either by representation on the Drainage Board or through the creation of an intermediary board.<sup>9</sup>

Several bills passed through the hoppers of both houses of the legislature with a compromise bill bridging the gap between maintaining the status quo and House Resolution 499. The resolution would have set up an eleven man appointive board to which all the lands of the Internal Improvement Fund would have been entrusted.<sup>10</sup>

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<sup>8</sup> Journal of the House of Representatives of Florida, 1929, 7.

<sup>9</sup> Ibid., 8.

<sup>10</sup> Everglades News, April 26, 1929; Miami Herald, May 12, 1929; E. D. D. "Minutes," VII, April 25, 1929. T. E. Will wrote Carlton on May 17, 1929, asking support for House Resolution 499, saying: "Without self-government the Everglades are Doomed. Twenty years close-up experience ought to have taught me something." Will saw a combination of natural reclamation along the lake short, War Department navigation regulations, the cross-state highway, big capital, and east coast rule as factors against interior Everglades settlements such as Okeelanta. T. E. Will to Doyle Carlton, May 17, 1929, Will Collection.

On May 29 bills creating a new Everglades Drainage District administration and the Okeechobee Flood Control District passed the legislature and were dispatched to the governor for his approval.<sup>11</sup> Chapter 13,633, Laws of Florida, provided for a board of commissioners of ten members, the five state officials as before, and five new members to be appointed from bona fide residents of the various counties of the district.<sup>12</sup> The act provided for cooperation between the district and the United States in regard to flood control. The bill introduced "the development" unit idea by which thirty per cent of the landowners in any locality might petition to develop their section, and proceed to do so under district supervision unless fifty per cent of the remaining landowners voted the proposal down. Other features of the new act provided for annual audits to be made public and new zonal assessment rates to be set up.

The second act, Chapter 13,711, Laws of Florida, inaugurated a flood control district, overlapping the drainage district.<sup>13</sup> This quasi-public corporation was set up with a

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<sup>11</sup> Everglades News; May 31, 1929.  
<sup>12</sup> Laws of Florida, 1929, 146-163.  
<sup>13</sup> Ibid., 174-178. Chapter 14,509, Laws of Florida, enacted at the 1929 session authorized the Commissioners of the Everglades Drainage District to issue \$3,000,000 in bonds, in addition to those issued before 1927, to pay obligations of the South Florida unit not covered by previous issues. Ibid., 1006-1007.



governing board of the same state officials and five land-owners from the area appointed by the governor. The newer district was authorized to construct control works, to cooperate with the federal government, to tax for benefits secured, and to bond up to \$5,000,000 should the need arise.

The first meeting of the ten Commissioners of the Drainage District occurred on September 4, 1929. Marcus A. Milan of Miami was elected vice-chairman of the Board and West Palm Beach was selected as a meeting place with monthly meetings to alternate between that city and Tallahassee.<sup>14</sup> The Board agreed to maintain an office at the state capital, with engineering and construction offices at West Palm Beach, and a resident engineer at Moore Haven.

With the adoption of the partial home rule law for the Everglades Drainage District and the inauguration of the ten man Board of Commissioners the program of pseudo-sponsorship by the state through the governor and his four cabinet members came to a gradual halt. It has been seen that during the period from 1912 to 1925 the Drainage District

. . . was able, from the proceeds of bonds, direct application of taxes and advances from the Trustees to excavate 440 miles of canal, 47 miles of protective levee around Lake Okeechobee, and to complete 16 locks at a total cost of eighteen million dollars.

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14 E. D. D. "Minutes," VII, September 4, 1929.

The financial stability of the District during this period was in large measure due to the policy of the Trustees of purchasing all tax certificates sold for the non-payment of taxes by private owners, resulting in a 100 per cent collection of all taxes levied. 15

The 1925 legislature had imposed the heaviest annual acreage taxes up to that date on the six special assessment zones of the district, graduated from six cents to \$1.50 an acre. The collapse of the Florida boom "with its attendant stagnation of commercial activities" and "shrinkage of values aggravated by the 1929 nation wide depression" caused the revenues from the special assessments to decline to near nothing; even the Trustees of the Internal Improvement Fund found themselves unable or unwilling to pay drainage taxes on their lands south of Lake Okeechobee. 16

By virtue of the authority of Chapter 7,305, Laws of Florida, 1917, the tax collectors of the several counties in the Everglades Drainage District were required to sell the tax certificates to the Trustees of all lands not redeemed for drainage taxes. The 1929 law, Chapter 13,633,

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15 W. Turner Wallis, "The History of Everglades Drainage and Its Present Status," The Soil Science Society of Florida, Proceedings, IV-A (1942), 33.

16 Senate Bill Number 835, Chapter 20,658, Laws of Florida, 1941, 26-27. Hereinafter cited as 1941 Senate Bill No. 835. "After 1925 it became increasingly difficult for the district to collect taxes on lands whose value had been deflated by the end of the boom and the depression. In 1924 it was able to collect 94 per cent of the total tax levied on lands within its boundaries; by 1930 this had dropped to 27.2 per cent; by 1937, to 8.3 per cent." F. P. Manuel, "Land Development in the Everglades," loc. cit., 12879.

left some doubt as to this requirement and Attorney-General Davis advised the Internal Improvement Fund officials against buying the certificates in April of 1931.<sup>17</sup> The Trustees agreed to pay the face amount of tax certificates bid off to them for Everglades Drainage District taxes through May, 1930, but notified the Drainage Commissioners and all tax collectors concerned that after that they would make no further payments.<sup>18</sup>

According to a statement made by the Trustees of the Internal Improvement Fund at the close of 1930 the Fund had contributed to the affairs of the Everglades Drainage District from 1907 to 1929 as follows:

Drainage District taxes paid on state lands	\$3,465,635.
Advanced on drainage tax certificates, taxes on certificated lands, and expense	1,054,138.
Sub-drainage district taxes on state lands	438,750.
Outright donations to Drainage District	1,009,059.
Total	\$5,967,582.
Amount received from land sales of Fund	4,307,389.
Paid in excess by Internal Improvement Fund	\$1,660,193. 19

17 I.I.B. Minutes, XVIII, 557. Counsel had earlier advised that there was no legal basis to require payment of the drainage taxes on land bid into the Improvement Fund by the tax certificate method. E. D. D. "Minutes," VII, August 6, 1929. On August 20, 1929, the I.I.B. Trustees held \$3,000,000 in tax certificates and decided to sell them to the highest bidder, but at prices not less than the face of the certificates, penalties, interest, costs, and all taxes. I.I.B. Minutes, XVIII, 163.

18 Ibid.; XVIII; 557.

19 Ibid., XVIII, 552. On September 21, 1931, the Board of Commissioners of the Drainage District accepted a settlement of \$1,202,514.77, as the amount owed by the Everglades officials, and cancelled the Drainage District claim on certificates held by the Trustees of the Internal Improvement Fund. E.D.D. "Minutes," VIII, September 21, 1931.

In the early summer of 1930 the Everglades Drainage Commissioners found that a payment of \$400,000 would be due on July 1 to meet bond maturities and interest coupons. The auditors anticipated a deficit of \$500,000 a year for the district unless tax collections increased or another source of income were found.<sup>20</sup> On July 31, 1930, the Trustees of the Improvement Fund lent the Drainage Commissioners \$300,000 to help meet the bond payments.<sup>21</sup> Trying to answer the definite need for some sort of a plan or maneuver, D. Graham Copeland, member of the Drainage Board from Everglades City, Collier County, compiled a report on policy as chairman of a committee appointed at a meeting held in Okeechobee City in the previous March.<sup>22</sup> The Copeland Report recited the entire history of the Everglades reclamation work from its beginning, laying particular emphasis on politics.

. . . we are to-day experiencing the same troubles which have characterized almost every governmental activity, the direction of which has been left to any large extent as a matter of politics. The Panama Canal, New York State Barge Canal, New Orleans Dock Board, Mobile Improvement Board, and the Louisiana Industrial Canal were each a dismal failure when controlled by politics, each a success when placed under the direction of competent officials not politically involved. This

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<sup>20</sup> Robert Pentland, Jr., James I. Keller, and W. F. Miller, Audit Report, December 31, 1929, Everglades Drainage District, Tallahassee, Florida, 26. The auditors stated that the deficit figure quoted would not include any improvement work or retirement of fixed indebtedness. A search for a new income source could not lie in drainage assessments since the tax then in force was burdensome: Ibid., 25-26.

<sup>21</sup> E. D. D. "Minutes," VIII, July 31, 1930.

<sup>22</sup> D. Graham Copeland, Policy: A Report to the Board of Commissioners of the Everglades Drainage District, iii. Cited hereinafter as Copeland Report.

Board must not continue to ignore this factor--  
to do so spells failure. 23

Copeland pointed out further weaknesses in finance, engineering, management, and policy, all of which should be corrected before further mistakes were made. The Drainage District Commissioner from Everglades City made a careful study of some fifty volumes of the published history of the Internal Improvement Fund, Everglades Drainage Board, and similar state boards connected with the reclamation work in South Florida and discovered that they revealed "such a glaring lack of coordination, cooperation and constructive thought as will be found in the history of few other great projects."<sup>24</sup> Copeland urged the adoption of eleven recommendations including: a state-wide tax to complete the drainage of the organic soils south of Lake Okeechobee; the establishment of a non-political drainage board to replace the Internal Improvement Trustees, Drainage Commissioners, and Okeechobee Flood Control District Commissioners; and the acceptance of a well-defined policy based on eminent engineering advice.<sup>25</sup> The Copeland Report was received by the Drainage

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23 D. G. Copeland, Copeland Report, 1. "It is believed that nothing is of greater importance than proving to the State that the Drainage and Reclamation of the Everglades is not one for one county or for several counties, not one for a district; but one that rests by solemn promise of the State itself as a whole. This should be the keynote of the policy of this board." Ibid., 3.

24 Ibid.; 35.

25 Ibid., 56-60.

Board on October 22, 1930, and \$200 was appropriated to have  
 26  
 a number of copies printed.

By December, 1930, it was evident that economic conditions in Florida, to say nothing of the national and international picture, would make it impossible for the Everglades district to meet its January 1, 1931, bond payments. Because of poor tax collections and high interest on the bonds the Board of Commissioners realized their position but affirmed their intention to pay the bonds in full, and asked for the  
 27  
 cooperation of their debtors.

"For lack of tax revenue the district defaulted on its outstanding bonds maturing on January 1, 1931," and remained  
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 in that position for over a decade. A number of conditions contributed to this failure, among which were a combination of effects of deflation in values after the 1926 land boom,

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26 E. D. D. "Minutes," VIII, October 22, 1930. On November 28 Copeland brought the matter of his work up for discussion. Commissioner Milam and Chief Drainage Engineer Elliot stated that they were in agreement with much of it, but not all. It was never heard from again. Ibid., November 28, 1930.

27 Everglades News, December 12, 1930. The Board also affirmed its legal and moral obligations; pledged its best efforts in the conduct of the business; welcomed the advice and cooperation of landowners, taxpayers, bondholders, and creditors toward a solution of the district's financial problems; and suggested that bondholders organize and select a committee with full powers of representation of all the bondholders.

28 1941 Senate Bill No. 835, 27. W. J. Evans, attorney for the Board, and F. C. Elliot, engineer, were instructed to negotiate with the bondholders' committee, organized by H. C. Rorick, of Spitzer, Rorick, and Company, toward some settlement. E.D.D. "Minutes," VIII, February 21, 1931.

the piling up of drainage, state, and county taxes beyond the capability of landowners to pay on land lying idle because of wretched drainage facilities, and the failure, on the part of the Internal Improvement Trustees, to maintain tax payments on the tax certificated or state lands.<sup>29</sup>

When Governor Carlton met the 1931 legislature he stated that "substantial progress" had been made in the reclamation of the Everglades.<sup>30</sup> No doubt the chief executive was referring to the progress of the federal government in the flood control program around the big lake in South Florida, for he noted that Florida was matching the \$7,000,000 appropriation with \$2,000,000 in the Okeechobee Flood Control District.<sup>31</sup>

With the passage of Chapter 14,717, Laws of Florida, 1931, the drainage district was removed from Tallahassee politics. By the enactment of this law Doyle E. Carlton made good his promise on "home rule," for by it the Board of Commissioners was to consist of five men appointed by the governor in staggered terms of four years from bona fide residents of the counties composing the drainage district.<sup>32</sup>

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<sup>29</sup> F. P. Manuel, "Land Development in the Everglades," *loc. cit.*, 12879.

<sup>30</sup> Journal of the State Senate of Florida of the Session of 1931, 8.

<sup>31</sup> Ibid.

<sup>32</sup> Laws of Florida, 1929, 195-202, 203-278. As early as the fall of 1929 Howard Sharp had written that the governor should be the only state official on the Everglades Board and that the whole control of the drainage unit should be in the district. Everglades News, October 25, 1929.

The 1931 law lowered the annual drainage tax assessments to a maximum of forty-nine cents an acre from the 1925 high of \$1.50 an acre.<sup>33</sup>

The act was of little real aid to the district for at that time tax collections were at a virtual standstill. The following November H. C. Rorick and others of the bondholders committee secured a three fold injunction from the United States District Court which forbade the Treasurer of Florida, as custodian of the funds of the Everglades Drainage District, to pay out any of the said district's moneys for any cause except actual operating expense; restrained any trading of indebtedness from the Trustees of the Internal Improvement Fund for tax purposes to the Board of Drainage Commissioners; and restrained the Drainage Board or the clerks of Circuit Courts in the state from receiving bonds or interest coupons for the redemption of tax certificates of lands sold for lack of payment of drainage taxes.<sup>34</sup>

In July, 1932, finances of the district reached such a low stage that the Drainage Board resolved to release all employees, affirm all liabilities, and express a willingness to

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<sup>33</sup> Laws of Florida, 1931, 235-236.

<sup>34</sup> E. D. D. "Minutes," VIII, November 25, 1931. H. C. Rorick had claimed in 1927 that the State of Florida backed the Everglades Drainage District bonds since the largest and most conspicuous lines of print on the bonds read "State of Florida." In addition, the state backed the bonds by paying drainage taxes on its own lands. Howard Sharp wrote that Rorick was misleading the public and making the bonds harder to sell and that he was supported by State Treasurer J. C. Luning, State Comptroller Ernest Amos, and F. C. Elliot in an effort to enlarge the drainage district and take in the populous east coast areas. Everglades News, February 11, 1927.



cooperate with its creditors even though the bondholders committee refused to enter further negotiations.<sup>35</sup> Strange as it may seem, Governor Carlton had expressed himself as "happy at the outcome" of Everglades affairs when he reviewed the legislation of 1932.<sup>36</sup> The Governor was quoted as saying that he foresaw prosperity for the Everglades with home rule, flood control, and free highways.

In an attempt to ease the burden of the taxpayers of the Everglades Drainage District, the 1929 and 1931 legislatures reduced the acreage assessments.<sup>37</sup> The reduction of the taxes, however, tended to impair the obligations to the bondholders and reduced the value of the bonds. "The Act enacted in 1931, relating to lower acreage tax for the Everglades Drainage District, was held void and ineffective insofar as affecting contract rights of holders of refunding bonds issued in 1925."<sup>38</sup> The decisions of the courts forced the continued assessment of the Everglades lands at the 1925 rate and, as a consequence, tax receipts dwindled to the vanishing point; even the Trustees of the Internal Improvement Fund neglected to pay their drainage taxes during the

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<sup>35</sup> E.D.D. "Minutes," VI, 440. The November, 1931, injunction had allowed the E. D. D. Board to spend only a one mill maintenance or administrative tax; this was not enough to meet even office expenses.

<sup>36</sup> Everglades News, February 12, 1932.

<sup>37</sup> Chapter 13,633, Laws of Florida, 1929, and Chapter 14,717, Laws of Florida, 1931:

<sup>38</sup> Southern Digest, 1940, Cumulative Annual Pocket Part, 158. Hereinafter cited as Southern Digest. See also State ex rel. Sherrill vs Milam, 153 Southern 100.

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 1930's. Conditions reached such a point in the early part of the decade that recourse was made to the courts to force the Drainage Commissioners to perform their "ministerial duty" of preparing assessment lists to be forwarded to the several county tax collectors.<sup>40</sup>

In order to determine how deeply in debt the Everglades Drainage District was falling, the Commissioners employed Wilbur F. Divine in November, 1934, to make a complete audit of the assets and liabilities of the governmental division.<sup>41</sup> Prefacing his audit, submitted to the Board of Commissioners on June 27, 1935, Divine outlined a brief history of the litigation which had brought the operations of the district to a standstill from July 1, 1932, to November 7, 1934.<sup>42</sup> No

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<sup>39</sup> 1941 Senate Bill No. 835, 27. Chapter 16,177, Laws of Florida, 1933, authorized the I.I.F. Trustees to pay taxes on their lands in the South Florida Conservancy District, an Everglades sub-drainage unit, out of any moneys they had in their possession. Laws of Florida, 1933, 721. In a suit brought by the Everglades Drainage District Commissioners against the Trustees asking payment of drainage taxes on tax certificates bid off to the I. I. F. Trustees, the courts held that taxes on such lands need not be paid until sold or redeemed as the Trustees held those lands in trust for the Drainage Commissioners. Southern Digest, 1940, 187. See also State ex rel. Board of Commissioners E. D. D. vs Sholtz et. al.; 112 Florida 756.

<sup>40</sup> Ibid., 183; 153 Southern 100; 113 Florida 491.

<sup>41</sup> E. D. D. "Minutes," VII, 10-13. At the same time Charles F. Werner was employed as secretary to the Board, "with the understanding that he be paid when funds are available."

<sup>42</sup> Wilbur F. Divine, "Auditor's Report, December 31, 1934, Everglades Drainage District," (unpublished document in the office of the secretary of the Everglades Drainage District, Miami, Florida) 1. Hereinafter cited as "1934 Audit." Divine found the last entries in the books as of June 30, 1932. Ibid.

acreage taxes had been levied for the years 1932, 1933, or 1934 and only a part of the area had been assessed for the one mill levy in 1932 and 1933.<sup>43</sup> The assets of the district totalled \$22,854,641.84 of which three fourths represented drainage works, while the liabilities totalled a similar amount of which \$11,633,737.50 represented bondholders' claims and \$2,322,790.66 represented moneys due the Arundel Corporation for construction and interest on notes payable.<sup>44</sup>

Annual Tax collections in the district never exceeded \$75,000 during the 1930's and less than five per cent of the lands were on a current tax basis. A number of efforts were made during the middle part of the decade to find some solution to the problem of reactivating the district and removing it from the same vicious circle which had engulfed the Internal Improvement Fund in the years after the reconstruction period.<sup>45</sup> The default was as productive of suits and protracted litigation in State and Federal Courts in the 1930's as had been the lot of the Improvement Fund before 1900.<sup>46</sup> In 1935 the Bondholders' Protective Committee was

43 Wilbur F. Divine, "1934 Audit," 1.

44 Ibid., 2-3. By virtue of a resolution adopted on August 29, 1934, the Board of Commissioners had reiterated their willingness to pay the debts of the district. E. D. D. "Minutes," VII, 8.

45 1941 Senate Bill No. 835, 28-29; James E. Beardsley, "Present Status of Plans for Financing the Everglades Drainage District," The Soil Science Society of Florida, Proceedings, VI-A (1942), 104-105.

46 1941 Senate Bill No. 835, 28-29.

organized. Composed of H. C. Rorick, W. H. Lippincott, and James R. Easton and representing some \$8,000,000, eighty-nine percent of the bondholders, the Committee began a series of suits to secure either a return on their investments or foreclosure of their "mortgage" on the Everglades Drainage District.<sup>47</sup>

The 1935 legislature sought to strengthen its large south Florida drainage unit by amending the 1931 Everglades Drainage District law to allow drainage taxes to be paid without requiring other taxes to be paid at the same time.<sup>48</sup> Various civic leaders of southern Florida were at work during the 1930 depression years seeking to unravel the tangled skein of the Everglades question. On March 15, 1935, W. G. Ward, chairman of the barge and highway committee of the Miami Chamber of Commerce, answered a letter from T. E. Will of the preceding February saying that he had

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<sup>47</sup> E. D. D. "Minutes," VII, 18-19, 25, 62. On March 20, 1935, the district was defending itself in four cases: two in the United States District Court for the Northern District of Florida; one in the United States District Court for Southern Florida at Miami; and one in the Florida Supreme Court at Tallahassee. *Ibid.*, 18-19.

<sup>48</sup> Chapter 16,993, Laws of Florida, 1935. This act further ordered tax sales of lands with sufficient delinquent drainage taxes to be bid off as a final resort to the Board of Commissioners of the District. At the same session the legislature enacted Chapter 17,272, Laws of Florida, ordering the Trustees of the Internal Improvement Fund to pay all special levies imposed by the legislature on their lands. *Ibid.*, 492-498, 1168-1169.

. . . reached the conclusion that the ultimate solution of the Everglades problems rests in the hands of the various departments of the United States Government which, in my opinion, are the only ones that can coordinate water control, navigation, fire control, drainage, and reclamation. 49

Ward further declared that, although the sub-drainage districts had spent considerable sums of money, their chief trouble continued to be the basic Everglades Drainage District tax. The general property owners faced the problems of water control and a terrific tax burden. The interests of land developers were clearly blocked as even the better Internal Improvement lands were burdened with drainage taxes up to \$35 an acre plus the assessments of the early 1930's.<sup>50</sup> Ward closed his letter to Will by saying that the major problem of the Everglades was how to eliminate the tax burden and at the same time satisfy the \$12,000,000 claims of the bondholders.

In his reply to Ward on March 18, Will wrote that even though the tax and bond problem was pressing there were other matters more important, some of which legislation might solve.<sup>51</sup> Will pointed to the vital issue of fire control and remarked that if the Glades fires were not put out the other problems would vanish like the very burning muck itself.

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49 W. G. Ward to T. E. Will, March 15, 1935, Will Collection. Ward was a member of the Miami legal firm of Stapp, Gourley, Vining, and Ward.

50 Ibid.

51 T. E. Will to W. G. Ward, March 18, 1935, Will Collection.

Will estimated that "robber taxes and maladministration" had wiped out ninety percent of the original 'Glades owners who had paid taxes for years but had gained no political or physical benefits for their holdings.

Reclamation is no good for us if we must BUY our land over again or go without. . . . Florida should clear herself of this scandal; and in connection with the Federal effort, now should be the time to correct it, if ever. 52

In an editorial entitled "Florida Should Ask U. S. Help on Everglades," the Fort Lauderdale Daily News looked at the situation of the four million acres of organic soils and decided that aid should not be sought for reclamation, but that flood control (saving human life) and subsistence (emergency or permanent relief) were somewhat different. 53 In the first place, the editor wrote, it was futile to ask for \$35,000,000 from the federal government, and secondly, the state had voluntarily assumed the burden by the 1850 swamp and overflowed land grant act; furthermore, the state had shouldered it by creating the Internal Improvement Fund of 1855. 54

Since that time the state has disposed of 24 out of each 25 acres of this 20 million acre tract (no one wants the other acre) and has misappropriated (stolen) over 36 million dollars from this trust fund, by sale or in kind for almost every conceivable purpose except reclamation, viz: subsidizing railroads (no one of which

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52 T. E. Will to W. G. Ward, March 18, 1935, Will Collection.

53 Fort Lauderdale Daily News, April 16, 1935.

54 Ibid.

comes near the Everglades), building State office buildings, industrial plants at state institutions, prison farm buildings, etc., etc., and not one cent has been returned to the Everglades by the State!

The government has shown its interest in the 'Glades by protecting the rich farming section around the rim of the lake with dikes and dams which cost millions.

The News prays that the government will take hold of the problem. We're about convinced that only a national government could straighten out the mess the 'Glades are in now. 55

One step toward the collection of data for possible federal use was the publication of two significant studies of land utility and conditions in 1935. The Florida State Planning Board reported on all of the lands in the state, while the Federal Emergency Relief Administration fixed its attention on a scrutiny of state drainage districts. 56

While neither of these two studies inspected the Everglades Drainage District, seventy-two other drainage or sub-drainage districts were investigated. The Goulds district near the lower Florida town of the same name was the only district with bonded debt not in default in 1935; the Southern district which included parts of Miami and environs had never issued bonds while constructing 125 miles of canals and ditches with tax funds. 57

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55 Fort Lauderdale Daily News, April 16, 1935.

56 Florida State Planning Board, Report on Land Problems and Conditions in Florida; Federal Emergency Relief Administration, Survey of the Several Drainage Districts of Florida. Hereinafter cited as F. E. R. A., Drainage Districts of Florida.

57 F.E.R.A., Drainage Districts of Florida, A-7, A-8. In some cases as many as ten separate levies were found on one piece of property: school, road and bridge, port, inlet, flood control, navigation, hospital, state, county, municipal, Everglades Drainage District, and sub-drainage district tax levies. Ibid., A-19.

The bonds authorized by seventy drainage districts, excluding the Everglades Drainage District, amounted to \$28,617,839.64, and of these \$6,581,196.00 were issued after the collapse of the Florida boom in 1926. The federal survey concluded that, in general, land drainage in Florida was

. . . seemingly the work of a trinity of opportunists: brokers, engineers, and contractors who seized on land drainage as the best remaining excuse for more bonded debts. 58

The state survey found that

These drainage districts were created for two purposes: 1) aid in subdividing and selling land; 2) creating bonds to be sold during a period of prosperity in the United States and thus provide work for engineers and contractors. 59

The State Planning Board suggested two remedies for future drainage proposals: (1) the approval of a majority of the property owners as well as the holders of the majority of the acreage; and (2) more effective examination of the need of and feasibility of the drainage scheme. 60

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58 F.E.R.A., Drainage Districts of Florida, A-14. "Certain projects were undertaken, undoubtedly, with the sole idea of subdividing large tracts of land into small units for marketing;" as for instance, Gladesview in Palm Beach County, a 12,160 acre tract owned by seventeen people, had no population and no farming. Ibid., A-8.

59 Florida State Planning Board, Report on Land Problems and Conditions in Florida, 47. The seventy two districts surveyed included 2,238,149 acres of which 198,520 were in cultivation in 1935.

60 Ibid., 48.



## 2. Refunding of the Bonded Debt

At a Florida drainage conference held January 22-23, 1917, Mr. D. Arthur Bowman of the investment house of Bowman, Cost, and Company, St. Louis, cautioned against organizing drainage districts and issuing bonds where settlement was sparse and where there was not at least 25 percent of the land under cultivation. 61

Beginning in 1936 definite attempts were made by the Board of Commissioners of the Everglades Drainage District to secure a loan from the Reconstruction Finance Corporation to float a refunding loan. 62 The 1937 legislature sought to solve the Everglades riddle through a compromise with the bondholders by the enactment of Chapter 17,902, Laws of Florida. This act lowered drainage tax assessments and rezoned the district with lower levies. The act further authorized the Drainage Commissioners to adjust or cancel taxes levied for 1936 and prior years, and to act with the Trustees of the Improvement Fund to their mutual benefit in a plan of refunding the drainage debt. 63

Unfortunately the courts defeated the purpose of the legislature in trying to "afford relief to the landowners,

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61 F. P. Manuel, "Land Development in the Everglades," loc. cit., quoting from "Florida Drainage Bonds and the Investor," Economic World, new series XIII (February 24, 1917), 271.

62 E. D. D. "Minutes," VII, 54. The Board resolved on June 12, 1936, to seek a \$10,000,000 loan from the government corporation. See also Everglades News, July 24, 1936.

63 Laws of Florida, 1937, 370-395.

encourage tax payment, and cure the default." 64 The legislature's efforts to break the vicious circle of the increasing debt failed when the state courts held the 1937 law was "an unconstitutional invasion" of the bondholders' rights. 65

By 1935 and 1936, when the country generally was emerging from the worst of the depression, the total amount of the default of State and county taxes in the State of Florida, to say nothing of the drainage taxes within various districts, was almost unbelievable. They amounted in many cases to several times what the land was worth. 66

The easiest way to liquidate the overburdened lands of Florida and get them back on the paying side of the various tax rolls was to "forgive" the back taxes. The 1937 session of the legislature passed the Murphy Act, which allowed the legal owner or a stranger to apply to any of the several clerks of the circuit courts of Florida for tax certificates more than two years old to be advertized and sold to the highest bidder. 67 The original owner was allowed to redeem his land within two years after the sale of the certificate on the payment of all costs, the amount bid at the courthouse

64 1941 Senate Bill No. 835, 27.

65 Ibid. Testimony of Mark R. Tennant, 1942 Migration Hearings, 12552. In 1937 the State Supreme Court ruled that drainage bonds could not be paid off on presentation, if funds were available, but that all bonds should be paid on a pro rata basis. Southern Digest, 1940, 186. See also 196 Southern 699 and 143 Florida 43.

66 Statement of M. R. Tennant, 1942 Migration Hearings, 12555.

67 Chapter 18, 296, Laws of Florida, 1937. The prospective purchaser of the tax certificate made a bid at least as high as the cost of the advertising and the fees of the county officers taking part in the transaction. The legislature estimated real estate valued at \$97,000,000 frozen and dead asset on the tax rolls. Laws of Florida, 1937, 1092-1097.

steps, and three percent interest.<sup>68</sup> If the tax delinquent land was not bid in, it returned to the State of Florida and the Trustees of the Internal Improvement Fund.

Although the Murphy Act benefitted the taxpayers with delinquent state and county taxes, it did not redound to the aid or succor of the Everglades Drainage District, since no provision was made for special assessments of the drainage type. Thousands of property owners and even speculators throughout the state bought tax certificates and two years later sought tax deeds, but Florida herself continued to default on the south Florida drainage taxes.<sup>69</sup> The drainage district continued in default until 1940. By that date

The district indebtedness was seventeen million dollars, most of it long past due. Ninety-five per cent of the land was delinquent in its taxes for about ten years. The bondholders, by a writ of mandamus, had secured a tax spread on the 1940 roll for more than fifteen million dollars. Furthermore, by law practically every land owner's title had been forfeited to the district for non payment of taxes. 70

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<sup>68</sup> Laws of Florida, 1937, 1095-1097. The act expired in two years. Ibid.

<sup>69</sup> Statement of M. R. Tennant, 1942 Migration Hearings, 12556.

<sup>70</sup> R. K. Lewis, "The Economic Phase of Reclamation and Soil Conservation Problems of the Florida Everglades," The Soil Science Society of Florida, Proceedings, IV-A (1942), 101. ". . . at the instance of the bondholders under a writ of mandamus to enforce levies under Chapter 10026, supra, there has been spread upon the tax rolls for the year 1940 against the lands within the District special assessments or taxes in the approximate sum of \$15,250,000.00 in addition to millions of dollars in outstanding delinquent taxes. . ." 1941 Senate Bill No. 835.

The Board of Commissioners of the Everglades Drainage District and the Reconstruction Finance Corporation began negotiations when a formal application was filed by the Board on June 18, 1936, for a loan to refinance the outstanding indebtedness.<sup>71</sup> On April 21, 1937, the Reconstruction Finance Corporation, after an exhaustive survey and appraisal, offered a loan of \$3,729,000 which would have been sufficient to retire the debt at thirty cents on each dollar principal amount.<sup>72</sup> The offer expired within a year; it was not taken advantage of because the debtors were reluctant to settle for that price. On January 27, 1939, the Reconstruction Finance Corporation again offered to liquidate the Everglades District debt at thirty-cents on the dollar. The District Commissioners submitted the proposition to the bondholders on January 31, 1939, and offered an additional eight cents on the dollar principal.<sup>73</sup> The bondholders refused to settle for thirty-eight cents on the dollar.<sup>74</sup> Unable to take advantage of the Federal agency's offer, the Drainage Board turned to private interests for aid. This plan also

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<sup>71</sup> Board of Commissioners of the Everglades Drainage District, Offer of Everglades Drainage District to Holders of Bonds Issued by Everglades Drainage District, January 31, 1939. 1. Cited hereinafter as E. D. D. 1939 Offer to Bondholders.

<sup>72</sup> Ibid., 1.

<sup>73</sup> Ibid., 3.

<sup>74</sup> E.D.D. "Minutes," VII, 153-156, 241-242.

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failed.

As has been seen, H. C. Rorick and the bondholders' protective committee had kept the Everglades drainage officials almost continually in state and federal courts since the first default in 1931. "Finally, in 1940, the committee prosecuted test foreclosure suits to foreclose its bonds against the forfeited lands of large individual landowners."<sup>76</sup>

With this state of affairs the landowners became thoroughly alarmed in 1940. Landowners' committees were organized throughout the district. These committees worked closely with the Everglades Board.

. . . a broad plan of refinancing was conceived. It contemplated compromising the total district debt upon a greatly reduced basis by the Finance Corporation. . . to be secured by refunding bonds which were to be supported by a revised tax structure drastically reducing the annual taxes and extending landowners the privilege of compromising the accumulated delinquent taxes at a ridiculously low figure. 77

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75 E.D.D. "Minutes," VII, 217; J. E. Beardsley, "Present Status of Plans for Refinancing the Everglades Drainage District," loc. cit., 104. Throughout 1939, 1940, and 1941 a number of open meetings were held by the Drainage Board to seek information and assistance from owners of the muck lands. Ibid., 191, 198, 216, 217, 294-296.

76 R. K. Lewis, "The Economic Phase of the Reclamation and Soil Conservation Problems of the Florida Everglades," loc. cit., 101. Hereinafter cited as "The Economic Phase of Reclamation." Rorick and his committee sought a foreclosure of liens of district taxes and a receivership of the lands but the petition was denied. F. P. Manuel, "Land Development in the Everglades," loc. cit., 12880.

77 R. K. Lewis, "The Economic Phase of Reclamation," loc. cit.

It was quite obvious that the division of the Everglades Drainage District into arbitrary geographical zones, as had been done since 1913, was "inequitable and incommensurate and disproportionate" to the relative benefits of reclamation.<sup>78</sup> Beginning in June, 1940, representatives of landowners and the Drainage Commissioners reopened negotiations with Rorick and the bondholders' committee as well as the Reconstruction Finance Corporation. "At the outset this appeared to be an almost hopeless task because of the failure of the previous attempts to accomplish the same end."<sup>79</sup>

Again an offer was received from the government loan agency but it was not until Governor Spessard L. Holland entered the chief executive's chair in 1941 that a bargain was made.<sup>80</sup>

In early March, 1941, a meeting was held in Thomasville, Georgia, just across the Florida state line from Tallahassee, of the bondholders' protective committee, representative Everglades landowners, and Governor Holland and his cabinet.

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<sup>78</sup> 1941 Senate Bill No. 835, 28.

<sup>79</sup> R. K. Lewis, "The Economic Phase of Reclamation," loc. cit., 101.

<sup>80</sup> Ibid., 101-102; J. E. Beardsley, "Present Status of Plans for Refinancing the Everglades Drainage District," loc. cit., 110. "Shortly after Governor Holland was inaugurated in 1941, a number of the landowners went to see him and requested his active assistance. Fortunately Governor Holland, as is his custom, went right into the matter. He showed a keen grasp of the problem and expressed a desire to help. . . . Within sixty days from the time Governor Holland took over he had a deal with the bondholders, necessary legislation was passed and the whole refinancing program was assured of success." R. K. Lewis, "The Economic Phase of Reclamation," loc. cit., 101.

The meeting was held in another state because of the fear of the members of the bondholders' committee that they would be served with process in litigation in Florida.<sup>81</sup>

Governor Holland did not stand back on his dignity--he went to Thomasville with the desire of accomplishing something. Significantly he told Mr. Rorick this:

"Now Mr. Rorick, it would seem that for some ten years you have been negotiating with one hand and litigating with the other, and I want that dual type of negotiation to end here and now--I'm a fellow who wants to negotiate or litigate, but I'm not going to do both at the same time. Let's get together. If you don't want to negotiate, we'll litigate 'till hell freezes over."

This approach did not take long to bring the bondholders around. Next day they came into Florida--where they were served with process. . . 82

When the 1941 session of the legislature convened, the governor and the Everglades drainage officials submitted a revolutionary bill for the south Florida reclamation project. The proposed legislation was drafted for the relief of all the taxpayers of the district and was comprehensive, completely rezoning and revising the tax structure of the drainage project. Both the senate and the house of representatives passed the enabling bill within an hour and without a single dissenting vote in either house. The bill

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<sup>81</sup> R. K. Lewis, "The Economic Phase of Reclamation," loc. cit., 102.

<sup>82</sup> Ibid., 102. ". . . we had already failed three times to negotiate a loan with the R. F. C.; today we are in the process of closing one. Primarily Governor Holland is responsible." J. E. Beardsley, "Present Status of Plans for Refinancing Everglades Drainage District," loc. cit., 110. See also Orlando Morning Sentinel, March 3; April 8, 15, 30; May 8, 1941.

went to the governor whose approval made it Chapter  
 20,658, Laws of Florida, 1941.<sup>83</sup>

The rezoning under the act was as nearly in accordance with actual benefits received as any act in the history of the project, running from a high of \$1.50 an acre for 91,981 acres to a low of 3¢ an acre for 1,769,735 acres.<sup>84</sup> Chapter 20,658 further provided for the compromise of back drainage taxes on the basis of two years taxes under the 1941 rate, regardless of the number of years of default, for 1936 or prior years; delinquent taxes for 1937-1940 were authorized to be settled on the basis of one year's assessment at the 1941 rate.<sup>85</sup> As was the case in the 1937 Murphy Act, either the owner or a stranger might purchase the tax certificates on the above basis and after two years secure a tax title to the land in question.

In connection with the drainage tax settlements the Trustees of the Internal Improvement Fund settled a claim of \$1,100,000 against the Everglades Drainage Commissioners for the cancellation of the back drainage taxes on 800,000

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<sup>83</sup> R: K. Lewis, "The Economic Phase of Reclamation," loc. cit., 103; Orlando Morning Sentinel, June 3, 1941.  
<sup>84</sup> 1941 Senate Bill No. 835, 17-18. The act levied an administrative tax of one-half mill ad valorem tax throughout the district. Ibid., 21-22. See also J. E. Beardsley, "Present Status of Plans for Refinancing the Everglades Drainage District," loc. cit., 105, 110-111.  
<sup>85</sup> Chapter 20,658, Laws of Florida, 1941.



acres of the lands of the Fund held within the boundaries  
 of the district,<sup>86</sup>

The tax compromise plan was the first phase of the re-funding process. Chapter 20,658 was something of an "enabling act" to put the district in a position whereby the Reconstruction Finance Corporation could see fit to accept the revised tax schedules as a basis for a \$5,660,000 loan and thus become the sole creditor of the south Florida unit. Governor Holland announced on June 6, 1941, that the refunding of the \$17,000,000 debt had begun.<sup>87</sup>

On June 11, 1941, the Drainage Commissioners adopted a plan of composition of the district's indebtedness under the authority of the 1941 law, and accepted the Reconstruction Finance Corporation's loan of \$5,660,000.<sup>88</sup> Under the plan of composition bondholders were paid 56.918 cents on the dollar of unpaid principal amount, less face amount for missing unpaid coupons maturing after July 1, 1941, and 36.77 cents on the dollar for missing unpaid coupons maturing before July 2, 1941. To the Arundel Corporation and other persons holding unpaid notes the district settled

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<sup>86</sup> 1942 Migration Hearings, 12555-12557; R. K. Lewis, "The Economic Phase of Reclamation," loc. cit., 102.

<sup>87</sup> Palm Beach Post, June 7, 1941. As of June, 1941, the debt was \$17,040,212.32 of which \$13,890,763 represented the claim of the Arundel Corporation and other miscellaneous claims. Everglades Drainage District, Plan of Composition of the Indebtedness of the Everglades Drainage District, 12. Hereinafter cited as 1941 Composition Plan.

<sup>88</sup> E. D. D. "Minutes," VII, 299-316.

for 26.14 cents on each dollar principal amount.

With the acceptance of the Drainage Commissioners' June 11, 1941, resolution, the Reconstruction Finance Corporation agreed to make the \$5,660,000 loan and take thirty-three year four per cent bonds to settle the old \$17,000,000 debt, a deal which cancelled \$20,000,000 in delinquent drainage taxes involving 4,800,000 acres. In order to consummate the refunding operation it was found necessary to employ interim bankers; the Drainage Commissioners did not have the necessary funds to swing the transaction and the bondholders' committee had a somewhat peculiar attitude toward the Reconstruction Finance Corporation.

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89 1941 Composition Plan, 12, 17.

90 Palm Beach Post, June 11, 1941. Judge John W. Holland, of the United States Court for the Southern District of Florida, Miami Division, set September 3, 1941, for a hearing on the plan as a preliminary to bankruptcy proceedings for the Everglades Drainage District. Ibid., June 14, 1941.

91 J. E. Beardsley, "Present Status of Plans for Financing the Everglades Drainage District," loc. cit., 111. ". . . because of Rorick's personal hatred and antagonism toward Jesse Jones, head of the Federal loan agencies, because of some refusal by the Reconstruction Finance Corporation to make a loan to Rorick's bank sometime in the past; and . . . any time the Reconstruction Finance Corporation made a commitment to the district of an amount sufficient to pay a definite amount to the bondholders, Rorick used that as a minimum, assuming that he could always get that much because of a commitment by a governmental agency to loan the district that amount, and he started trading from there." F. P. Manuel, "Land Development in the Everglades;" quoting In the Matter of the Everglades Drainage District, In the United States District Court for the Southern District of Florida Bankrupt, No. 1949-M, 590-591.

The Ranson-Davidson Company of Kansas City, Missouri, bought the outstanding bonds at approximately fifty-seven cents, and the Arundel dredging company notes at twenty cents on the dollar selling both to the Reconstruction Finance Corporation, the former at fifty-seven and the latter at 26.14 cents making a profit of \$112,000 which was the amount that the liquidating agents received for handling the entire deal.<sup>92</sup>

Through the fall of 1941 bankruptcy proceedings were heard in the Miami Division of the United States Federal Court and the tax compromise plan was carried out. In April, 1942, an interlocutory decree was issued completing the refunding and forcing in the bonds not represented by the Rorick interests.<sup>93</sup> Speaking in March, 1943, James E. Beardsley of Clewiston, a member of the Board of Commissioners and General Manager of the Everglades Drainage District, said:

We owe RFC \$5,300,000. The Board is seeking some opinions from taxpayers as to how it shall handle. . . an accumulation of taxes set aside for the debt service funds . . . which today amount

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<sup>92</sup> J. E. Beardsley, "Present Status of Plans for Re-financing the Everglades Drainage District," loc. cit., 111. "The District could also have bought that claim for twenty cents on the dollar, if they had had the four hundred thousand dollars to buy it with. These people bought it and are legitimately entitled to the fee. I might say that is the only 'gravy' that appeared in the Everglades Refinancing operation."

<sup>93</sup> Statement of District Commissioner M. R. Tennant, 1942 Migration Hearings, 12553; R. K. Lewis, "The Economic Phase of Reclamation," loc. cit., 103.

to approximately \$480,000 with all interest and commitments paid. . . . shall the Commissioners hang onto that surplus as a hedge against bad times, or should it pay off part of its mortgage reducing the loan to \$5,000,000. . . .

. . . . .

I am not unduly concerned with the future of the Everglades. In the course of a year or two, probably we will stand in much the same position as the Trustees of the Internal Improvement Fund have stood in the past--we will be the large landowners in the District, and then we will be able to exercise the type of control over these areas we deem necessary. 94

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94 J. E. Beardsley, "Everglades Drainage District," The Soil Science Society of Florida, Proceedings, V-A (1943), 168-169.

## CHAPTER XV

### THE CONTEMPORARY SCENE

#### 1. Agriculture and Industry

Writing about the United States tropics during the 1930's one traveler found that the Everglades are now somewhat better understood ". . . [though] there are still large portions of them that remain unexplored, virgin territory-- America's last frontier."<sup>1</sup> Another traveler observed "a new race of pioneers . . . creating a fertile agricultural region in the heavy soil of the Everglades," where the real story of this "American Valley of the Nile" did not start until 1929.<sup>2</sup>

Prior to 1939 seventy-five percent of the farms in the lake region of the upper Everglades were operated on a tenant basis.<sup>3</sup> An economic study made in 1928 on Florida's chances to recover from the 1926 land boom collapse stated that

. . . except for speculative farming the Everglades is to a large extent an experiment. . . . Thus far, most of the Everglades farming has been done by speculative operators who hope to combat the winter frost successfully and bring

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1 John E. Jennings, Jr., Our American Tropics, 51.

2 Jane D. Floyd, "Magic Farms of the Everglades," Travel, LXVIII (January, 1937), 25. An example of the fertility of the 'Glades and consequent growth of vegetation has given the following story to the local folklore. "Two Negro boys were planting corn and found it was sprouting as fast as they dropped their seed. One boy called to the other to sit on the row, so that it wouldn't grow to fodder before they finished planting. The next day the sitter dropped down a note reading: Passed through heaven yesterday at 12:15 sellin' roastin' ears to the angels." Theodore Pratt; "Land of the Jook," Saturday Evening Post, CCXIII (April 16, 1941), 21.

3 L. LeMar Stephan, "Vegetable Production in the Northern Everglades," Economic Geography, XX (April, 1944), 84.

their crops to market at the height of the winter, when other sections of continental United States are not producing. 4

Illustrative of this speculation is the comment that the Everglades growers were not farmers but

. . . soil miners gambling with nature in a speculation usually financed by northern commission houses, which furnish seed and capital, if need be, and take their profit in the handling of the crop. Not many of the growers own their lands; they lease it for one year, usually shifting to another tract the next year. They are, therefore, tenant farmers. They prefer to lease because their gamble is less and because taxes are high--as many as four drainage taxes on each acre at some points. 5

These migrant agrarians, newcomers to the region, were often called "suit case farmers" since many of them entered the section, leased land, and lived out of a suit case until their crops were made and sold in sixty days, more or less. 6 The hazards of the Okeelanta, island, and lake shore pioneers were overcome to some extent through trial and error, the information from the state experiment station, and better water control.

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4 M. S. Rukeyser; "Is Florida Coming Back?" World's Work, LV (March, 1928); 478.

5 Theodore Pratt, "Land of the Jook," Saturday Evening Post, CCXIII (April 26, 1941), 21. In the winter of 1935 one farmer made \$150,000 on 150 acres of cabbage, bringing his cabbages to harvesting point after all others had been rained out. "The land was with him and God watched his water table." See also J. D. Floyd, "Magic Farms of the Everglades," loc. cit., 49. Another grower made \$40,000 on beans when crops in Florida and other states were generally frozen. Ibid., 27.

6 L. E. Stephan, "Vegetable Production in the Northern Everglades," loc. cit., 83.

Autumn rainstorms accompanied by high winds in 1929 produced flood conditions throughout the Everglades. On September 28 the winds reached a velocity of forty miles an hour at Belle Glade and sixty miles an hour at Miami, resulting in a hurricane scare.<sup>7</sup> On September 27 the big lake stood at an elevation of 13.7 feet, and on October 5 the level read 14.6, with rainfall during that period varying from 5.2 inches west of Deerfield to 13 inches west of Miami. The heavy rains beat down seed beds throughout the area and damaged 12,000 acres of sugar cane.<sup>8</sup> On October 23 a joint meeting of the commissioners of the drainage and flood control districts was held at Miami to see what could be done to relieve the flooded lands in the southern 'Glades. The two boards decided to make \$50,000 available for emergency relief in the area west of Miami, \$15,000 for the area west of Ft. Lauderdale, and \$5,000 for the Snake Creek Canal section.<sup>9</sup>

The gradual installation of pumping units by sub-drainage districts or private owners has clearly demonstrated

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<sup>7</sup> University of Florida Agricultural Experiment Station, Annual Report, 1930, 114. The storms of the fall kept the water levels too high, but the worst conditions were due to the out of season rains in April which backed a two foot head of water in the Hillsboro Canal against the station. Ibid., 114-116. See also F. C. Elliot, "Effects of Recent Storm in Everglades Section," Florida Engineer and Contractor, V (October, 1929), 156.

<sup>8</sup> F. C. Elliot; "Effects of Recent Storm in Everglades Section," loc. cit., 156;

<sup>9</sup> E. D. D. "Minutes," VII, October 23, 1929.

the inability of the earlier agricultural efforts to drain the lands by gravity toward the arterial canals. Electric or fuel oil driven turbine-type pumps have been satisfactory for water control on sections from a few hundred to a thousand acres, while heavy-duty Diesels drive wood-screw pumps to control the water levels on areas up to 10,000 acres.<sup>10</sup>

The seven principal Sub-Drainage districts adjacent to Lake Okeechobee, extending from Moore Haven to Canal Point, are political subdivisions of the State of Florida, and have been created under General or Special Acts of Legislature as integral units of the Everglades Drainage District. They embrace a reclaimed area of some 95,400 acres, have 19 pumping units, employing engines totalling 5,000 horsepower and having a combined capacity for handling approximately 1,780,000 gallons of water per minute.<sup>11</sup>

In 1929 acreage in crops in the Everglades reached a total of 42,400 with 17,150 in vegetables and 25,250 in sugar cane.<sup>12</sup> Packing methods began a shift from the field

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<sup>10</sup> B. S. Clayton, "Peat Soil Problems in the Everglades," Florida Grower, XLIII (September, 1935), 10.

<sup>11</sup> H. A. Bestor, "Reclamation Problems of Sub-Drainage Districts Adjacent to Lake Okeechobee," loc. cit., 160. "We have been requested to start the pumps in practically all the units immediately after the recent rains: To us, this proves that we have been able to maintain a fair water table through syphoning during the recent dry season. This, of course, is what we are attempting to do for our taxpayers." Statement of J. F. Scullen, Manager of the South Florida Conservancy District, Belle Glade Herald, November 1, 1940.

<sup>12</sup> E. D. D. "Minutes," January 2, 1930. The 1930 census counted 9,054 people in the Upper 'Glades as follows: Canal Point, 2,475; Pahokee, 2,735; Chosen, 700; Belle Glade, 1,043; South Bay, 756; and Ritta, 345. The Pahokee area numbered 187 farms, Canal Point 108, Belle Glade 29, South Bay 17, and Ritta 21. Everglades News, June 20, 1930. Clewiston and Moore Haven were not considered in this tabulation published by Howard Sharp.



to the packing house in 1930 with the first installation of a bean grading machine on the L. L. Stuckey property at Canal Point.<sup>13</sup> Another event of the 1929-1930 season was the establishment of the State Sub-Tropical Experiment Station at Miami to work on the introduction, propagation, and culture problems of trees, shrubs, and fruits adaptable to South Florida.<sup>14</sup>

Three discoveries in the late 1920's "made it possible to develop thousands of acres of otherwise useless land."<sup>15</sup> Copper sulphate to cure "muck sickness" or the toxic acids which caused the "reclaiming disease" of the crops of the early settlers, manganese for the prevention of yellowing and failure of snap beans, and zinc spraying to supply deficiencies of this element were the open sesame to truly productive farming in the Everglades.

By 1939, Palm Beach County was producing approximately thirty percent of Florida's vegetables, and was said by 1945 to produce more vegetables than any other county in the

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<sup>13</sup> Everglades News, January 11, 1930.

<sup>14</sup> University of Florida Agricultural Experiment Station, Annual Report, 1930, 136-137. It was reported that the Brown Company spent more money on Everglades research and experimentation in 1927 than did the State of Florida. E. H. Taylor, "Florida's Question Marks," loc. cit., 21.

<sup>15</sup> Harold Severson; "Her 1,000 Acre Salad Bowl," Nation's Business, XXXIII (March, 1945), 88-90. The 1937-1938 season witnessed 7,000 carloads of vegetables passing through Canal Point alone. Everglades News, May 6, 1938.

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United States. A seasonal breakdown showed the muck lands lying fallow in the summer months until August when fall plowing begins, with planting of beans, potatoes, and celery in the weeks from the middle of September to Christmas. The winter months were the heavy producers of celery, cabbage, and sweet peas, while the spring months brought a second peak of beans, tomatoes, and more celery. From a test planting in 1930, Palm Beach County had become the second county in Florida in celery production by 1945.

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Since 1930 the shift has been from tenancy to farm ownership in the Upper 'Glades. Land cultivation in Palm Beach County increased 132% in the decade from 1930 to 1940, while in the same period farm ownership increased 241%.

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Since 1940 the shift in land utility has been from tenancy to a cash basis and outright ownership with settlement

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16 L. L. Stephan, "Vegetable Production in the Northern Everglades," loc. cit.; 79; Harold Severson, "Her 1,000 Acre Salad Bowl," loc. cit., 88. Palm Beach county moved 13,400 carloads of vegetables in 1940-41; almost a third of the crop moved by truck. L. L. Stephan, "Vegetable Production in the Northern Everglades," loc. cit.; 79.

17 Harold Severson, "Her 1,000 Acre Salad Bowl," loc. cit., 90; University of Florida Experiment Station, Annual Report, 1939, 149. The first commercial celery production was in 1934, and by 1939 there were 800 acres in the stalk.

18 L. L. Stephan, "Vegetable Production in the Northern Everglades," loc. cit., 84. Of 110,000 acres in production in 1943, 75,000 were in vegetables, 30,000 in sugar cane, and 5,000 in pastures, citrus, and other usage. Joseph T. Elvove, "The Florida Everglades--A Region of New Settlement," Journal of Land and Public Utility Economics, XIX (November, 1943), 468.

encouraged by the levee construction along the lake shore. The overall size of holdings has increased, but there are many farms of ten to forty acres in profitable cultivation; nonetheless, the area lends itself to industrialization on a mechanized plane to the extent that Palm Beach County has been said to lead the nation in this respect.<sup>19</sup>

The ideal size for a farm in the Everglades, according to economists who have studied the area, is 640 acres. The average cost for raw land is figured at \$30 an acre, with preparation, ditching, and pumping equipment averaging \$45 an acre, plus \$35,000 for equipment, housing, and miscellaneous machinery.<sup>20</sup> Total production costs for cash rental farming have been figured at \$100 an acre broken down as follows: rent, \$10-\$15; fertilizers, \$5-\$6; preparation of soil, \$5; planting, \$18; harvest, \$32; packing, \$30. The average snap bean farm has been 280 acres, with receipts of \$19,584, expenses of \$14,747, and a return of \$4,837 for an August-May operation.<sup>21</sup>

The trend in 1945 was toward diversification on the

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<sup>19</sup> Harold Severson, "Her 1,000 Acre Salad Bowl," *loc. cit.*, 88. Fifteen growers farmed from one to three thousand acres apiece in 1945 in Palm Beach County.

<sup>20</sup> L. L. Stephan, "Vegetable Production in the Northern Everglades," *loc. cit.*, 95.

<sup>21</sup> *Ibid.*, 97. The 4,000 acres planted to celery from 1936 to 1940 reflected the following net average returns to each celery grower: in 1936-1937, \$6,500; 1938-1939, \$12,500; 1939-1940, \$20,000.

large holdings, illustrated by Mrs. Ruth Wedgworth of Belle Glade who planted 400 acres in Irish potatoes, 175 acres in celery, and 425 acres in peas, cabbage, sugar cane, corn, escarole, and pasturage for finishing steers.

. . . in addition to growing carloads of vegetables she packs and markets her neighbors' crops: She has her own fertilizer and mixing plant, a packing house covering 48,000 square feet, and a precooling plant. More than 1,500 carloads of vegetables were shipped from her plant in 1943.

The trend toward diversification has been brought about by the desire to stabilize financial returns, provide for soil conservation, find summer use for the lands, encourage year-round labor demand, and process local produce. Four items hold out promise for staple crops: sugar, starch, stock finishing, and fiber.

Sugar has been established; starch from sweet potatoes is in the experimental stage; and ramie for fiber production is still presenting problems of harvesting and decortication. Stock finishing offers a good profit in beef production with the introduction of Brahma cattle, a species which can cope

22 Harold Severson, "Her 1,000 Acre Salad Bowl," loc. cit., 88. Another diversified crop in the vegetable line was found in the shipment of 140 carloads of radishes in 1940, harvested 22 days after being planted. Theodore Pratt, "Land of the Jook," loc. cit., 21.

23 Harold Severson, "Her 1,000 Acre Salad Bowl," loc. cit., 90.

24 L. L. Stephan, "Vegetable Production in the Northern Everglades," loc. cit., 101. In 1942 a \$100,000 cannery began operation in Belle Glade contracting for 2,500 acres of beans, tomatoes, celery, spinach, beets, and small potatoes to pack up to 750,000 cases of vegetables. Ibid., 100.

25 Ibid., 90.

with the vagaries of a wet sub-tropical climate and the pests common to it, as well as thrive on Fara, Napier, Bahia, Dallis, and other grasses used for pastures.<sup>26</sup> The United States Sugar Corporation has encouraged the use of its molasses by-product mixed with orange pulp from the citrus canneries of central Florida for cattle finishing or fattening.<sup>27</sup> Many Everglades farmers purchase steers from Florida ranchers to fatten on the Everglades grasses, especially during the dry winter months when pastures further north are dormant.<sup>28</sup>

The Everglades problems of drainage, crops, fertilizers, and subsidence have been conquered to some extent though they are far from solved. The day of speculative farming has largely passed; though an occasional farmer may make an amazing profit, as many or more may lose everything. "The more able (or luckier) of the early speculators have become large-scale growers. Newcomers have appeared with adequate capital to finance large operations."<sup>29</sup>

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<sup>26</sup> L. L. Stephan, "Vegetable Production in the Northern Everglades," loc. cit., 90-91; J. T. Elvove, "The Florida Everglades: A Region of New Settlement," loc. cit., 467; University of Florida Agricultural Experiment Station, Annual Reports, 1932, 164-212; 1936, 115-140; 1939, 149; 1940, 167.

<sup>27</sup> United States Sugar Corporation, Sugar and the Everglades, 12.

<sup>28</sup> Orlando Morning Sentinel, April 2, 1941; May 19, 1946. "While on most unimproved Florida pasture it takes 10 acres to care for one cow in the Everglades two cows not only are able to survive on one acre, but they can also be fattened..." Al Cody, "Florida Cattle."

<sup>29</sup> Joan Pascal and Harold Tipton, "Vegetable Production in the Everglades," 1942 Migration Hearings, 12952. This article, exhibit number thirteen of the hearings, is by far the best material available on Everglades farming in the 1940's. Ibid., 12888-12955.

One large grower told the committee investigating national defense migration in South Florida in 1942 that it was his

. . . studied opinion, after watching in the aggregate over 100,000 acres of vegetable farming, that the same amount of intelligence, effort, and capital put into farming ventures in the Everglades as in other business will provide a greater profit. 30

The sugar operations of the Florida Sugar and Food Products Company on the muck lands of the Pelican Lake drainage district, and in the mill which was erected at Canal Point, were suspended in 1925 on account of the flooding of the fields and the consequent destruction of the cane crops. 31

At that time no one connected with the enterprise or in the Everglades generally appreciated fully the necessity for adequate water control and the Canal Point operation was virtually abandoned by 1925 when B. J. Dahlberg, then and now head of the Celotex Co., of Chicago, was induced to survey the Everglades section with a view to growing cane as a source of additional bagasse for Celotex. 32

As a result of the inspection the Dahlberg-Celotex interests purchased outright or on option some 100,000 acres along the lakeshore, including the fields and mill of the Florida Sugar and Food Products Company. 33 Local flood

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30 J. Pascal and H. Tipton, "Vegetable Production in the Everglades," loc cit., 12953.

31 House of Representatives Documents, Number 215, 70 Congress, 1 Session, 38.

32 Statement of J. E. Beardsley, 1942 Migration Hearings, 12564.

33 Ibid., 12564; Charles W. Wood, "The Florida Town that Sugar Built," Forbes, XXII (July 15, 1928), 22. The reasons advanced for the 1925 sugar cane development in the Everglades included a chance to beat the world sugar market, to make America self-sufficient, and the urge of Florida investments to make good. Ibid., 21.

control and drainage work was carried on for two years before the land was planted to cane in the 1927-1928 season. Organizing an auxiliary company under the name of the Southern Sugar Company the Dahlberg interests purchased the Hialeah mill of the Pennsylvania Sugar Company and combined it with the Canal Point mill at Clewiston.<sup>34</sup>

Along with the wallboard and sugar companies the Clewiston Sales Company was organized to plan and build a residential and resort city near the site of the transplanted sugar mill at Clewiston. By 1928 the townsite boasted two modern hotels,<sup>35</sup> a half dozen stores, a newspaper, and a garage. Tractors and special machinery for planting, cultivating, and hauling cane to the loading platforms were used to place the field operations on a mechanized basis. Cane grinding began in the Clewiston mill on January 14, 1929; and 12,969 tons of cane produced 745 tons of ninety-six percent sugar; in 1929-1930, 202,011 tons of cane produced 14,468 tons of sugar; and in 1930-1931, 351,051 tons of cane produced 26,465 tons of sugar.<sup>36</sup>

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34 F. P. Manuel, "Sugar Production in Florida," Exhibit Number 14, 1942 Migration Hearings, 12957-12958. This article, done in conjunction with the hearings is an excellent survey of the Everglades sugar operations. Ibid.; 12955-12976. See also Everglades News, July 15, December 30, 1927.

35 C. W. Wood, "The Florida Town that Sugar Built," loc. cit., 22; Everglades News, July 15, 1927.

36 F. P. Manuel, "Sugar Production in Florida," loc. cit., 12958; Everglades News, August 1, 1930.

The Clewiston mill was originally constructed to grind 1,500 tons of cane per day, and was increased to 4,000 tons per day in 1930.<sup>37</sup> In July, 1930, however, the Southern Sugar Company was thrown into receivership because of the collapse of the stock market, decline in sugar price, and the high stages of water which flooded some of the cane fields.<sup>38</sup>

The collapse of the several efforts to produce sugar profitably can be attributed to the trial and error method of the early corporate enterprises in dealing with drainage, storms, fertilization, propagation, and the search for high sugar content and disease resisting plants.

The general sugar situation did not create a favorable milieu for Florida's infant industry. During the twenties when governments throughout the world were subsidizing beet-sugar production, and technological improvements as well as intensive industrialization increased the output of raw cane sugar, excessive supplies accumulated and prices of sugar dropped steadily. The depression of 1929 completely overturned a number of sugar enterprises which were already tottering. 39

The Southern Sugar Company continued in receivership until December 7, 1931, when Charles Stewart Mott and

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37 "Country's Largest Sugar Mill Completed in Florida Everglades," Manufacturer's Record, XCVII (February 6, 1930), 69.

38 Everglades News, July 4, 1930. Assets were listed at \$20,000,000 and debts at \$4,500,000. "The Dahlberg enterprise was predicated upon the sale of additional stock for increase in capital and, following the 1929 crash it was impossible to continue the sale of stock so the company . . . was thrown into bankruptcy." 1942 Migration Hearings, 12564.

39 F. F. Manuel, "Sugar Production in Florida," loc. cit., 12957-12958. See also J. E. Dalton, Sugar: A Case Study of Government Control, 42-52.



Clarence Bitting bought the property at a court insolvency sale and reorganized as the United States Sugar Corporation. <sup>40</sup> The corporation had 12,000 acres in cane in 1932 and planned for 16,000 acres in 1933. <sup>41</sup> This corporation accounts for some ninety-five percent of Florida's sugar production. The following table records its progress since the first harvest.

Harvest:	Tons of cane	Tons of 96% raw sugar	Yield percent sugar in cane	Tons of cane per acre	Tons of 96% raw sugar per acre	
1931-1932	292,228	23,913	8.11	22.53	1.83	
1932-1933	410,882	36,501	8.89	34.31	3.04	
1933-1934	452,797	40,184	8.91	34.90	3.05	
1934-1935	350,742	25,791	7.35	29.02	2.14	
1935-1936	451,369	39,268	8.72	35.55	3.09	
1936-1937	529,156	48,736	9.21	35.29	3.24	
1937-1938	582,834	53,246	9.13	35.02	3.09	
1938-1939	805,455	85,663	10.66	38.56	4.11	
1939-1940	663,232	65,101	9.32	37.90	3.72	
1940-1941	873,809	91,767	10.50	33.73	3.54	42

<sup>40</sup> Everglades News, September 11, 18; November 5; December 4, 11; 1931. Mott, a former vice-president of General Motors, had been the largest stockholder of the Southern Sugar Company. Ibid., November 5, 1931.

<sup>41</sup> Everglades News, March 25, 1932. Experiments in rodent control brought to light estimated losses of \$250,000 for the 1930-1931 sugarcane season. University of Florida Agricultural Experiment Station, Annual Report, 1931, 161-162.

<sup>42</sup> F. P. Manuel, "Sugar Production in Florida," loc. cit., 12962. The decline of the percent of raw sugar per acre for the last two years noted was attributed to the fact that the company was experimenting with new types of cane in order to lengthen the harvest. Ibid., 12961. The decline in tonnage ground in 1935 was caused by a severe cold wave which froze thousands of acres of cane and made many crops a total loss. The temperature fell to 13° F. in the 'Glades on December 10, 1934. University of Florida Agricultural Experiment Station, Annual Report, 1935, 110-112.

The success of this [corporation] together with that of experiments made by the Department of Agriculture in the growing of cane, prove that sugar can be raised, ground, and delivered to the refinery at a lower cost per pound in Florida than any other part of the United States or her possessions. 43

Sugar legislation has hampered the expansion of Florida sugar lands and production has been stymied by various federal laws. Under the several clauses of the Jones-Costigan Act of 1934 sugar producers in the continental cane and beet areas received benefit payments from processing taxes based on marketing quotas. In 1936 in the Hoosac Mills Case the Supreme Court declared the tax-benefit sections of the act unconstitutional, but some form of restrictive legislation existed until after Pearl Harbor.<sup>44</sup>

Writing in 1937, a former chief of the Sugar Section of the Agricultural Adjustment Administration and professor in the Harvard Graduate School of Business Administration found that there was

. . . no better example in the contemporary economic and political scene of the close relationship between government and business than that found in the case of the Florida raw cane sugar industry. Since its inception in

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43 J. E. Jennings, Jr., Our American Tropics, 56. As one writer put it, "Cane and Everglades are mates. . . ." Robert McCormick, "Lavish Land," Collier's, CX (August 8, 1942), 65. "The 10,000 acres of reclaimed land now in cane make a mere dot on the map of the total area that may eventually be devoted to cane culture. . . ." "Everglades Sugar," Business Week, (February 13, 1937), 35.

44 J. E. Dalton, Sugar: A Case Study of Government Control, 97-98, 138-140, 143-144, 187, 300.

1929 it has spent three years under a tariff system, two years under a quota system with benefit payments, and one year under a quota system with Soil Conservation payments. Its future will be uncertain until some permanent sugar policy is adopted by Congress. But with its low cost, the Florida industry is in as favorable a position as any sugar industry, continental or insular, to operate successfully under a policy of unlimited production without direct benefit payments. 45

As early as 1937 Clarence Bitting, president of the United States Sugar Corporation, was pointing out the fact that the army and navy listed sugar as a critical war time material and that the nation was then dependent on "offshore areas for three-quarters of this vital necessity of life."<sup>46</sup>

Florida, paying higher wages than any other area supplying the American [sugar] market can produce sugar at lower costs than any other area under the American flag and can match costs with Cuba. Florida the highest wage area is also the lowest cost area. 47

It was not until after the United States had been at war some months that the Florida Everglades cane growers were allowed to grow beyond the quota set for the state, and by that time the necessary labor and essential grinding and refining machinery were impossible to obtain. The sugar

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45 J. E. Dalton, Sugar: A Case Study of Government Control, 187.

46 Clarence R. Bitting, "What Sugar Means to Florida," Southern Banker, LXX (May, 1938), 14. The sugar executive asked that Florida be allowed to supply 10% of the U. S. supply and predicted that if this were done 500,000 more people could live in comfort in South Florida.

47 Ibid., 13.

profit in Florida reached almost eleven percent on the net worth of the United States Sugar Corporation in 1939.<sup>48</sup>

From the beginning of the restrictive legislation in 1934 attempts have been made by Florida's governors, congressmen, legislatures, and private individuals to defeat any quota system, but the forces of other producers have been too strong for the infant industry of Florida to buck.<sup>49</sup>

Speaking before a special sub-committee of the Agriculture Committee of the federal House of Representatives in March, 1937, the president of the United States Sugar Corporation recommended a three point plan for sugar legislation. It is as follows: (1) there should be no restriction on continental production of a vital food of which 75% was imported; (2) there should be no tax imposed on a vital food necessity of the people; and (3) benefit payments should be reduced and should be made to operators of family sized farms.<sup>50</sup>

In 1941 the sugar market of the United States was

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<sup>48</sup> Palm Beach Post, December 30, 1939. In the same year the Clewiston corporation received benefit payments from the federal government of \$470,007, which represented the second largest payment made that year.

<sup>49</sup> Everglades News, February 16, 23, 1934, March 5, 26, 1937, June 30, December 1, 29, 1939.

<sup>50</sup> United States Sugar Corporation, Sugar and the Everglades, 53-54. Writing in 1941 in his column "The Washington Treadmill," Frank A. Kennedy reported on April 13 that "the western beet-sugar bloc, which always has been strong enough to quell the rebel tendencies of the Florida Congressional delegation, seems to be playing its same old game." Orlando Morning Sentinel, April 13, 1941.

divided according to production areas:

Philippines	15.41%	plus 100%	home market	
Cuba	28.60%	"	"	"
Hawaii	14.04%	"	"	"
Porto Rico	11.94%	"	"	"
U.S. Beet Sugar	23.19%			
Louisiana Cane Sugar	5.25%			
Florida	"	"	less than 1%	51

The 1939 session of the Florida legislature submitted a memorial, approved by the governor on April 17, 1939, to the President and Congress petitioning an increase in the sugar quota allotment for Florida, citing the fact that the Cuban share of the United States market was twenty-eight percent to Florida's less than one percent share.<sup>52</sup>

The United States Sugar Corporation purchased about ten percent of its cane from independent growers in 1941 and previous years. The cane was contracted for under a cooperative agreement at a price averaging \$3 a ton, depending upon the sucrose content and the price of raw sugar on the New York markets.<sup>53</sup> The independent growers participated in the profits and benefits of the sugar house and its research program without providing any capital for such privileges. According to the reports of the Clewiston corporation, several hundred

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51 United States Sugar Corporation, Sugar and the Everglades, 55. "We pass laws to keep aliens from our shores, and then pass other laws guaranteeing our market to exploiters of foreign peon labor." Orlando (Florida) Reporter-Star, October 30, 1940.

52 Laws of Florida, 1939, 1669-1670.

53 United States Sugar Corporation, Sugar and the Everglades, 31-33; F. P. Manuel, "Sugar Production in Florida," loc. cit., 12963.

other 'Glades farmers wanted to supply the mill with cane but were unable to do so under the sugar quota system.<sup>54</sup>

Many of the farmers in the Belle Glade Pahokee area, now limited to the production of winter vegetables in competition with peonage production in foreign countries, are desirous of an opportunity to diversify their production and at the same time obtain an assured cash crop. In an attempt to improve their own situation through their own efforts, many such farmers joined in the organization of the Florida Cooperative Sugar Association for the purpose of erecting a sugar house to grind their own sugar cane and to further such purpose pledged over 12,000 acres to cane production [in 1938]. Unfortunately the Federal Government has, so far, denied these American farmers the right to supply the non-surplus needs of their fellow Americans. 55

Senator Claude Pepper of Florida and other members of the Florida delegation at Washington worked toward the establishment of an independent sugar house in the form of a cooperative in 1941 and 1942, but it has appeared that their efforts have come to naught.<sup>56</sup>

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<sup>54</sup> United States Sugar Corporation, Sugar and the Everglades, 32.

<sup>55</sup> Ibid., 6-7.

<sup>56</sup> Orlando Morning Sentinel, March 9, 1941; February 2, March 22, April 19, 1942. During the 1945-1946 grinding season the Clewiston sugar house announced a record 1,020,000 gross tons of cane processed, producing 190,000,000 pounds of sugar. ". . . approximately 30,000 acres of cane were cut and handled with more than 400 freight car loads of cane moving in daily from the company's 12 plantations extending some 50 miles through the Everglades." Orlando Morning Sentinel, May 5, 1946. See also Ibid., May 19, 1946.

## 2. The Conservation Movement

With the development of the Dahlberg-Celotex and Southern Sugar interests around the shore of Lake Okeechobee from Canal Point to Clewiston the future looked bright for Miami to capitalize on the hinterland as a purchasing area.<sup>57</sup> Agitation for a barge or truck line from the lake section to Miami to haul proposed sugar tonnage resulted in surveys of the North New River Canal by the government engineers. These surveys were unfavorable. Failure to receive federal support on canal improvement through the lower Everglades caused the advocates of better transportation facilities to turn to highway construction. On May 24, 1929,

Dr. Thomas E. Will appeared before the Trustees and requested that the remainder of the land which the Trustees had set aside for Palm Beach County, being approximately 1,500 acres, be converted into cash and the amount realized from said sale be applied on the construction of a road along the North Canal and on necessary work in the canal. 58

Will continued to work on getting a highway built along the banks of the Lauderdale Canal through the Everglades wilderness to the metropolitan area of the lower east coast.<sup>59</sup> On July 3, 1935, Will wrote the Everglades News that the Florida

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<sup>57</sup> Miami News, June 10, 1928.

<sup>58</sup> I. I. B. Minutes, XVIII, 111. Acting on Will's request the Trustees instructed the chief drainage engineer to make a report as to cost, with further action deferred until adjournment of the legislature.

<sup>59</sup> Everglades News, July 27, 1934.

State Road Department had allotted \$450,000 to be spent on the Okeechobee-Miami highway, state route number twenty-six, and that he understood a bridge would be built across the Bolles Canal, "right by my door in Okeelanta where I'm staying much of the time, staging a comeback."<sup>60</sup> In the fall of 1935 the Everglades Drainage District deeded a strip one hundred feet wide along the canal bank to the Florida State Road Department and a year later the Internal Improvement Fund Trustees granted a right of way through their lands for the same purpose.<sup>61</sup>

On February 12, 1937, Will wrote a long letter to the Everglades News on the progress of the highway being constructed through Okeelanta to Miami.<sup>62</sup> Almost a month later death brought a close to the career of Thomas Elmer Will, of whom it was said: ". . . the Everglades lost not only one of its oldest settlers and pioneer developers, but an ardent champion for all worthwhile improvements, and a recognized authority on Everglades affairs."<sup>63</sup>

<sup>60</sup> Everglades News, July 5, 1935. Under the Federal Works Program \$145,000 was appropriated for bridge building on road 26. Miami Herald, July 2, 1935.

<sup>61</sup> Everglades News, September 27, 1935; I.I.B. Minutes, XXI, 16-19. In March of 1936 the Florida State Road Department allotted \$662,000 to the construction of road 26. Everglades News, March 27, 1936.

<sup>62</sup> Everglades News; February 12, 1937.

<sup>63</sup> Ibid., March 12, 1937. "Whereas, during his lifetime the late Honorable Thomas E. Will gave unstintingly of his time and means in the promotion of the building of a road from Lake Okeechobee area to the East Coast of Florida, and "Whereas, as a result of his untiring efforts State Road No. 26 is now in process of construction, and will soon be open to traffic, and



The Thomas E. Will Memorial Highway built at a cost of \$1,500,000 was opened on April 11, 1941, thus providing growers of the area around Lake Okeechobee a direct route through the Everglades to the ports of the southeast Florida coast.

The growth of the Everglades development is indicated by its largest county whose

. . . population . . . in 1920 was only 18,600 persons. One-quarter of a century later the population [was] 112,300. In 1920 the value of all vegetables produced in the State was less than \$16,000,000.00. Today Palm Beach County produces annually vegetables valued at \$30,000,000.00, in addition to an estimated sugar crop value of \$8,000,000.00. 65

From the status of a village Belle Glade grew in eight years, 1929 to 1937, to a town with paved streets, a \$37,000 high school, \$87,000 water plant, cold storage plant, modern

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"Whereas, the public is desirous of expressing its gratitude for the services rendered in this connection by the Honorable Thomas E. Will, Therefore, be it resolved that State Road No. 26 from South Bay to Ft. Lauderdale and Miami be designated and known as the Thomas E. Will Memorial Highway." House Concurrent Resolution Number 17, Laws of Florida, 1937.

64 Palm Beach Post, April 12, 1941; Orlando Morning Sentinel, April 11, 1941; Orlando Reporter-Star, April 12, 1941.

65 The Water Control Committee of Palm Beach County Resources Development Board, Report on Water Control for Palm Beach County, 1945-1946, 3. Hereinafter cited as Palm Beach Water Control Report. In 1943 there were 17,000 year-round residents in Moore Haven, Clewiston, South Bay, Belle Glade, Pahokee, and Canal Point and 90,000 to 100,000 acres were under agricultural control, though more than 80% was never in cultivation at one time. John H. Davis, Jr., The Natural Features of Southern Florida, Especially the Vegetation, and the Everglades, 286.

airport, and "handsome churches of all denominations." <sup>66</sup>545

One of the last frontiers of the United States to be opened and exploited, the Everglades had presented the typical sociological picture in its development from the pioneer stage of "get-rich-quick" schemes to a region of substantial industry. The big demand for seasonal labor in the harvesting, packing, and milling of the winter vegetable and sugar cane crops has been accompanied by several unpleasant corollaries. <sup>67</sup> Since the season lasts less than six months, most of the field and packing house work has <sup>68</sup> been done by migratory labor.

Within the last decade the labor situation in the area has been the subject of publicity because of the squalid living conditions of many of the laborers and their families. In 1942 the House of Representatives Select Committee Investigating National Defense Migration sent members of its field staff to Florida, authorizing them to take testimony

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<sup>66</sup> J. D. Floyd, "Magic Farms of the Everglades," loc. cit., 27. The neighboring settlement of Pahokee was described as a "boom town" in 1938. Don Waters, Outboard Cruising, 42.

<sup>67</sup> J. Pascal and H. G. Tipton, "Vegetable Production in Florida," loc. cit., 12940-12943. Attention is again called to the authoritative research and writing of this survey, especially the testimony and statistics on the labor situation.

<sup>68</sup> "The frontierlike violence of the region is a produce of the most outrageous kind of farming practiced in America, which draws thousands of migrant workers, large numbers of whom live in the most abject poverty." Theodore Pratt, "Land of the Jook," loc. cit., 20-21.

on the large volume of migration to the South Florida vegetable and sugar cane areas.<sup>69</sup> The reports and exhibits of these hearings bear out the opinions that the Everglades have produced some of America's worst rural slums. Apologists for these conditions believed that many of the migrants lived in the same squalor in their home states, but that when so many of them congregated in the Everglades it was more noticeable.<sup>70</sup>

Estimates of the number of migrant laborers into South Florida varied from 15,000 to 25,000 in the 1941-1942 winter season, with 20,000 being the most frequently mentioned number.<sup>71</sup> The poor housing supplied the migrants has been the cause of deep concern and sharp criticism of "outsiders."

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<sup>69</sup> 1942 Migration Hearings, 12535. The testimony taken in South Florida, as well as several supplementary exhibits and three reports prepared by the committee's research staff, appear in the published hearings. Ibid., 12535-12976.

<sup>70</sup> "In the Florida legend is a chapter which is not set forth on the glossy pages of tourist circulars but goes by word of mouth from cabin to cabin across Georgia cotton fields, out to the Carolina sea islands, north into caves of the Alabama and Tennessee hills, and is wonderfully received by the poor folk there, west even to Louisiana, Mississippi, and Arkansas, where the tractors are moving in the wide river plains amongst the shacks of the share-croppers. And these obscure, these disheartened, and landless people, white and black, learn that there is a golden Florida made ready for them too, where the same warm sun that shines on the Palm Beach millionaire will shine down on them the long winter through, and the same tall palms will shade them. And money is to be made there in the beans, the tomatoes, the celery, and the sugar-cane big money." Senate hearings, part 2, May 15, 1940, 337 quoted in ibid., 12927.

<sup>71</sup> Ibid., 12927-12928.

Undoubtedly the fact that in past years many of the growers were working leased land had a great deal to do with the little thought given to the living conditions of field hands and packing house employees. Other contributing factors to the poor housing conditions were the fatalistic feelings surviving from the tragedy of the 1928 hurricane, the uncertainty attendant on the weather and relative crop successes, and the lack of attachment and sentiment for the region by the immigrants.

The federal government, through the Farm Security Administration, has built five camps for migrant labor and many of the planter-operators have constructed houses or barracks for their individual workers. The United States Sugar Corporation has built a number of plantation villages to care for both field and sugar house employees and also furnishes medical care, schools, commissaries, and organized recreation for its white and colored employees.

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72 Elaine Klepper, "Glades Migrant Workers," Orlando Morning Sentinel, April 28, 1940. This investigator found the majority of the migrants came from Georgia, Alabama, Tennessee, Ohio, Arkansas, Missouri, the Southwest, and California, but that almost half of them were from Florida. "The jooks are always going, but when the sugar-cane workers are paid off and when good vegetable crops are in they operate full blast until everybody's money is spent. Some of them haven't had their doors closed for five years; several haven't any doors; but merely doorways." Theodore Pratt, "Land of the Jook," loc. cit., 40.

73 Theodore Pratt, "Land of the Jook," loc. cit., 40. A Georgia woman told a newspaper reporter that she was in her first home in twenty years when she was located in one of the houses of the Osceola Camp of the Farm Security Administration at Belle Glade. Her last home in Moultrie, Georgia, had burned in 1920. Orlando Reporter-Star, May 1, 1940.

In a talk before one of a series of meetings held in Montgomery, Alabama in August, 1940, discussing the interstate migration of destitute citizens Mrs. Franklin Delano Roosevelt "praised the work of the operators of sugar plantations in the Everglades" toward the amelioration of migrant labor problems in Florida.

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In closing my statement I cannot resist the temptation to direct attention to a most glaring, unjust and unfair accusation made against the South. For years the South has borne the cost of educating her youth, only upon maturity to find them grabbed by the industrial, commercial and financial North and East. This condition has placed an unfair educational burden upon most Southern states; in addition it has prevented the South's utilizing the genius, ability, and capability which she cradled and fostered. The South has the most abundant supply of two of the three essentials for plant life--rainfall and sunshine; she has an adequacy of the third essential--soil. Every agency but nature has apparently combined to stifle the resources and capabilities of the South; we in the Everglades have shown that the highest standards of living in agriculture can be maintained in the South; we are sure this same condition can be proved in industry; we are satisfied that once equality with the rest of the nation can be obtained, the South will forge rapidly to the lead. Most emphatically the South is not a problem, economic or otherwise to the nation, unless such problem be to find ways and means of continuing her subjection. 75

In the Everglades settlements of Canal Point, Pahokee, Belle Glade, Clewiston, Moore Haven and others, life is much the same as elsewhere in the United States; schools, churches,

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74 United States Sugar Corporation, Sugar and the Everglades, 59.

75 Statement of Clarence Bitting; United States Sugar Corporation, Sugar and the Everglades, 66-67.

service clubs, modern stores, and recreational features are found here similar to those in any small American city. Throughout the area an atmosphere of optimism prevails. No one wants to remember the tragedies of 1926 and 1928, and few can recall the trials and hardships of the pioneers of forty years ago, for as always the second and third generations reap the benefits of the pioneer effort.

The general land policy of the several governors and officials of Florida since the inception of the Internal Improvement Fund in 1855 has ever been to dispose of the public domain of the peninsula in large blocks, such as the Disston, Wade, Bolles, and other sales, and to suggest the subdivision of these big parcels of acreage through private channels. <sup>76</sup> Broward prophesied the settling of millions of people in the Everglades, but it was during his administration and that of Gilchrist, his successor, that a large part of the Everglades passed into corporate ownership.

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76 F. P. Manuel, "Land Development in the Everglades," loc. cit., 12883-12885. Manuel cites the following passage from the document of the Okeechobee Flood Control District's appeal for federal aid in 1929: ". . . only large scale and well-financed corporations could have demonstrated the possibilities of sugar culture, peanut growing, and the various other specialties which have been or will be promoted. These corporations by demonstrating the agricultural and industrial possibilities of a territory which in its natural state would be a watery wilderness, have contributed to the actual and potential wealth of the Nation." Senate Documents, Number 225, 71 Congress, 3 Session, 74. See also E. R. Lloyd, "Agricultural Possibilities of the Florida Everglades," Senate Documents, Number 85, 71 Congress, 2 Session, 14.

As early as 1912, Mead, Metcalf, and Hazen bluntly informed the Everglades Land Sales Company that only by progressive drainage of small areas could the Everglades successfully be made habitable without the serious consequences of excessive costs, too rapid development for land utility, and subsidence.<sup>77</sup>

The adaptability of the level lands south of Lake Okeechobee to large-scale operations requiring adequate credit and financing has given rise to a serious conflict of land policy; the small farm plant versus plantation size holdings. A study of the 1912 and 1926 land booms shows that Florida ". . . suffered immeasurable harm at the hands of the ten acres and freedom heresy. . . . The lure of the small acreage of high priced crops has wrecked too many careers."<sup>78</sup> And yet throughout the years from 1924 through 1930 Howard Sharp, editor of the Everglades News, held that the organic soils of Palm Beach County should be settled in five and ten acre tracts. Said he: "There can be 10,000 homes in localities where there isn't a house now-- 50,000 population, and ten million dollars wealth where now the land is assessed at under \$5 an acre."<sup>79</sup> Along with the

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<sup>77</sup> "Ill-advised attempts at too rapid development, while possibly profitable to the few, must result in great loss to the many. . . . real progress, and the greatest good to the State itself, will come from slow, substantial, progressive development which is the most certain, the safest, and ultimately the best for all concerned." Mead, Metcalf, and Hazen, 1912 Report on the Drainage of the Everglades of Florida, 33.

<sup>78</sup> John R. McMahon, "All Over the Map," Country Gentleman, LXXXV (September 11, 1920), 7.

<sup>79</sup> Everglades News, December 19, 1924, July 25, 1930. Sharp attacked the Southern Sugar Company for "driving" the farmers around the lake shore off the custard apple lands and supplanting independent white farmers with Negro field hands. Ibid., July 25, 1930.

obvious trend toward large-sized and mechanized plantings there has been a contrasting movement toward subsistence homesteads. <sup>80</sup> The combination of good soil, equable climate, and high pressure salesmanship by real estate agents makes it easy to "produce a fairly convincing picture of a life of ease in a land of perpetual sunshine, with Dame <sup>81</sup> Nature doing all the work."

Take a fellow who's fed up on cities, who isn't afraid of work, and who has a good cash reserve after his place is bought, developed and paid for. . . That fellow will fall in love with this place overnight. But he must be prepared to take the good breaks along with the bad ones, "cause hell son there just ain't no paradise." <sup>82</sup>

The work of T. E. Will, covering the years from 1910 through 1937, is perhaps the best illustration of the almost futile efforts of the individual of moderate means to bring order out of chaos in the confused Everglades reclamation

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<sup>80</sup> Fort Lauderdale Daily News, March 6, 1935. William G. Ward of Miami is reputed to have started the idea which gave source to the news that "the government plans to set up subsistence homesteads for 100,000 families in Florida. The proposal that the Federal Government resume the unreclaimed Everglades land still held by Florida and put over reclamation, following this with settlement and development is easily one of the greatest things ever brought before South Florida." Another advantage of such a movement would be the addition of voters in sufficient strength to help South Florida overcome its political subjugation by north and west Florida, thus equalizing the "conquered province" vote. Ibid.

<sup>81</sup> Steve Trumbull, "There Ain't No Paradise," Country Gentleman, CVI (December, 1936), 7. "Be Independent and free from worry on a 10 acre Florida truck farm. Good land as low as \$15 per acre. \$5 down. Adv." Ibid.

<sup>82</sup> Ibid., 66. In 1942 the Farm Security Administration approved a loan of \$1,345,314 to establish 150 low income farm families on 6,200 acres, 5,000 of which was saw grass muck, to develop production of truck crops, raw milk, and fattening of beef cattle. 1942 Migration Hearings, 12854-12855.



project. There can be no doubt that this pioneer was sincere, though visionary, when he wrote:

This country has a tremendous future once the cloud lifts. I figured it all out in 1909, with maps before me. I saw the Panama Canal-- Theodore Roosevelt was fighting for it then-- the Gulf, and our position in the Western World. . . . Since then Miami has become a big aeroplane headquarters; and South America is just at our door. I watch with deep interest such things as the coming Buenos Aires round-up; initiated I think by President Roosevelt. Out of it may come a sure-enough combination for the Western World. Then, when poor Europe and Asia have had their last round, with modern killing machinery, maybe they can pattern after us. I'm all the time after a better world, a decent place in which to raise children.

. . . . .  
As to my holding on. Well, a man usually has to die to get understood, I'm a sentimental sort of creature; and my parents always taught me to be square with people and I've tried to be just that. With everything down here SHOT, I've never felt that I would be justified in running off and leaving everybody in the lurch. This has cost me a professional career, and every cent of such money I had; and has meant 27 years of hard work and fierce fighting; but IF ONLY we can get out, and I can say with a clear conscience, "The Glades area is at least ready to occupy and use," I'll feel amply repaid. 83

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83 T. E. Will to W. L. Alexander, September 24, 1936, Will Collection. Correspondence in the Will Collection mutely testifies to this pioneer's long fight for the reclamation and settlement of Okeelanta and other sections in the saw grass muck back from the short of Lake Okeechobee. In 1931 he wrote: "Old buyers have been hit, hard, but few as hard as I. Most waited for 'George to do it,' and I was George." Fort Lauderdale Daily News, April 1, 1931. Will's work earned him the title of "John, the Baptist, of the Everglades." Fort Lauderdale Call, June 12, 1926.

Contrasting with this "testament of faith," written just under six months before his death in 1936, is the article Will wrote for the Review of Reviews in 1912. That article was an enthusiastic condensation of his work with Senator D. U. Fletcher on Senate Document Number 89. At that time Will was non-committal on Broward's plans to drain the Everglades by the "cut and <sup>84</sup>dry method."

John R. McMahon was serious in his survey of agricultural production in the Everglades in 1920 when he observed that "the farm problem" of the Everglades revolved around the answer to the question of whether the soil would float away in times of heavy precipitation or burn up and be blown away by the winds <sup>85</sup> in the very dry season.

There will be revelation for the North in the Everglades' conflagration, for millions regard these as but an immense swamp and how could a swamp burn? Facetiously they may remark that the Everglades need irrigation rather than drainage. <sup>86</sup>

Usually low rainfall and consequent low water levels in Lake Okeechobee and the Everglades in 1931 and 1932 found many grass and muck fires throughout the whole region. The big lake fell below twelve feet and many fires which had begun in the spring of 1931 continued to burn into the summer of

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84 F. E. Will, "Everglades of Florida," loc. cit., 451-456.

85 J. R. McMahon, "Poco Moonshine," loc. cit., 4.

86 John K. Small, "The Everglades," Scientific Monthly, XXVIII (January, 1929), 87.

1932.<sup>87</sup> The legislature set up a fair system of fire control in 1925 by creating an Everglades Board, but in 1929 it emasculated the previous act by repealing certain sections and abolishing the control board.<sup>88</sup> By a concurrent resolution the 1931 legislature appropriated an emergency relief fund of \$50,000, but many of the fires were out of control and it took the rains of the summer and fall of 1932 to extinguish them.

In February, 1932, G. P. Allison of South Bay wrote T. E. Will, who was then in the national capital, that great fires were raging over nearly all the Everglades which at night could be seen for fifty miles; the fires produced such dense smoke that an automobile headlight was visible for only a few feet in the forenoon hours.<sup>89</sup> In answering Allison's letter Will stated that he had been to see the federal Forest Service and had seen Representative Ruth Bryan Owen, who had appraised Secretary Ray Lyman Wilbur of the Interior Depart-

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<sup>87</sup> University of Florida Agricultural Experiment Station, Annual Report, 1932, 165-166. Pahokee farmers attempted to overcome the drought in January, 1932, by cultivating the bottom of old Pelican Bay and extending their operations far beyond that on the moist lake bottom. On January 15, 1932, the lake level stood at 12.8 feet; by May the level had fallen to 11.8. Everglades News, January 15, May 6, 1932. Howard Sharp told his subscribers that the 1932 fires were not all the responsibility of the state or the Drainage Board, and that both individuals and communities could do more toward fire protection. Ibid., February 12, 1932.

<sup>88</sup> Chapters 13634, 14508, Laws of Florida, 1929.

<sup>89</sup> G. P. Allison to T. E. Will, February 23, 1932, Will Collection.

ment of the situation.

Secretary Wilbur had told Mrs. Owen there was no hope. The government deals with FEDERAL affairs; and our's is a STATE affair.

In Senator Fletcher's office I talked with his Secretary, Mr. Hill. He's willing and anxious to help; but could not see how to jump above the hurdles. . . .

Remember, I'm on the job all the time, seeking our Glades salvation. 90

In the annual report of the Everglades Experiment Station at Belle Glade, submitted in June, 1932, Dr. R. V. Allison, the Director, called attention to the problems arising from the low water levels then prevalent. He pointed out that the problem in the Everglades theretofore had been one of the disposition of excess waters, but that with the abnormally low rainfall there had arisen the problems of irrigation and fire control.<sup>91</sup> The Director of the Experiment Station suggested that the spill of Lake Okeechobee might be diverted through the long diagonal canals onto the uncultivated 'Glades south of the lake shore to prevent fire, conserve the soil, and ameliorate the winter temperatures. The Director further advocated the adoption of a program of soil conservation in the Everglades that had been lacking heretofore because of the inadequate facilities for handling

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90 F. E. Will to G. P. Allison, February 25, 1932, Will Collection.

91 University of Florida Agricultural Experiment Station, Annual Report, 1932, 165-166.

the water, a solution made possible through federal aid in  
 constructing lake dikes and control canals.<sup>92</sup>

The low waters continued through most of the 1930's and into the 1940's. In 1935 the state legislature recreated an Everglades Fire Control District and appropriated \$50,000 to fight the muck fires.<sup>93</sup> The 1939 legislature reaffirmed the 1935 law and appropriated \$75,000 annually to fight Everglades fires, passing the law over the veto of Governor Fred P. Cone.<sup>94</sup> In addition the 1939 legislature memorialized President Franklin Delano Roosevelt and Congress

. . . to cause an Everglades Drainage District survey for supplying information as to the best ways, methods, or plans to be adopted for permanent protection of the lands in the Everglades Drainage District. . . .<sup>95</sup>

Fires blazed in the Everglades in 1939, 1941, and 1943, while freezes occurred in 1935 and 1939; nonetheless heavy rains caused much damage in 1940.<sup>96</sup> The dry years of the

<sup>92</sup> University of Florida Agricultural Experiment Station, Annual Report, 1932, 165-166.. J. K. Small wrote that careless hunters and motorists received most of the blame for starting Everglades fires, but that he was in disagreement. "No! the crazy drainage schemes are responsible. Nature's building of ages has been utterly destroyed in a decade." J. K. Small, "The Everglades," loc. cit., 87.

<sup>93</sup> Chapter 16994, Laws of Florida, 1935; Everglades News, June 14, 28, 1935.

<sup>94</sup> Chapter 19274, Law of Florida, 1939.

<sup>95</sup> House Memorial Number 7, Ibid., 1674-1675.

<sup>96</sup> University of Florida Agricultural Experiment Station, Annual Reports, 1935-1941; United States Sugar Corporation, The United States Sugar Corporation and the Development of the Sugar Industry in the Florida Everglades, 6; Orlando Morning Sentinel, September 13, 1940, May 30, 1941.

1930's proved a source of concern to the cities of the lower east coast whose water systems were endangered by salt water infiltration caused in part by the lowering of the Everglades water table.

Scientists, naturalists, and engineers realized from time to time that uncontrolled or haphazard reclamation in the Kissimmee-Okeechobee watershed would finally result in unpredictable confusion in the balance of life established by nature. Arthur E. Morgan and others had pointed this out in the congressional hearings in Washington in 1912. Mead, Metcalf, and Hazen had been most emphatic in their report published in the fall of the same year. The Isham Randolph Commission had stressed the desirability of progressive drainage in their report to the Board of Everglades Drainage Commissioners in 1913, yet Randolph and his associates had submitted plans for the drainage of the entire area south of Lake Okeechobee. Again in 1927 the Everglades Engineering Board of Review had made positive suggestions that the organic soils be reclaimed progressively by unit areas. The question arises, then, why wasn't the advice of these authorities followed? An excellent answer to this query may be found in the words of W. Turner Wallis, engineer and general manager of the

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97 Orlando Morning Sentinel, March 9, 1941. For an excellent survey of fire fighting in the area, see Guy J. Bender, "The Everglades Fire Control District," The Soil Science Society of Florida, Proceedings, V-A (1943), 149-151.

Everglades Drainage District. In May, 1942, he wrote:

The extent of partial reclamation of lands throughout the entire area, far beyond any present or probable future need for these lands as homesteads or food producers, is beyond question the biggest single factor involved in a solution of most of the existing problems.

Senate Document No. 89, 62nd Congress, 1st Session, relating to the Everglades, furnishes fifteen thousand reasons for this condition by the single statement that sales of Everglades lands by the Trustees of the Internal Improvement Fund and other owners had increased the number of individual owners of lands in the Everglades from about a dozen owners in 1909 to upward of 15,000 on July 1, 1911.

Doubtless each of the 15,000 owners, all of whom paid far more for their land in advance of any reclamation than most of it is worth today, believed in principle that the only sound policy was one of progressive drainage, provided, however, his land was to be among the first to be drained. 98

The policy of selling land on the alternate section plan, begun almost with the first work under Broward, has been a bar of no mean weight to any plan of progressive

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98 W. Turner Wallis, "The Interrelationship of Physical and Economic Factors in Everglades Reclamation," The Soil Science Society of Florida, Proceedings, IV-A (1942), 114. A somewhat extreme but nonetheless relevant point of view was expressed by one of the buyers referred to by Wallis. "I stopped paying taxes because I was finally convinced I was being robbed," wrote G. O. Banky, of Washington, D. C., who had paid the assessments for years though not the least attempt was made to drain his land. Banky stated that he had paid \$70 an acre for his land, yet the Drainage Commissioners were offering 20,000 acres in the same district for \$1-\$5 and acre. "I felt and still feel that I was dealing with dishonest people and that the only safe thing to do was to break off all connections with them." G. O. Banky to T. E. Will, February 4, 1931, Will Collection.

drainage.

The best promise for a solution of this problem would be the adoption by the State of a policy under which the owners of lands located in a deferred area could trade for State lands within areas to be next in line for reclamation and successful use.<sup>99</sup>

The completion of the flood control works in the Calcoosahatchee-Ckeechobee drainage area and the consequent removal of the threat of serious flooding has solved that trouble so prevalent in the decade from 1920 to 1930. From 1930 to 1945 importance has been attached to soil subsidence and destruction by combustion in the muck soils of the Everglades. In 1932 Howard Sharp took up the cause of internal water control and bitterly denounced various State and drainage district officials whom he charged with seeking to promote problems rather than solve them in order that they might continue to draw large salaries.<sup>100</sup>

In an editorial, entitled "Record of Futility," Sharp recalled that R. V. Allison had pointed out as early as 1928, in an address before the Florida State Horticultural Society, that over drainage was a greater menace than under drainage, and that there would be no muck fires if water were stored on

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<sup>99</sup> W. T. Wallis, "The Interrelationship of Physical and Economic Factors in Everglades Reclamation," loc. cit., 115.

<sup>100</sup> Everglades News, July 22, 1932. Sharp noted that W. I. Evans drew \$12,000 yearly as counsel for the Everglades Drainage and Ckeechobee Flood Control Districts, and that A. W. Young drew \$8,500 yearly as general manager of the bankrupt drainage district; and he declared that George B. Hills and F. C. Elliot, engineers, were more interested in their salaries ~~rather~~ than in conservation. Ibid., September 30, 1932.



the undrained areas of the Everglades rather than drained  
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 off to the seas. A Miamian had predicted in 1927 that

Ultimately a large area of the Everglades  
 will be converted into impounding reservoirs to  
 conserve the water during the dry season, and  
 especially during years of minimum rainfall. 102

In 1936 Representative Mark Wilcox of Miami, with the  
 assistance of R. V. Allison of Belle Glade, began a campaign  
 to interest the United States Department of Agriculture in  
 the problem of conservation in the Everglades. 103 By 1940  
 sufficient ground work had been laid, including an act of  
 Congress authorizing the expenditure of federal funds, for  
 the United States Soil Conservation Service to make relatively  
 complete surveys of the Everglades. 104 The entrance of the  
 Soil Conservation Service into the picture has brought other  
 agencies into action, and the spadework of the second genera-  
 tion of Everglades pioneers has begun to bear fruit. C. Kay

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101 Everglades News, September 30, 1932.

102 A. W. Munn, "Drainage of the Everglades," The Miamian, VIII (June, 1927), 31: "According to Trele in his work on agricultural economics, reclamation projects are instigated by promoters and politicians regardless of the interest of the farmers;" Robert T. Morris, letters to the editor, New York Times, October 14, 1928.

103 T. E. Will to W. L. Alexander, September 24, 1936, Will Collection. Will pointed also to the "wonderful things being done on the land of the" sugar company "where sufficient funds and a good engineer were proving things" the state never tried to do.

104 C. Kay Davis, "The Plan and Progress of Soil and Water Conservation Studies in the Everglades," The Soil Science Society of Florida, Proceedings, IV-A (1942), 86-89; C. Kay Davis, "Summary of Three Years of Conservation Work in the Everglades and Plans For the Future," The Soil Science Society of Florida, Proceedings, V-A (1943), 116-117; E.D.D. "Minutes," VII, 205.

Davis, engineer and project manager of the Conservation Service, has devoted his efforts, according to one writer, to "undoing the seventy million dollars worth of damage done the Glades in the last thirty or forty years."<sup>105</sup>

We know now, of course, that those expansive plans of the early days, by whomever developed or promoted at the time, were then and are now entirely impractical from the economic standpoint due to the great variability of the soil and the absolute unfitness of great sections of the Everglades for agricultural development, to say nothing of the paramount importance of developing it by economic units, as needed. These physical relationships are only now in process of systematic study by the modern survey that is under way. . . a study that is certain to have a profound influence on the plans for the areas that are developed in the future--that is, if proper use is made of this information. <sup>106</sup>

The greatest problem facing the Everglades is that of subsidence. "About one-half inch loss in elevation each year can be expected under the most favorable water table compatible with crop yields."<sup>107</sup> The town of Belle Glade has settled six feet in its elevation in the last twenty-five years, and it is a common practice for residents on the muck soils to add a new doorstep to their houses every two to three years. <sup>108</sup>

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<sup>105</sup> Robert McCormick, "Lavis<sup>h</sup> Land," Collier's, CX (August 8, 1942), 66.

<sup>106</sup> R. V. Allison, Editorial Note, The Soil Science Society of Florida, Proceedings, IV-A (1942), 157.

<sup>107</sup> C. K. Davis, "The Plan and Progress of Soil and Water Conservation Studies in the Everglades," loc. cit., 86.

<sup>108</sup> Robert McCormick, "Lavish Land," loc. cit., 66. "The Everglades, if not used wisely, will be a memory in 75 years at the rate of their present subsidence."

Since only 500,000 of the 4,500,000 acres of Everglades land are overlain with muck of five foot depth or over, it has been urged that at least 3,000,000 acres in the drainage district be set aside for water and wildlife reservations, and that the remainder of the acreage be used for cattle grazing or left in its natural state.<sup>109</sup>

Public symposiums of the Soil Science Society of Florida held in West Palm Beach on April 21, 1942, and in Belle Glade on March 17, 1943, at which a number of papers were read on Everglades problems resulted in much discussion of the Everglades throughout the State. This discussion focused attention on the glaring need for the development of future policies and plans for the reclamation and conservation of the Florida 'Glades.<sup>110</sup>

In 1939 the Florida State Planning Board, with the help and cooperation of the National Resources Planning Board and local Florida interests of both public and private nature,

. . . brought together various groups of technical men to study and analyze this area of Florida and to offer certain recommendations, based on conclusions derived from facts, for the further developments and adjustments of the

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109 Robert McCormick, "Lavish Land," loc. cit., 65-66.  
 110 Everglades Drainage District, Report by Advisory Committee on the Present Drainage System in Relation to Water Control Requirements of Everglades Drainage District, vii.  
 Hereinafter cited as 1944 Water Control Report of E. D. D.

land and water resources. The combined effort has been designated the Southeastern Florida Joint Resources Investigation. 111

Actual field work in connection with the investigation began in October, 1939, with funds coming from local and state agencies. Federal interests matched these funds in 1939 and 1940 to the extent of \$79,000, and for the year closing June 30, 1941, the federal agencies made \$120,000 available on condition that it be matched by Florida appropriations. 112

At the symposium held in Belle Glade in mid-March of 1943 one of the more outstanding statements made was that concerning the inevitable loss of the organic soils. B. S. Clayton, of the United States Department of Agriculture and resident drainage engineer in the Everglades, declared that

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111 Stanley H. Wright, Conserving Land and Water Resources: Brief Description of the Purpose and Organization of the Southeastern Florida Joint Resources Investigation, 3. Hereinafter cited as Conserving Land and Water Resources. Federal agencies participating in the investigation included the Soil Conservation Service, Bureaus of Agricultural Economics Weather, Entomology, Plant Industry, and Agricultural Chemistry of the Department of Agriculture; Geological Survey, Ground Water Division, Surface Water Division, Biological Survey, National Park Service, and Indian Office of the Department of Interior; and the District Engineer of the War Department. State agencies participating included the Department of Agriculture, Agricultural Experiment Station, Geological Survey, and Internal Improvement Fund. Local agencies participating included the Everglades Drainage District, Everglades Fire Control Commission, Dade County, and the cities of Miami, Coral Gables, and Miami Beach. Ibid., 4-10.

112 Ibid., 9.

All peat land will continue to subside as long as drained and the time will arrive when either the peat is consumed or cultivation shall have to be discontinued on account of the shallow depth of the soil. However, we still have a good depth of soil in most of the agricultural area of the Northern Everglades and with proper attention to the water table the productive life of the land can be substantially extended. 113

As a result of a resolution passed at the Belle Glade meeting, requesting the Everglades Drainage District to assume the responsibility for the development of an over-all policy and plan for the conservation and development of the Everglades, and to serve as the central authority to coordinate the activities of all government and private agencies in the execution of such a plan, a public meeting was held in the offices of the Drainage Board on March 26, 114 1943. At that meeting arrangements were made for a joint meeting of the Drainage Commissioners, the Trustees of the Internal Improvement Fund, various other state officials, and

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113 B. S. Clayton and J. R. Neller, "Nature and Extent of the Surface Subsidence of the Organic Soils of the Everglades," The Soil Science Society of Florida, Proceedings, V-A (1943), 120. "I would suggest, and I am making it in the order of a motion, that we have a joint meeting of the Everglades Drainage Board, the Okeechobee Flood Control Board, the Fire Control Board, the National Park Service and other organizations and individuals interested in the work with the Internal Improvement Board at the earliest possible date and also have at this meeting these scientists, both State and Federal. . . . The soil is sinking every year, more and more, and each year more and more of it is burning up. We've got an asset here in the Glades that we must pay attention to. It is too valuable." Nathan Mayo, Commissioner of Agriculture of Florida, ibid., 131.

114 1944 Report on Water Control of E. D. D., vii.

representatives of other agencies engaged or interested in the reclamation of lands in South Florida. The joint meeting was held in April, 1943, at Tallahassee and as a consequence, by general agreement, the Board of Commissioners of the Everglades Drainage District was selected to serve as the authority in the preparation and execution of a comprehensive plan "to prevent or retard the wastage of the resources of the area. . ."

The Drainage Board then set up an advisory committee which presented a report on the whole subject and set down basic facts and recommendations for the district. On May 1, 1944, the Board submitted the report of the advisory committee to the landowners of the district for study, consideration, and discussion, ". . . in order that the Board might have the counsel and advice gained through the experience of the thousands of tax payers." In its letter transmitting the 1944 report to the landowners the Drainage Board stated that it had planned to take action on the recommendations of the report when "reactions and wishes" of the taxpayers had been ascertained.

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115 1944 Report on Water Control of E. D. D., viii.

116 Ibid., v. This report is a thorough study of the facts gained from forty years of drainage and investigation in the Everglades and draws particularly on the results of the scientific field and laboratory research of federal, state, and local agencies which have been collecting physical and economic evidence within the last ten years.

117 Ibid., vi.

In view of the inadequacy of the present drainage system and the urgent need to prevent excessive waste of the resources of the Everglades, the adoption of a practical plan of improvement of the drainage system is immediately necessary. First consideration should be given those improvements that promote conservation of resources and increase the efficiency of the present system. 118

### 3. The Everglades National Park

John K. Small, Charles T. Simpson, Ernest F. Coe, D. Graham Copeland, Mark Wilcox, and many other native and adopted sons of Florida had long advocated a refuge and retreat for the sub-marginal lands of the southern Everglades and Gulf coasts. 119 In 1929 Ernest F. Coe, David G. Fairchild, and others aided the park cause in the organization of the Tropical Everglades Park Association. In the same year Senator Duncan U. Fletcher introduced the first bill for this proposed national park in congress. 120

. . . the Everglades National Park will preserve for posterity the only true tropical region in the continental United States. 121

Obviously, there are no rocks standing on end, no canyons, glaciers or snow capped ranges as found in the west; but here in the proposed part area are found forests of tropical plants and the largest mangrove trees in the world . . . tremendous expenses of level marsh and prairie . . . broad marine scenes and unlimited networks of intimate lagoons . . . nesting and feeding grounds for

118 1944 Report on Water Control of E. D. D., 40.

119 John K. Small, From Eden to Sahara, 7; et passim; "The Everglades," loc. cit., 87; C. T. Simpson, Florida Wild Life, 89, 191-193; W. S. Blatchley, In Days Agone, 270.

120 J. E. Jennings, Jr., Our American Tropics, 65;

F. P. Stockbridge and F. H. Perry, So This is Florida, 142-147.

121 J. E. Jennings, Jr., Our American Tropics, 66.

millions of birds . . . and above all a weird enchantment that only an unspoiled tropical wilderness possesses.

These are not to be found in any other national park. They are but a few of the natural resources of the area which qualify it for national park status. 122

The establishment of Royal Palm State Park around Paradise Key, southwest of Miami near the eastern edge of the Everglades, by the legislature of Florida at the request of the Florida Federation of Women's Clubs, was the first step toward the future national park in the southern end of Florida. Legislative action, beginning in 1929 by the state legislature and continuing at practically every session since that date, has been directed toward the consumation of the projected park.<sup>123</sup> Opposition to the park in the form of organized groups of amateur sportsmen has delayed the efforts of public and private interests to secure roughly 1,300,000 acres of land for the planned park area. In addition, the bringing in of oil wells for commercial production in south Florida has further delayed the project approved by Congress in 1934.<sup>124</sup>

122 Miami Herald, April 8, 1945.

123 Chapter 13887, Laws of Florida 1929; Chapter 14745, 1931; Chapter 16995, 1935; Chapter 16996, 1935; Chapter 17903, 1937; and Chapter 19319, 1939. Laws of Florida, 1929, 1931, 1935, 1937, 1939.

124 Florida Research Bureau, Florida and Its Money, 39-40, 106-107. Orlando Morning Sentinel, April 7, 1941; Orlando Reporter-Star, April 10, 1941. In 1941 the national park service stated that it was unable to act further on account of the delay of the state of Florida to tender acreage in fee simple.



The discovery of oil and gas in a well 11,626 feet deep, near Sunniland in Collier County in 1943 had much to do with the reluctance of state and private parties to deliver up lands for a public recreation area and game reservation. <sup>125</sup> But

More progress has been made in the past two years toward final establishment of the park than was made in the preceding eight or ten years. Lands in the area have been released from the bonded indebtedness of the Everglades Drainage District, legislation has been enacted to facilitate the acquisition of lands by the State and the conveyance of a park area to the Federal Government; the problem of oil and gas exploration has been brought to a reasonable conclusion, and the program for the area has reached a point where the important phases of land acquisition are now in progress. <sup>126</sup>

Pending the final acquisition of the State lands for a national park, an agreement has been worked out whereby parts of the area may be conveyed to the United States for the purpose of protecting the scenic beauty, wildlife, and other

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<sup>125</sup> J. H. Davis, Jr., The Natural Features of Southern Florida, 301. For the pros and cons of possible damages and dangers of oil wells to the Everglades wilderness see Kenneth D. Morrison, "Oil in the Everglades," Natural History, LIII (June; 1944), 282-283 and "Letters," ibid., LIII (September, 1944), 292, 294.

<sup>126</sup> C. Roy Vinten, "The National Park Service," The Soil Science Society of Florida, Proceedings, V-A (1943), 153; see also John H. Baker, "Wildlife Preservation in the Glades," ibid., 11-15.

natural features.

The state already owns about two-thirds of the [area] . . . which the government has determined as the minimum area on which it will establish the park. Florida has until 1954 . . . to acquire the remaining acreage, all privately owned, and transfer it to the federal government for park purposes. 128

It is believed that the people of Florida, in general, and the legislature, in particular, will make a concerted drive to add this unique tropical area to the national park system. Florida has been ever mindful of its profit in providing attractions for the tourist trade. An Everglades National Park would be an asset whose attractiveness, to both native and traveler, would improve with the passage of years.

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127 House of Representatives Documents, Report Number 1842, 78 Congress, 2 Session, 1-2. See also Executive Order Number 6883, F. D. Roosevelt, October 22, 1934.  
128 Miami Herald, April 26, 1946.

### Conclusion

The creation of an Internal Improvement Fund by the State of Florida in 1835 marked the beginning of the reclamation of the Everglades. The early efforts of the Board of Trustees of that Fund to encourage reclamation through grants of land to railroads, land companies, and other alleged developers involved the area in a confusion of land ownership and land interests which was not conducive to suitable drainage and land use. Out of this situation came the establishment of a Board of Drainage Commissioners and direct attempts to construct facilities with funds from the sale of lands. The failure of the Drainage Board to achieve any real progress was followed by the creation of the Everglades Drainage District with the authority to raise funds for reclamation by levying a drainage tax on the overflowed lands.

The history of the early operations in the Everglades clearly shows distinct phases with regard to reclamation and public reaction in such questions as the feasibility of drainage, the worth of the lands for agricultural use, and the sufficiency and permanence of those early operations. To answer these questions the several boards of Trustee-Commissioners hired several groups of engineers to examine the problems of reclamation and to report on the practicability and the feasibility, and to recommend continuance of the project.

All of the engineering examiners sponsored by officials

of the State of Florida recommended the reclamation of the Everglades as physically practicable. Little attempt was made, however, by these examiners to report on the vital need for intelligent water management as an absolute necessity to conserve the organic soils, on the importance of progressive unit development, or on comprehensive plans which would have coordinated the physical needs of reclaimed portions with those of the unreclaimed portions.

The persistence of drainage operations on the part of the State since 1900, together with the activities of the sub-drainage districts and the control of Lake Okeechobee through federal participation has resulted in the present agricultural use and commercial development of the land in the Everglades. As has been seen, however, the absence of definite plans and central authority to control water management is resulting in a serious state of affairs. Contemporary agricultural and economic enterprises are exacting a terrific toll at the expense of the natural resources of the Everglades. Until these conditions are recognized and works undertaken to conserve these resources these irretrievable losses will continue.

The alteration of the physical characteristics of a region almost invariably results in the creation of new problems relating to the utilization or conservation of that area. The drainage of peat and muck lands has almost always resulted in too low a water table and consequent

over-drainage which, in turn, causes excessive soil oxidation and subsidence. The over-drainage which has occurred in the Everglades of Florida is similar to that which has taken place on such reclamation projects in other organic soil areas. Records of organic soil reclamation in other sections of the United States and in other countries of the world show that deposits of these soils as deep as those found in the Everglades have entirely disappeared under agricultural development.

The permanence of the soils and the life of the agricultural and commercial enterprises in the Everglades are challenged, the investment in improvements and drainage facilities is threatened, and the unreclaimed areas and east coast metropolitan water supplies are all jeopardized by the lack of adequate water control. The tremendous value of the Everglades under proper management and water control makes the present system of waste a concern of the entire nation.

The problems of overproduction and marketing of vegetable crops are far from solved. Also unsolved is the problem of suitable agriculture or industry that may some day use the remainder of the area that can be made available for settlement. The problem of soil conservation is of great importance from the historical standpoint since, if better care is not taken of these soils, they can not endure beyond a few decades. Further than this, if better thought

is not given to the present and future care of those sections that are still undeveloped, those soils certainly will not be available for development at such time as they are needed.

In all of this important question of soil and water conservation and the determining part it is to play in the future of the Everglades, there is one asset available in this section that is also found in other pioneer agricultural areas. This asset is the great admiration and respect that the Everglades farmer has for the land he is working. These feelings spring largely from the prolific fecundity of the black soil. This conscious love of the land, more than anything else, will bind owners and tenants alike into a rigorous observance of rules, once a technical leadership has been developed that can show them what they must do if they would protect this fertile earth against complete destruction.

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