The Florida Surveyor

October 2023
Volume XXXI, Issue 9

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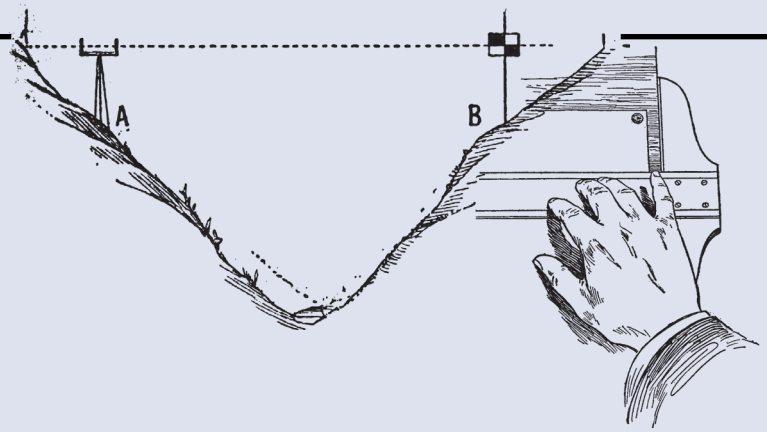

The Florida Surveyor is the official publication of the Florida Surveying and Mapping Society, also known as FSMS. It is published monthly for the purpose of communicating with the professional surveying community and related professions who are members of FSMS. Our award winning publication informs members eleven months out of the year about national, state, and district events and accomplishments, as well as articles relevant to the surveying profession. In addition, continuing educational courses are also available.

PRESIDENT'S Message

September 29th, 2023

When you complete a survey ask yourself:

Can I back up what I did and why I did it? You may understand it, but can you present your findings in a way that the court and a lay person can understand it?

Did you complete your internal surveyor's report at the end of the survey while the reasoning is still fresh in your mind? Not the day you get the notice that it is going to court. *Oh, you do not do an internal surveyor's report on each job? Why not?*

Did I meet the survey requirements of the Board of Surveyors and Mappers at the time of the survey? Keep a copy of the rules at the time of the survey. Keep a copy of the backup. You never know when your survey will be brought into question.

President
Howard Ehmke
(561) 360-8883
Howard@GCYinc.com

On the more difficult surveys set up a meeting with the party chief and at least two or three surveyors in your office and go over the issues of the survey. Everyone needs to be free to speak what they think. Do not block them out if they disagree with your conclusions. Open your mind to what they are saying, and if it makes more sense than your analysis, incorporate their input into the survey.

Thoughts on the rules:

Think of 5J-17 as a contract with your client: in this case the Board. As you move through the rules you will see the constant theme of "*Truth in Labeling*", on the face of the survey "tell what you did." This was a big part of the rewrite from Minimum Technical Standards to Standards of Practice.

PRESIDENT'S Message

5J-17.015 Statement Regarding Lack of Insurance. In addition to the office sign required by section 472.015, F.S., if neither the business entity nor the individual licensee has professional liability insurance, a written notification shall be provided directly to the client prior to commencement of any work, in the form of a written statement that clearly and conspicuously states to the client that neither the business entity nor the individual licensee has professional liability insurance. The notice shall be retained for a period of six years from the date of creation pursuant to paragraph 5J-17.053(5)(a), F.A.C.

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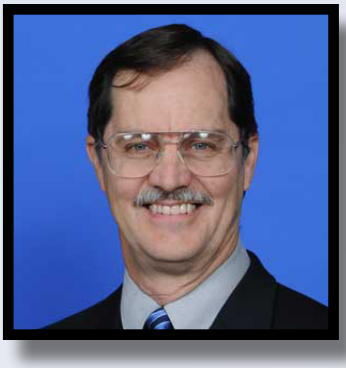

President-Elect

Richard Pryce
(954) 739-6400
rdpryce@gmail.com

Vice President

Allen Nobles
(561) 687-2220
allen@burritobrothers.biz

Secretary

Sam Hall
(352) 408-6033
surveysam17@outlook.com

Treasurer

Bon Dewitt
(352) 392-6010
bon@ufl.edu

Immediate Past President

Lou Campanile, Jr.
(954) 980-8888
lou@campanile.net

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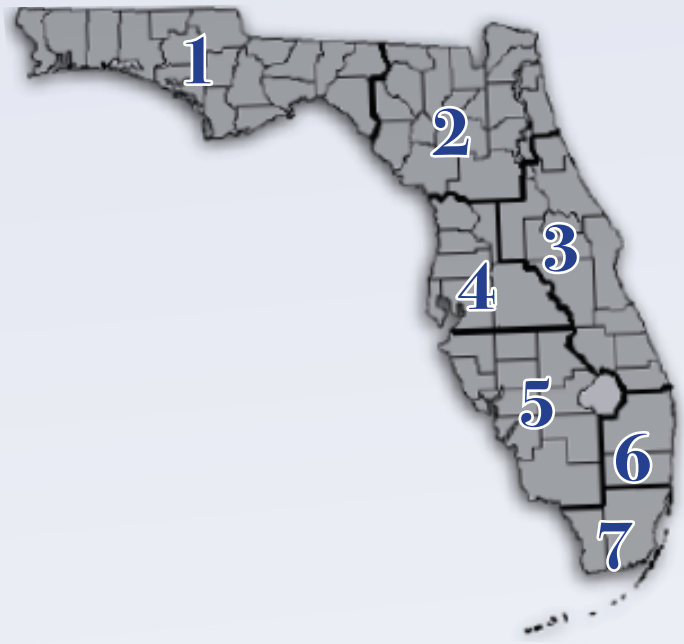

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Bay, Calhoun, Escambia, Franklin, Gadsden, Gulf, Holmes, Jackson, Jefferson, Leon, Liberty, Madison, Okaloosa, Santa Rosa, Taylor, Wakulla, Walton, Washington

Eric Stuart
(850) 685-1149
eric.stuart@sam.biz

Chad Thurner
(850) 200-2441
chad.thurner@sam.biz

District 2 - Northeast

Alachua, Baker, Bradford, Clay, Columbia, Dixie, Duval, Gilchrist, Hamilton, Lafayette, Levy, Marion, Nassau, Putnam, Suwannee, St. Johns, Union

Nick Digruttolo
(863) 344-2330
ndigruttolo@pickettusa.com

Pablo Ferrari
(904) 824-3086
pferrari@drmp.com

District 3 - East Central

Brevard, Flagler, Indian River, Lake, Okeechobee, Orange, Osceola, Seminole, Martin, St. Lucie, Volusia

Al Quickel
(407) 567-1566
alq.fsms@gmail.com

Robert Johnson
(772) 562-4191
bobj@carterassoc.com

District 4 - West Central

Citrus, Hernando, Hillsborough, Pasco, Pinellas, Polk, Sumter

Greg Prather
(863) 533-9095
gprather@pickettusa.com

Alex Parnes
(813) 493-3952
alexwolfeparnes@gmail.com

District 5 - Southwest

Charlotte, Collier, DeSoto, Glades, Hardee, Hendry, Highlands, Lee, Manatee, Sarasota

Shane Christy
(941) 840-2809
schristy@georgefyoung.com

Donald Stouten
(239) 281-0410
dstouten@ardurra.com

District 6 - Southeast

Broward, Palm Beach

Mark Sowers
(954) 868-7172
msowers@mgvera.com

Earl Soeder
(407) 601-5816
earl.soeder@duncan-parnell.com

District 7 - South

Miami-Dade, Monroe

Jose Sanfiel
(305) 351-2942
psm5636@gmail.com

Manny Vera, Jr.
(305) 221-6210
mverajr@mgvera.com

NSPS Director

Russell Hyatt
(941) 748-4693
russell@hyattsurvey.com

2023-24 Chapter Presidents

District 1

Panhandle
Bill Butler
wtb@butlersurveying.com

Gulf Coast
Jonathan Gibson
jgibson0102@gmail.com

Chipola
Jesse Snelgrove
jsnelgrove@snelgrovesurveying.com

Northwest FL
Jeremiah Slaymaker
jslay@wginc.com

District 2

FL Crown
Brandon Robbins
brndrbbns@netscape.net

North Central FL
Jeremy D. Hallick
jdhallick@hotmail.com

UF Geomatics
Andrea Slaven
aslaven@ufl.edu

District 3

Central FL
William (Bill) Rowe
browe@southeasternsurveying.com

Indian River
Brion Yancy
brionyancy@gmail.com

Volusia
Jeff Cory (Interim)
jeff@corysurveyor.com

District 4

Ridge
Kenneth Glass
kglass@civilsurv.com

Tampa Bay
John Beland
jbeland1979@gmail.com

District 5

Charlotte Harbor
Derek Miller
millersurveying@comcast.net

Collier-Lee
Steve Shawles II
sshawles@haleyward.com

Manasota
Shane Christy
schristy@georgefyoung.com

District 6

Broward
Benjamin Hoyle
benjamin.hoyle@kci.com

Palm Beach
Lee Powers
lpowers@zemangroup.com

FAU Geomatics
Leah Ballou
leahmballou@gmail.com

District 7

Miami-Dade
Eddie Suarez
marketing@longitudefl.com

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CHAPTER ONE
Draining the Swamp: Development and the Beginning of Flood Control in South Florida, 1845-1947

In the mid-1800s, the Everglades, a region of water and sawgrass between Lake Okeechobee and the southern edge of Florida, percolated in Floridians' minds. What, they asked, was the purpose of this vast wetland? Was it destined to lay unoccupied, or were there measures they could take to make the area conducive to settlement? Unappreciative of the plethora of flora and fauna in the region, most Floridians could see only a wet swamp that had to be drained and seeded to crop before it could reach its full potential. Accordingly, throughout the late 1800s and the first decades of the twentieth century, Floridians, both privately and with state help, examined the possibility of draining the Everglades. Hamilton Disston and Napoleon Bonaparte Broward, for example, pursued drainage relentlessly, and railroads and land speculators marketed the dry land as an agricultural paradise. But problems appeared in the 1920s and 1930s: storms sporadically produced devastating floods, while flora and fauna dwindled because of the lack of water. Such problems required federal action; in 1930, the U.S. Army Corps of Engineers began a flood control project around Lake Okeechobee, and in the 1930s and 1940s, conservationists were able to secure protection for wildlife and vegetation through the creation of Everglades National Park. The state had sponsored drainage programs for much of the twentieth century, but by the mid-1940s, officials realized that federal help was necessary so that water in South Florida could be managed comprehensively.

Because this period of drainage, early flood control, and conservation laid the groundwork for the establishment of the Central and Southern Florida (C&SF) Flood Control Project in 1948 and for the subsequent water supply tensions prevalent throughout the rest of the century, it constitutes a critical era in the history of water management in South Florida. No flood control project or water supply scheme in the second half of the twentieth century began with a *tabula rasa*; instead, the Corps and other agencies had to construct projects in an environment that had already been extensively modified. In the words of historian George E. Buker, the Corps was "faced with correcting past mistakes."[1] By the time the Corps developed the C&SF Project, numerous political entities, including federal interests (the National Park Service and the U.S. Fish and Wildlife Service), state interests (the trustees of the Internal Improvement Fund), and local interests (boards of county commissioners) had already staked out their water terrain. Thus, the Corps would not only have to work within a manipulated and modified ecosystem, but also with existing political interests, each with a different perspective as to how water should be managed.[2]

Thousands of years before Americans had made any attempts to alter the South Florida environment, including the Everglades, native peoples had traversed the area, discovering ways to subsist and flourish within the soggy marshes. By the first years of the common era, three groups had settled in the Everglades area: the Calusa, who resided in a region that began north of the Caloosahatchee River and extended south through the Ten Thousand Islands to Cape Sable;

the Mayaimi, who occupied the shores of Lake Okeechobee; and the Tekesta, who lived on the east coast beaches from Boca Raton south to Biscayne Bay and the keys.[3] By the time of Spanish contact in the early sixteenth century, the most dominant and populous group was the Calusa. This tribe, like the Mayaimi and the Tekesta, had learned how to use the Everglades, its water, and its resources in the most efficient ways. The groups subsisted mainly on food obtained in the freshwater and saltwater of the region, including cocoplum, sea grape, prickly pear, cabbage palm, and saw palmetto, as well as fish and game. They made clothes out of tree moss and palmetto strips, and employed conch shells as tools and drinking cups. They built houses using cabbage palm posts and palmetto, and applied fish oil to discourage mosquitoes and sandflies.[4]

Despite their knowledge of the land, the groups could not escape the problems that resulted from non-Indian settlement. In the early 1500s, Spanish explorers reached Florida, led by Juan Ponce de León in 1513. The first Spaniard to explore the region extensively was Pedro Menendez, who, in the 1560s, conducted investigations to try to find a waterway across the Florida peninsula to facilitate Spanish navigation to the Americas. By 1570, however, Spanish interest in South Florida had waned, mainly because no trans-peninsula waterway had been discovered. Yet non-Indians still influenced the region, and European diseases and slave raids decimated Indian populations. When Great Britain assumed authority over the area from 1763 to 1783, only 80 Calusa families remained, and they left with the Spanish. By the time the United States had gained official control over Florida in 1821, other Indian groups, including the Seminole, an offshoot of the Creek in Georgia, had moved into the Everglades, and Americans spent a great amount of time and energy trying to remove them in the 1830s, 1840s, and 1850s.[5]

The Second Seminole War (1835-1842) and the Third Seminole War (1854-1855), for example, represented concerted campaigns by the United States to extricate the Seminole from the Everglades. Although these battles were characterized by one scholar as "America's first Vietnam," in that it was "a guerilla war of attrition, fought on unfamiliar, unforgiving terrain, against an underestimated, highly motivated enemy who often retreated but never quit," the expeditions provided numerous accounts and maps of the South Florida landscape, including the Ives map discussed below. Despite the colorful accounts of the landscape – or perhaps because of them, as most soldiers depicted the scenery as an "interminable, dreary waste of waters" infested with mosquitoes, snakes, and sawgrass – Floridians expressed little interest in the Everglades until the mid-1800s.[6]

Ken Hughes' rendition of Pedro Menendez, the first Spaniard to explore South Florida extensively. (Source: The Florida Memory Project, State Library and Archives of Florida.)

This situation changed on 3 March 1845, when Congress allowed Florida to enter the United States as the 27th state in the Union. Thereafter, the state's legislature, seeking new areas

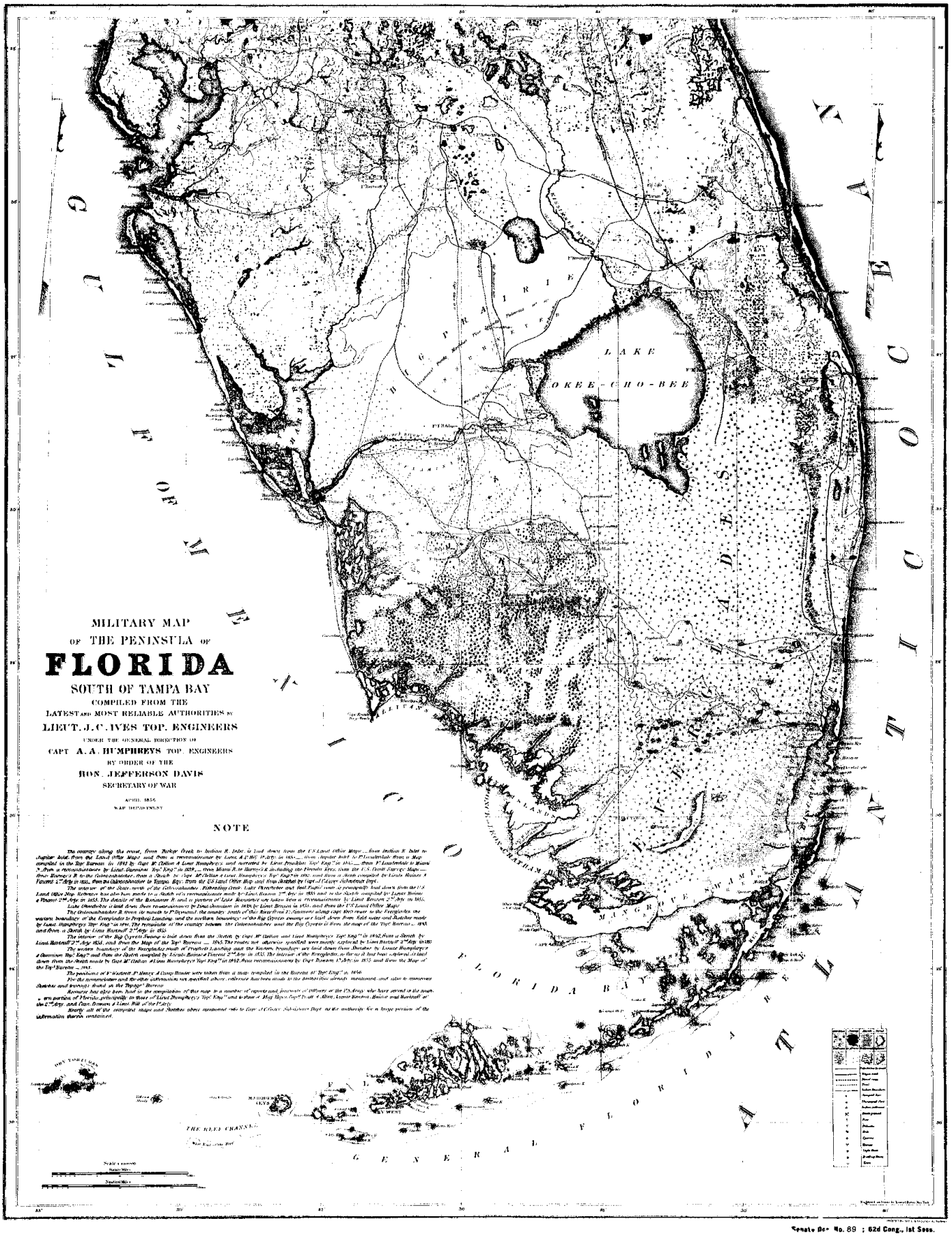
where people could settle, passed resolutions declaring that "there is a vast and extensive region, commonly termed the Everglades, in the southern section of this State, . . . which has hitherto been regarded as wholly valueless in consequence of being covered with water at stated periods of the year." The resolution asked Florida's representative and senators to "earnestly press upon" Congress to appoint "competent engineers to examine and survey the aforesaid region" in regard to the possibilities of drainage.[7] Buckingham Smith, an attorney from St. Augustine, Florida, received this appointment, and he submitted a report to the secretary of the treasury on 1 June 1848. In this document, Smith provided a detailed description of the Everglades landscape:

> The Everglades extend from the southern margin of Lake Okeechobee some 90 miles toward Cape Sable, the southern extremity of the peninsula of Florida, and are in width from 30 to 50 miles. They lie in a vast basin of lime rock. Their waters are entirely fresh, varying from 1 to 6 feet in depth. . . . As the Everglades extend southwardly from Lake Okeechobee they gradually decline and their waters move in the same course. They have their origin in the copious rains which fall in that latitude during the autumn and fall and in the overflow of Lake Okeechobee through swamps between it and the Everglades.[8]

Smith believed that in order to reclaim the Everglades, canals would have to be constructed from Lake Okeechobee to the Caloosahatchee and Loxahatchee rivers, thereby allowing the lake to drain into these rivers, lowering its water level and preventing it from sending water on its normal southward trek. Drains would also have to be placed at strategic locations "by which the waters accumulating from the rains may be conducted to the ocean or gulf." If such actions were not taken, Smith claimed, "the region south of the northern end of Lake Okeechobee will remain valueless for ages to come." But if drainage was implemented, the land could produce cotton, corn, rice, and tobacco, as well as lemons, limes, oranges, bananas, plantains, figs, olives, pineapple, and coconuts.[9] According to historian David McCally, Senator Westcott forwarded this report to the *Commercial Review of the South and West*, which "embraced Smith's conclusions and urged Congress to deed the Everglades to the State of Florida so that reclamation could begin."[10]

Congress listened to the *Commercial Review's* recommendation. In the Swamp Lands Act of 1850, Congress expanded the jurisdiction of an 1849 act granting swamp areas to the state of Louisiana, allowing the federal government to provide swamp and overflowed lands unfit for cultivation to other states as well.[11] Under the authority of this act, the federal government transferred title to more than 20 million acres to the state of Florida. In 1851 and 1855, the Florida legislature passed acts creating an Internal Improvement Fund (IIF), consisting of the land and the money obtained from land sales, and establishing a board of trustees to oversee the fund. This board, composed in part of the governor and his cabinet, essentially had authority over all state land sales and over all reclamation matters.[12]

In 1856, more information about the topographical features of South Florida was made available when Lieutenant J. C. Ives, a topographical engineer serving in the Third Seminole War, conducted a survey of the area and combined his data with other records produced in the 1840s by army officers traversing the region to produce a map of the "comparatively unknown region" south of Tampa Bay. The Department of War wanted the map to inform officers fighting the Seminole, but it became, in the words of Marjory Stoneman Douglas, "the first fine



Senate Doc. No. 89 ; 62d Cong., 1st Sess.

Lieutenant J.C. Ives' military map of South Florida, 1856. (Source: U.S. Army Corps of Engineers, Jacksonville District.)

American map of the country."[13] Ives highlighted not only the Everglades, but other areas of South Florida, including Big Cypress Swamp and Lake Okeechobee, and he noted that the land was basically "a flat expanse, where the prairie of one day may at another be converted into a lake and where the lakes, rivers, swamps and hammocks" fluctuated as much as three feet at a time.[14]

Eager for a chance to promote the settlement of South Florida, the IIF began granting deals to railroad companies in which it would give the corporations land in return for completed rail lines. In this way, the IIF hoped to "open the interior and attract settlers, who would buy land and replenish the fund, which could perhaps be used to finance drainage ditches someday in the future."[15] After many railroads succumbed to financial difficulties in the post-Civil War era, the IIF essentially faced bankruptcy. Its situation worsened when Francis Vose, a New York metals manufacturer who had provided iron to railroad companies in Florida in return for state bonds, refused to accept the state's offer of 20 cents on the dollar for the bonds and sued the IIF instead. From that suit, an injunction was placed against the IIF's, preventing it from distributing any more land for discounted prices until Vose had been paid in full. Desperate for money, the IIF, under the leadership of Governor William D. Bloxham, began looking for new investors interested in obtaining land for reclamation purposes. In 1881, it found a candidate: Hamilton Disston.[16]

Disston was a 34-year-old entrepreneur from Philadelphia whose wealthy father owned a lucrative saw and file manufacturing company. First visiting Florida in 1877 on a fishing trip, Disston had been obsessed with draining the Everglades ever since. In 1881, Disston proposed to drain lands flooded by Kissimmee River and Lake Okeechobee waters by constructing a system of canals and ditches from Lake Okeechobee to the Caloosahatchee River, the St. Lucie River, and the Miami River, and by straightening and deepening the Kissimmee. This would convey water in the flooded Kissimmee basin to Lake Okeechobee, and the excess water would then be flushed out via the Caloosahatchee, St. Lucie, and Miami rivers, thereby lowering Lake Okeechobee's water level and allowing vast acreages of land to be cultivated. In exchange, the IIF would give Disston and his associates "one-half of all the reclaimed land already belonging to the state or later turned over by the federal government," as well as four million more acres for $1 million.[17] In September 1881, Disston's corporation, the Atlantic Gulf Coast Canal and Land Sales Company, began drainage operations.

By deepening and straightening the Kissimmee River, and by constructing canals connecting the various lakes that formed the headwaters of the river, Disston was able to drain portions of the area and sell it to cattle operators as grazing land in the 1880s. Disston's company also deepened the Caloosahatchee River and connected it to Lake Okeechobee through a linchpin canal. In addition, the corporation began a canal south of Lake Okeechobee, hoping to drain water into the Shark River, and started another east of the Kissimmee Valley toward the St. Johns River. To promote the reclaimed land, Disston produced advertising brochures, planned model cities, built hotels, settled families, and established agricultural enterprises such as sugar, rice, and peach cultivation. By the 1890s, however, Disston had overextended his operations, and the Panic of 1893 dealt a devastating blow to his finances. Banks began recalling loans and bonds became due. Faced with an increasingly precarious situation, Disston died on 30 April 1896, either through suicide or from a heart attack. Although his decade-long drainage effort

reclaimed less than 100,000 acres, he left two legacies: first, he demonstrated conclusively the agricultural potential of the region through his experimental farms, and second, his connection of the Caloosahatchee River to Lake Okeechobee was "the first significant step in draining the Everglades."[18]

Meanwhile, the vision of canals and drainage lived on in other minds. John Westcott, for example, formed the Florida Coast Line Canal and Transportation Company in 1881 to build a canal from the mouth of the St. Johns River to Biscayne Bay. The enterprise received a boost in the 1890s when Henry L. Flagler, who became a millionaire with Standard Oil, formed the Florida East Coast Railroad to build a rail line from St. Augustine to Miami Beach. Flagler became interested in the canal project, perhaps because the company agreed to provide the railroad corporation with 270,000 acres of land it had obtained. However, even with Flagler's interest and resources, canal construction proceeded slowly, not reaching completion until 1912, although the construction of his railroad did precipitate South Florida's first settlement boom, leading to the establishment of West Palm Beach, Fort Lauderdale, and Miami.[19]

Hamilton Disston, the first to set up extensive drainage operations in South Florida. (Source: The Florida Memory Project, State Library and Archives of Florida.)

By the close of the nineteenth century, large-scale drainage and agricultural development of the Everglades, although attempted by many different parties, had not reached fruition. Despite the granting and sale of millions of acres of land in southern Florida to railroads and other corporations, successful reclamation lay in the future. An 1891 report written by H. W. Wiley of the U.S. Department of Agriculture observed that, although "the possibilities of bringing into successful cultivation the swamp lands of Florida have occupied the minds of capitalists for several years," large tracts remained inundated. Even those that had been drained were "still in the wild state, . . . no attempts having been made to fit them for cultivation."[20] Conditions were no better in 1903, leading Governor William S. Jennings to compare Florida's drainage endeavors to "the man who undertook to lift himself," opining that the state was "almost as helpless."[21]

In the early 1900s, drainage schemes gained momentum, largely because of changing ideas about the human use of nature. The late 1800s and early 1900s saw the development of a conservation movement in the United States, characterized, in the words of historian Samuel P. Hays, by "rational planning to promote efficient development and use of all natural resources."[22] This movement expressed itself in several ways, including the formation of the U.S. Reclamation Service in 1902, and in the creation of national parks, which were conceived as areas to preserve pristine wilderness for the enjoyment of future generations. Other conservationists held that

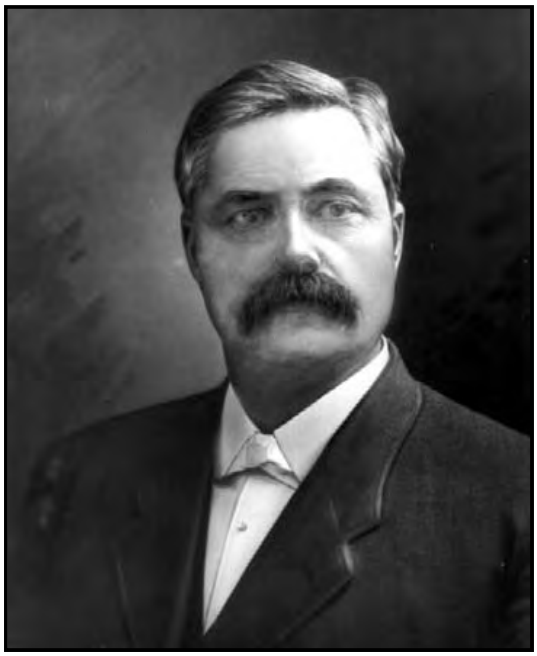
Early settlers to South Florida. (Source: South Florida Water Management District.)

making wasteland productive was an excellent way to promote the efficient use of the nation's resources. The editors of *Collier's* magazine, for example, claimed that the terms "conservation" and "reclamation" meant not only the irrigation of dry land, but the draining of wetlands as well.[23] In Florida, these ideas, coupled with populist notions of the necessity of taking land from railroads and other large corporations to benefit small farmers, influenced state officials to implement drainage policies vigorously so that Everglades land could be used for agriculture.[24]

The drainage program was facilitated in 1903 when the federal government provided the IIF trustees with the patent to over two million acres of the Everglades, thereby ending several disputes over whether the state, railroad interests, or corporations were entitled to the land.[25] With this title secured, state officials actively implemented their own drainage program. Napoleon Bonaparte Broward, a Jacksonville jack-of-all-trades who had previously been employed as a steamboat captain, a sheriff, and a gunrunner, was especially active in promoting drainage.[26] In 1904, Broward entered Florida's race for governor, concerned that the state was relying too much on railroads and special interests to drain the land (and consequently was allowing these entities to accumulate large holdings and vast amounts of Florida wealth). During his campaign, Broward "carried his map of the Everglades from one end of the State to another, always crying in the hustings, 'Save and reclaim the people's land!'"[27] He pledged that, if elected, he would use state money to drain the land, financing the endeavor by selling the dry tracts for $5 to $20 an acre.[28]

After winning the election, Broward began to implement his promises, thereby inaugurating the first official state-sponsored drainage program. In May 1905, Broward gave a special message to the state legislature dealing exclusively with draining the Everglades. Insisting that it was the "duty" of the IIF trustees to drain Florida lands, he proposed that the state build a system

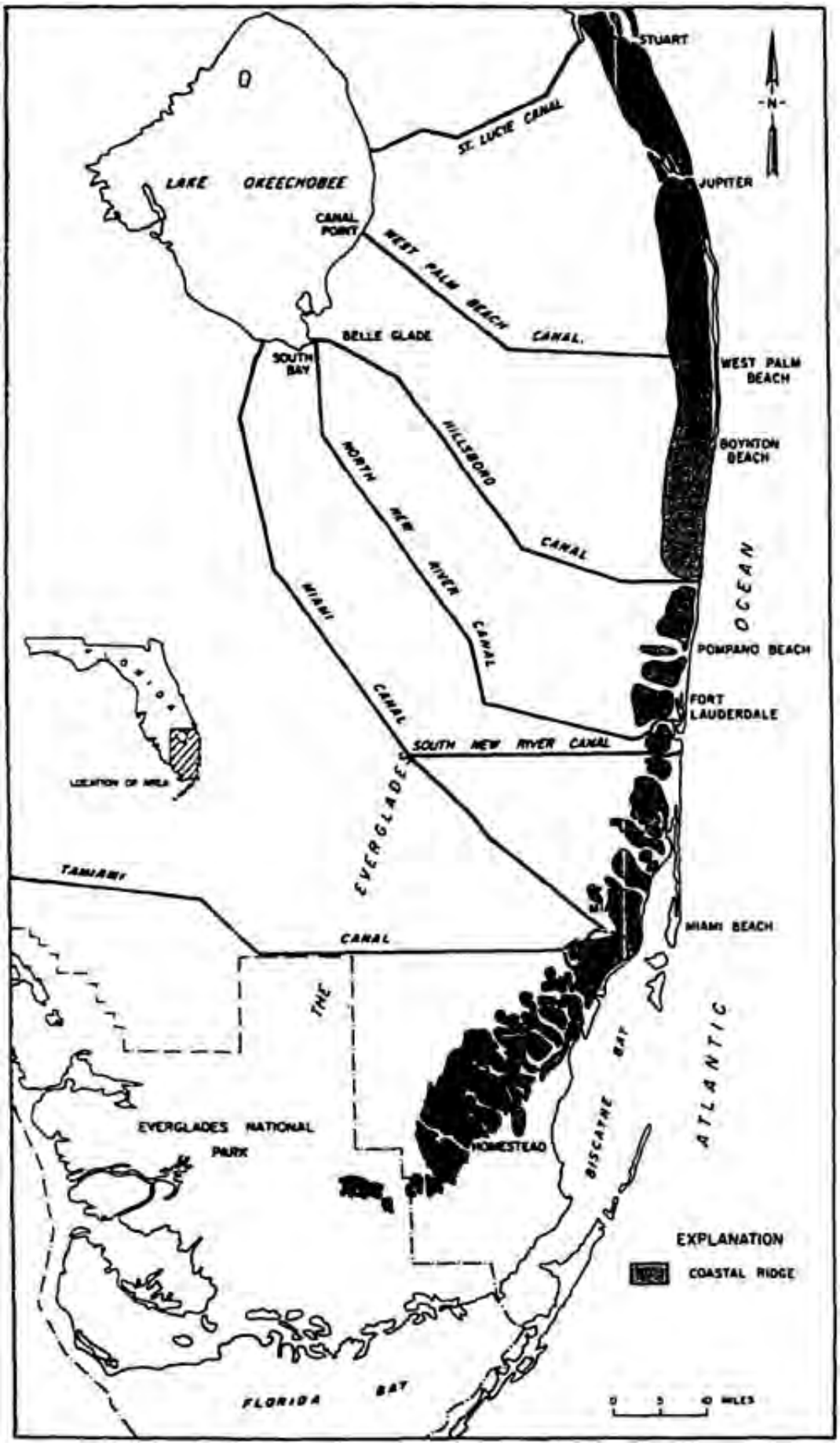
of canals from Lake Okeechobee to the St. Lucie, St. Johns, and Caloosahatchee river basins, thereby allowing the lake's level to drop six feet. Such a scheme would allow large amounts of land, including three million acres held by private interests, to become productive. Broward also proposed that the state pass a constitutional amendment creating a drainage district that would collect taxes from private landowners "in proportion to benefits that the land will derive," thereby producing more money to be used in other drainage efforts.[29] The state legislature acted on Broward's recommendation, passing an act in 1903 that created the Everglades Drainage District (EDD) with boundaries roughly corresponding to the two million acres patented to the state in 1903.[30]



Napoleon Bonaparte Broward. (Source: The Florida Memory Project, State Library and Archives of Florida.)

With the EDD in place, Broward ushered in an era of intensive state interest in drainage, including the construction of the New River Canal, running southeast from Lake Okeechobee to the New River near Fort Lauderdale. But in actuality, Broward accomplished relatively little; only 15 miles of canal were dug by the end of his term and the IIF fund had been depleted. Therefore, in December 1908, only a week before his term as governor ended, Broward convinced the IIF trustees to give Richard J. Bolles, a Colorado developer, 500,000 acres of land in exchange for $1 million. The trustees then proposed that most of this money be used to build five major canals – the North New River, South New River, Miami, Hillsboro, and Caloosahatchee. However, no studies had been completed on whether or not these waterways were practicable, resulting in a sale that "irrevocably committed the State of Florida to a specific drainage project even before the first engineering study regarding its feasibility appeared."[31]

For the next several years, the state commissioned numerous engineering reports that revised the best methods to drain the land. These included the Wright Report (1909), which facilitated land speculation in South Florida based on low cost estimates of drainage schemes (which turned out to be faulty at best and fraudulent at worst); an Everglades Land Sales Company examination (1912) which recommended that Lake Okeechobee's water levels be regulated to facilitate drainage; and the Randolph Report (1913), which recommended the construction of a control canal from Lake Okeechobee to the St. Lucie River (the St. Lucie Canal) and that became "the master plan for all drainage work."[32] By the end of the 1920s, the major drainage canals were largely in place, consisting of the Caloosahatchee Canal, which ran from the western shore of Lake Okeechobee to the Gulf of Mexico; the St. Lucie Canal, which extended from the eastern side of Lake Okeechobee to the Atlantic Ocean; and the West Palm Beach, Hillsboro, North New River, and Miami canals, which all ran from various points on the southern shore of Lake Okeechobee to the Atlantic Ocean.[33]



Location of major canals in South Florida. (Source: U.S. Army Corps of Engineers, Jacksonville District.)

As these waterways were completed, agriculture developed in the region south of Lake Okeechobee. In the 1910s and 1920s, many new settlements appeared along the canals extending from Lake Okeechobee, including South Bay (on the North New River Canal), Lake Harbor (by the Miami Canal), Belle Glade (on the Hillsboro Canal), Pahokee (near the West Palm Beach Canal), and Moore Haven (on the southeast shore of Lake Okeechobee). By 1920, 23,000 people resided in the EDD. These numbers increased in the 1920s, in part because of better information about how to make Everglades soil productive and in part because of a growing demand for agricultural products. Perhaps even more important was the development of the sugar industry in the Everglades, started by the Southern Sugar Company in the 1920s and continued by Charles Stewart Mott, who rescued Southern Sugar from bankruptcy and reorganized it as the United States Sugar Corporation in 1931. Because of these efforts, cane sugar quickly became one of the predominant crops in the region.[34]

Yet even with the drainage works, flooding still occurred periodically in the Everglades region. After excessive rainfall in 1924, the EDD constructed a small dike around the southern end of Lake Okeechobee from Bascom Point to Moore Haven, the region's largest town.[35] Unfortunately, the barrier did not hold in 1926 when a hurricane swept over Moore Haven with winds between 130 to 150 miles an hour. Over 400 people were killed, approximately 1,200 had to be evacuated, and thousands of dollars of property damage occurred. Because of the devastation, the IIF trustees appointed an Everglades Engineering Board of Review in 1927 to examine the drainage program established by the Randolph Report, and to make additional recommendations about Everglades reclamation.[36]

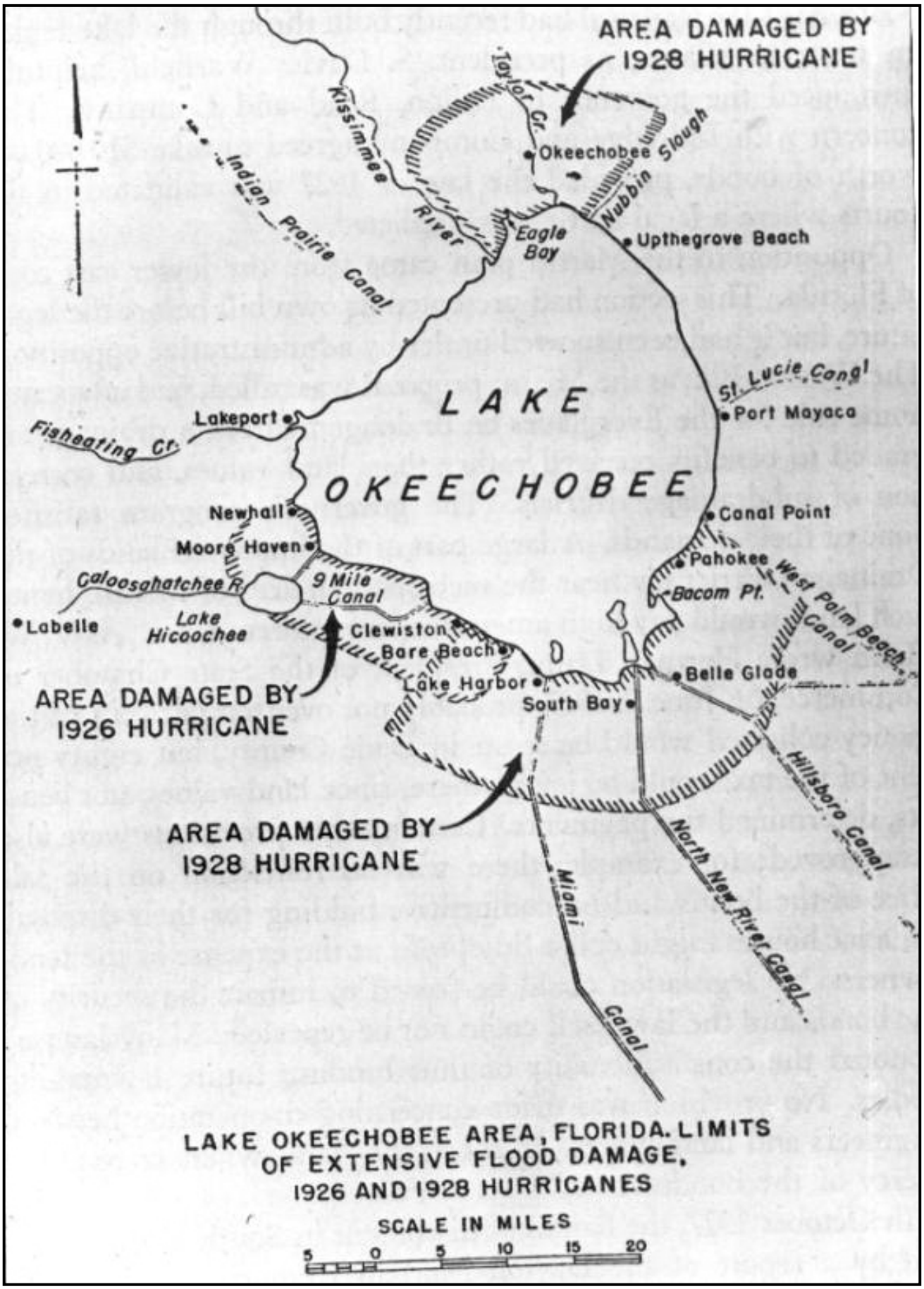
Destruction wreaked by the 1926 hurricane. (Source: The Florida Memory Project, State Library and Archives of Florida.)

The board, which consisted of Anson Marston (a prominent transportation engineer who had worked on the establishment of different highways), S. H. McCrory, and George B. Hills, spent two weeks examining drainage works, records, and data pertaining to reclamation. In its final report, published in May 1927, it stated that the Randolph Report's drainage plan had several fatal flaws, especially in terms of controlling floods. To correct the problems, the board recommended that the EDD complete and deepen the St. Lucie Canal as soon as possible (since its operation would have aided flood control efforts during the 1926 storm); that it enlarge the Caloosahatchee Canal; that Lake Okeechobee be controlled to a maximum and minimum level of 17 and 14 feet above mean low water (Punta Rosa datum, which the U.S. Coast and Geodetic Survey had determined to be 0.88 foot below mean sea level), respectively; and that a "greatly enlarged and highly safeguarded levee" be constructed on the south shores of Lake Okeechobee to protect the surrounding communities.[37]

The chances of the EDD implementing the board's suggestions were slim, however, because of continued financial problems.[38] Then, in 1928, another disaster struck the Lake Okeechobee region. In August and September, torrential rain fell in the area, causing the lake to reach a high level. On 16 September, another hurricane appeared, striking Florida at West Palm Beach and traveling northwest across Lake Okeechobee. Winds reached velocities of 135 miles per hour, causing wind tides and waves on the lake to exceed 29 feet in height on the southeastern shore. Unfortunately, the existing levees extended only 22 feet in elevation, causing water to pour over the dikes and into the streets of Belle Glade and other shore communities to depths of eight feet. The water ripped houses from their foundations and swept terrified residents to their deaths. By the time the hurricane moved on, it had killed over 2,000 people, most of them migrant black laborers.[39]

Emerging from the disaster, residents called for help. But because of the financial difficulties of the EDD, and because it was unclear whether or not the EDD could properly operate for flood control instead of drainage, the state could do little to provide the desired flood protection. To rectify the situation, the state legislature created the Okeechobee Flood Control District in 1929, with boundaries including all of South Florida beginning at the northern shore of Lake Okeechobee, and directed it to construct flood control structures and to regulate Lake Okeechobee and the Caloosahatchee River to prevent damaging floods.[40]

To fulfill these missions, the Okeechobee district worked closely with the U.S. Army Corps of Engineers, which had already been making investigations as to what could be done to alleviate flooding from Lake Okeechobee. Since the early 1800s, the Corps had been the federal government's leading civil works agency, but most of its construction involved navigation projects on rivers and lakes. Until the 1930s, the federal government regarded flood control mainly as a local responsibility; not until 1936 would Congress recognize flood control as a proper federal activity nationwide, although it did pass a flood control act in 1917, allowing the construction of works on the Sacramento and Mississippi rivers.[41] Likewise, in 1928, Congress authorized the Corps to undertake an ambitious effort on the Lower Mississippi River, covering several states.[42] In 1924, U.S. Representative Herbert Drane, a Democrat from Florida, introduced a bill into Congress requesting that the Corps examine the Caloosahatchee River to ascertain whether deepening the channel could relieve flooding. Congress passed the act and provided $40,000, but the Corps, under the leadership of Chief of Engineers Major General



Area hit by the 1928 hurricane. (Source: The Florida Memory Project, State Library and Archives of Florida.)

Edgar Jadwin did not commence any work. After the hurricane passed, the Corps held public hearings at Pahokee and Moore Haven and completed its study, but found no justification for federal action. Nevertheless, Congress passed another bill requiring the Corps to investigate more comprehensively the problem of flood control in the region. After holding public hearings in communities around the lake, Jadwin recommended to Congress in April 1928 that the Corps take no flood control action until state and local resources had been exhausted. Jadwin believed that the plans already in place by the EDD, including enlargement and completion of the St. Lucie Canal, were sufficient. "If carried out," he promised, "they will provide for the control of floods in these areas with a reasonable factor of safety."[43]

After the devastation of the 1928 hurricane, Jadwin reexamined flood control possibilities around Lake Okeechobee, in part because Florida Governor John W. Martin and his cabinet sent a resolution to Congress asking that the federal government construct a high levee around the lake's southern shore. After considerable study by the Jacksonville District, Jadwin recommended that the Corps undertake a flood control and navigation program consisting of "a channel 6 feet deep and at least 80 feet wide from Lake Okeechobee to Fort Myers" (basically deepening the Caloosahatchee River to make it a second control canal); "the improvement of Taylor Creek to the extent of providing a channel 6 feet deep and 60 feet wide to Okeechobee [C]ity"; and the construction of levees along the south and north shores of the lake to heights of at least 31 feet. Jadwin estimated that the project would cost over $10 million, and he suggested that the state of Florida or other local interests provide 62.5 percent of that cost, not to exceed $6.74 million.[44]

Because of the expense of the Corps' proposal, the Okeechobee Flood Control District hired George B. Hills, one of the members of the 1927 Everglades Engineering Board of Review, to conduct an independent investigation of flood control. He recommended early in 1930 that Congress authorize a navigation and flood control project whereby the Corps, using the existing Caloosahatchee and St. Lucie canals, would build a waterway across Florida through the Everglades. At the same time, Congress requested that the Board of Engineers for Rivers and Harbors review Jadwin's 1929 report, and in March 1930, the board recommended that the levees be at least 34 feet above sea level and that instead of the $6 million contribution, the state provide $3.8 million and build at its own cost the north shore levee.[45]

In the spring of 1930, Congress passed a general river and harbor bill that included these provisions for flood control and navigation. Because many representatives were uneasy about the Corps implementing a flood control project, the House and Senate portrayed the program as primarily one that would improve navigation and provide only incidental flood protection. No matter how it was depicted, the plan, according to U.S. Senator Duncan Fletcher, would allow the Corps to make improvements to the St. Lucie Canal, to expand the levees along Lake Okeechobee's north and south shores, and to complete the "canalization" of the Caloosahatchee River. Fletcher believed that this would provide a "complete solution of the problems of adequate interstate navigation facilities and flood-control protection."[46]

Following this plan, the Corps built over 67 miles of dikes along Lake Okeechobee's south shore – later named the Hoover Dike after President Herbert Hoover – and another 15 miles of levees along the north shore near the city of Okeechobee. These were all constructed to handle crests of 32 to 35 feet in height. The Corps also performed the required deepening of the

Caloosahatchee River, and by March 1938, the entire project was completed.[47] The Corps then assumed control of regulating the water level of Lake Okeechobee, maintaining a level between 14 and 17 feet through discharges to the St. Lucie Canal and the Caloosahatchee River.

Interesting, however, was the fact that in the 1930s, the U.S. Coast and Geodetic Survey, which had originally demarcated Lake Okeechobee's water levels in accordance with the Punta Rosa Datum (corresponding to the mean low water elevation of the Gulf of Mexico), discovered that the datum plane was not 0.88 foot below mean sea level, but was actually 1.44 feet below mean sea level. Therefore, the original levee construction around Lake Okeechobee, which was supposed to have been 31 feet, was actually only 29.56 feet according to the National Geodetic Vertical Datum (NGVD) of 1929. Many continued to use the old Punta Rosa Datum plane for Lake Okeechobee (designating it as Lake Okeechobee Datum), even though the Corps had to convert the datum before designing any Lake Okeechobee project in order to avoid errors.[48] Regardless, by the end of the 1930s, the drainage system in southern Florida essentially consisted of the structures that enabled the Corps to regulate Lake Okeechobee; the four major drainage canals (West Palm Beach, Hillsboro, North New River, and Miami); and two canals connecting the four waterways (the Bolles and Cross canals).[49]

A poster commemorating the construction of Hoover Dike. (Source: South Florida Water Management District.)

The success of drainage and flood control efforts, coupled with periods of drought, had detrimental effects on flora and fauna in the Everglades, emphasizing that proper amounts of water were essential to preserve the unique natural resources of the area. The region housed, among other things, orchids, mangroves, magnolia, cypress, mahogany, lignum vitae, rubber trees, egrets, cranes, herons, flamingos, spoonbills, alligators, turkeys, bear, deer, fox, wildcats, panthers, raccoons, and opossums. However, drainage, human settlement, and hunting slowly destroyed this rich diversity of life.[50] In the late 1800s, a flourishing plume trade brought hunters of all kinds to the Everglades, where they massacred thousands of egrets by invading rookeries.[51] The Florida state legislature passed a law in 1901 outlawing plume hunting, and the National Audubon Society, first formed in the 1880s, hired four game wardens to patrol the rookeries and enforce the law. Hunters did not welcome this supervision, and on 8 July 1905, Guy Bradley, one of the wardens, was murdered as he investigated a poaching incident, becoming America's first environmental martyr. This event led to laws "which strengthened bird protection and helped bring the significance of the Everglades to the American people."[52]

Drainage in South Florida only compounded the poaching destruction, as it enabled settlement to encroach on the Everglades. Recognizing the danger that human habitation posed, James Ingraham of the Florida East Coast Drainage and Sugar Company called for the preservation of Paradise Key, located in the Royal Palm area of the current Everglades National Park, in 1905. His efforts led Mary Barr Munroe of the Florida Federation of Women's Clubs to

join the fight, and she, along with several scientists, including botanists David Fairchild and J. K. Small, advocated the creation of a Paradise Key reserve. Heeding these cries, the state established Royal Palm State Park in 1916.[53]

In the 1920s, Ernest Coe, a landscape architect from Connecticut who had moved to the Miami area, became the loudest voice for Everglades preservation. Coe had always been interested in nature, and he became entranced with the mangroves, the orchids, the giant royal palm trees, and other plants in the Everglades region, as well as the numerous bird rookeries and other wildlife. Coe claimed that these natural attributes justified the creation of a national park to preserve the unique ecology.[54] In promulgating these views, Coe was drawing on the ideas of many conservationists in the late 1800s and early 1900s who believed that the nation's natural wonders should be preserved as national parks for the enjoyment of future generations. Beginning with Yosemite and Yellowstone, Congress set aside vast tracts of land characterized by monumental scenery – huge mountain peaks, pristine vistas, waterfalls, canyons, and geysers – to protect these resources from exploitation and development, and in 1916, it created the National Park Service (NPS) to manage these areas.[55]

By the 1920s, some Americans had decided that national parks could also preserve plant and wildlife as well as scenery. Coe was one of these, and he began agitating for the creation of a national park to protect the ecology of the Everglades. In 1928, he formed the Tropic Everglades National Park Association and persuaded David Fairchild, a botanist with the U.S. Department of Agriculture, to serve as its first president. For the next several months, Coe, with the aid of the association, studied and mapped the area, conducting surveys by plane and boat. He brought his data to U.S. Senator Duncan U. Fletcher, a Democrat from Jacksonville, and in 1929, Fletcher ushered a bill through Congress authorizing an investigation of the Everglades as a possible national park.[56]

In 1930, an NPS committee, consisting of Director Horace Albright, Assistant Director Arno Cammerer, and Yellowstone National Park Superintendent Roger Toll, explored the Everglades on a four-day tour sponsored by the Tropic Everglades National Park Association. At the conclusion of this inquiry, the committee made a favorable report on the park's creation, and in December 1930, the secretary of the interior recommended that Congress establish a park constituting 2,000 square miles in Dade, Monroe, and Collier counties. However, Florida's congressional delegation had a difficult time passing a bill to create the park, mainly because many members of Congress could not understand why preservation of the area was necessary or important.[57]

The task became easier as more evidence mounted of how drainage and a lack of water affected plants and wildlife in the Everglades. In 1929, New York botanist John Kunkel Small had warned of the pending "extermination" of plants and wildlife in the Everglades because drainage facilitated fires that destroyed the soil. "Florida is being drained and burned to such an extent that it will soon become a desert!" he exclaimed.[58] Secretary of the Interior Ray Lyman Wilbur echoed these thoughts in 1933, stating that drainage prevented enough fresh water from reaching the Shark River and other waterways in South Florida, thus destroying "the most unique qualities" of the area.[59] John O'Reilly, a reporter for the *New York Herald Tribune*, also explained how the lack of water affected wildlife, noting that drainage had removed "a single block in the foundation on which the wild beauty and natural abundance of such a region is

built." The evidence for this, he claimed, was "in the brown and dying vegetation; in the vast fires that have been eating plants and soil alike; [and] in the wholesale migration of birds and animals from a habitat which has been their home since before history." The solution, O'Reilly believed, was "to get the overflow of Lake Okeechobee directed back onto the Everglades," thereby reestablishing feeding grounds and allowing "thousands upon thousands of White Ibises and other water birds [to] return to their rookeries."[60]

The effects of drought on the land. (Source: The Florida Memory Project, State Library and Archives of Florida.)

Influenced by these arguments, Congress passed an act in 1934 authorizing the creation of Everglades National Park. Heeding the report submitted by the NPS committee, this law recommended that an area of approximately 2,000 square miles be established as the Everglades National Park as soon as the state was able to transfer title to the lands to the United States.[61] This large area included much of Dade, Monroe, and Collier counties, including what would become known as the East Everglades area and islands in Florida Bay and the southern Gulf of Mexico. According to NPS Director Arno Cammerer, one of the main reasons for the establishment of the park was "so that the wild life may in fact be protected. . . . [T]he only hope the wild life has of surviving is to come under the protective wings of the National Park Service."[62]

Yet one group lost out in this effort to preserve Everglades flora and fauna: the Seminole Indians. The Seminole had originally been part of the Creek Confederacy. After the Yamasee War in the 1710s, a group of Creeks moved into northern Florida. After several years, those Creek that had not relocated began referring to the Florida Creek as *simanó·li*, meaning "wild" or "runaway." This term eventually morphed into "Seminole," the English term for this group. After a series of wars in the first half of the nineteenth century, the United States removed the Seminole to southern Florida, establishing a reserve for the group in 1849 in Big Cypress Swamp, and most Seminole took up residence in either the swamp or the Everglades. When the Tamiami Trail was built in 1928, some families moved to areas surrounding the highway in order to conduct business with tourists.[63]

In 1917, the state of Florida created a reservation for the Seminole out of 99,000 acres of land in Monroe County. Likewise, in the early 1930s, the federal government consolidated several small areas of land into tracts set aside for the Seminole: Brighton (located to the northwest of Lake Okeechobee), Big Cypress (in the northeastern part of Big Cypress Swamp) and Dania (later called Hollywood, located near the eastern coast just south of Fort Lauderdale). Most Seminole ignored these reservations and continued to live wherever they wanted. Yet problems resulted in 1934 because the state reservation lay within the proposed boundaries of Everglades National Park. To resolve the situation, the state agreed to provide the federal government with the Seminole land in exchange for 104,800 acres in Broward and Palm Beach counties. This land lay north of the Tamiami Trail in the eastern part of Big Cypress Swamp.[64]

With the Seminole situation resolved, the state of Florida turned to the task of acquiring additional lands for the park, and it passed an enabling act allowing it to convey tracts to the United States as soon as it acquired them. But despite the best efforts of the Everglades National Park Association and the State Everglades National Park Commission (which had been created in 1935 to handle the land purchase and transfer issues), acquisition proceeded slowly.[65] One of the problems was that in the early 1940s oil was discovered in southern Florida, and the state began issuing oil and gas leases on the land it owned within the proposed park boundaries. By 1947, Humble Oil and Refining Company alone had produced 230,701 barrels of oil. This caused consternation among many conservationists; an article in *Natural History*, for example, lamented that "liquid death may ooze up from the bowels of the earth to spread its polluting destruction through the fresh water" and called for immediate action "to make certain that the production of oil entails a minimum of damage to the numberless natural assets of this exotic wilderness."[66] Despite conservationists' concerns, drilling continued, and the NPS reported in the early 1940s that it "saw no way of establishing a national park for some time, since the area would be constantly subject to pressure for exploring and drilling for oil."[67]

In the meantime, wildlife and plants continued to be destroyed. In 1937 and 1938, Daniel Beard, a wildlife technician for the NPS, traversed the Everglades region and made observations about its flora and fauna and the effects of drainage on them.[68] Beard reported that before drainage began, "the park got the bulk of the western flow and some of the eastern flow that went through the Everglade Keys."[69] After the construction of the drainage canals, water entered the park only from the east. Drainage also lowered the water table, leading to the destruction of gator holes and the abandonment of large bird rookeries. According to A. E. Demaray, acting director of the NPS, Beard's main finding was that "changed water levels are in all probability

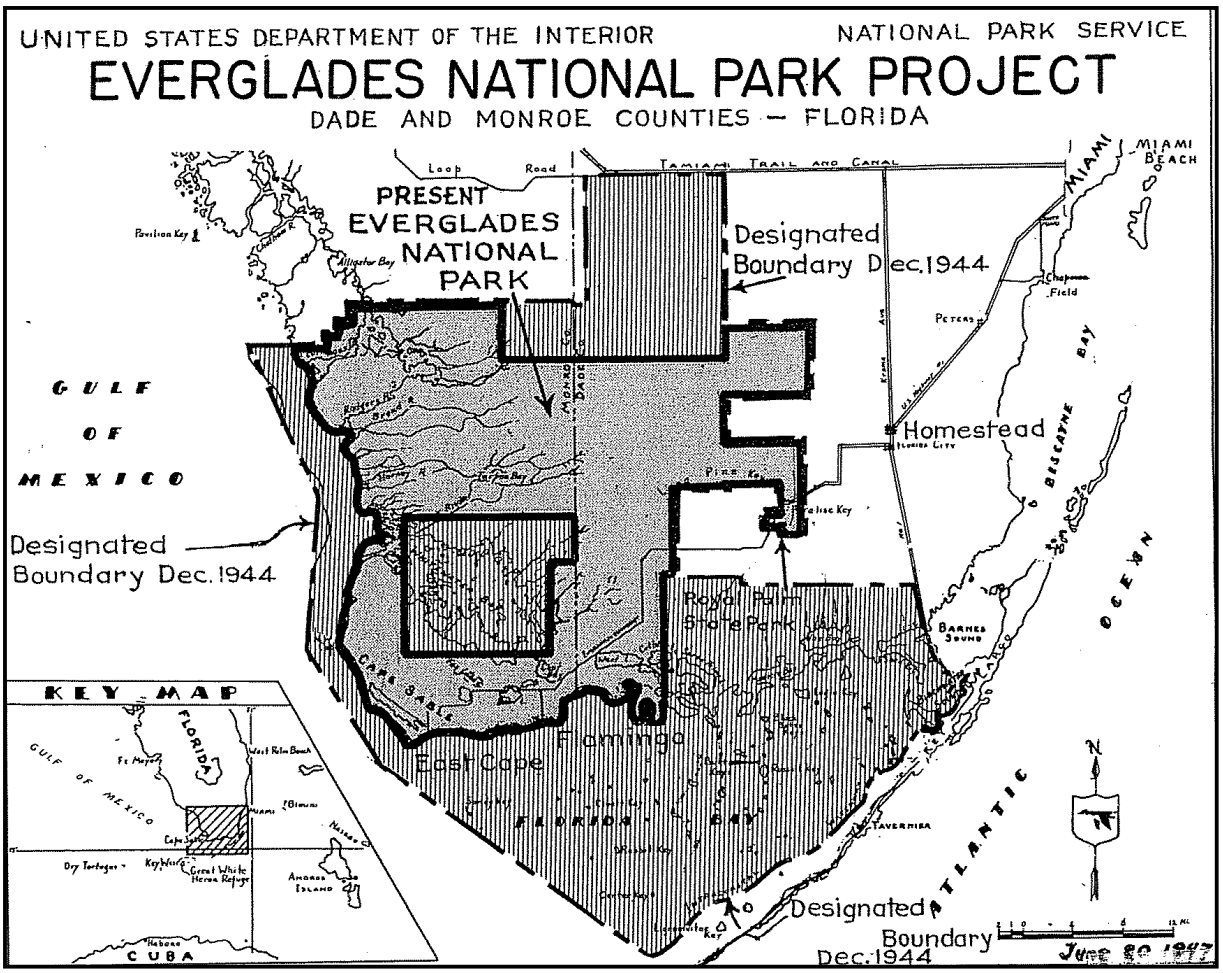
fundamentally responsible for the depletion of characteristic plants and animals of the proposed park area." Based on these conclusions, Demaray proclaimed that "restoration of water levels is fundamental and must be accomplished if the area becomes a park. . . . Water is the basis for the unique features of southern Florida that make it of national park caliber."[70] The NPS therefore called for another extensive study of how drainage and flood control systems had affected the wildlife.

White ibis. (Source: The Florida Memory Project, State Library and Archives of Florida.)

Meanwhile, the NPS participated in meetings in 1939 about saltwater intrusion and a shortage of drinking water for municipalities in South Florida. Although the conference focused on these issues, NPS representatives emphasized that state and federal interests should not deprive the Everglades of water in order to solve the problems. Continued inadequate water supplies, they stated, would "result in increasing the fire risk, decreasing soil building and destroying wildlife."[71] What was necessary, NPS officials declared, was the "restoration and maintenance of normal water conditions" in order to guarantee the "preservation and restoration of the national park character."[72]

An inspection of the Everglades in 1939 by Clifford C. Presnall, assistant chief of the NPS's Wildlife Division, reiterated the importance of water. Presnall reported that water levels were as much as three feet below normal and that some ditches were completely dry. He believed that "this lowering of the water table would not have been nearly so pronounced had there been no drainage canals." He blamed drainage for causing bird migrations and for decimating tree snail populations, thereby drastically reducing the number of Everglades kites. Drainage had also caused fire to become "unnaturally preponderant." Only the restoration of the "unhampered overflow from lake Okeechobee into the Everglades such as existed before the construction of dikes" would alleviate the situation, Presnall asserted, but he understood that the preponderance of agriculture south of Lake Okeechobee would make such a renewal difficult.[73]

In order to ensure that the animals and plants in the region had at least some form of protection, the state established a state wildlife refuge within the proposed park boundaries. Unfortunately, the designation did little to reduce the destruction, whether by drought or by poaching.[74] Therefore, on 6 December 1944, Congress passed an act allowing the secretary of the interior to accept "submerged land, or interests therein, subject to such reservations of oil, gas, or mineral rights" within the 2,000 square mile boundary, and to protect such land until the federal government could clear the mineral reservations.[75] The state then conveyed to the United



Everglades National Park boundaries, 1944. (Source: Records of Everglades National Park, Record Group 79, National Archives and Records Administration II, College Park, Maryland.)

States more than 850,000 acres of land within the proposed boundaries. One publication noted that the land consisted of three areas: Florida Bay; a 34-mile long and three-mile wide strip between Cape Sable and Lostman's River; and 400,000 acres from the Shark River to Royal Palm State Park and north to Forty Mile Bend on the Tamiami Trail, a highway constructed in the 1910s and 1920s from Miami to Fort Myers and Tampa. Some of the lands not included were those in the Big Cypress region, those north of the Tamiami Trail, those located on the upper keys, and those which would become known as the East Everglades.[76] All of the deeded land was designated as the Everglades Wildlife Refuge, and the U.S. Fish and Wildlife Service was given administrative authority over it, with Daniel Beard as manager.[77]

Because of continuing difficulties with acquiring private land and with oil and gas rights, the state agreed in 1947 to the establishment of a "minimum" park, something that would at least get portions of the Everglades protected. This acreage, totaling 454,000 acres and corresponding roughly to the third section deeded to the United States in 1944, became Everglades National Park on 27 June 1947 when Secretary of the Interior J. A. Krug issued Order No. 2338.[78] Both park and state officials regarded this "minimum" park as only the beginning, noting that additional land to total 1,282,000 acres would "ultimately . . . be added to the park."[79] President Harry Truman officially dedicated the park on 6 December 1947, making it the first national park

to be established not for its scenery but solely to protect its flora and fauna.[80] According to Acting Secretary of the Interior Warner W. Gardner, the establishment of the park only was a first step in its creation; more acreage would be added as it became available.[81]

Everglades National Park advocates, as well as NPS personnel, were enthusiastic about the park's creation, believing that it was a step in the right direction for the preservation of the unique flora and fauna of southern Florida. However, because it was, in the words of Marjory Stoneman Douglas, "the only national park in which the wild-life, the crocodiles, the trees, the orchids, will be more important than the sheer geology of the country," it was essential that the flora and fauna had sufficient water.[82] Just two days before the creation of the park, NPS officials had reiterated that "this new national park is dependent to a large degree on the conservation and favorable distribution of the surface waters of the lower Everglades drainage basin." Therefore, "the restoration of natural conditions is the first requirement in any plan for bringing back many forms of wildlife which have been reduced to critical numbers." The NPS expressed its interest and concern "with any plans dealing with drainage, storage, and distribution of the waters of the lower Everglades," and believed that it was now an active player in any decisions involving this resource.[83]

In the 100 years following the state's declaration of interest in drainage, southern Florida had undergone vast transformations. Several canals had been built, and rivers flowing out of Lake Okeechobee had been channelized in order to control flooding from the lake and to remove water from the land. Settlement and agriculture had quickly followed the desiccation of land; the lower east coast of Florida's population had increased from 22,961 in 1900 to 228,454 in 1930, while cane sugar production had doubled between 1931 and 1941. Although the state had initiated drainage operations and implemented them for much of the first half of the twentieth century, it ultimately had to turn to the U.S. Army Corps of Engineers for flood control works. Yet all of these structures, whether for drainage or for flood control, had serious consequences for southern Florida's flora and fauna, especially in the Everglades. The federal government created Everglades National Park in 1947 to protect these resources, but the problem of ensuring that the park received adequate water remained. Many, including John H. Baker, executive director of the National Audubon Society, believed that the solution lay in "an intelligent water-control and land-use plan, backed by adequate legislative and administrative authority" and executed by "a qualified hydraulic engineer."[84] Whether one could be developed remained to be seen.

August Burghard and Ernest Coe at the dedication of Everglades National Park. (Source: The Florida Memory Project, State Library and Archives of Florida.)

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Chapter One Endnotes

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[18] Quotation in Ann Vileisis, *Discovering the Unknown Landscape: A History of America's Wetlands* (Washington, D.C.: Island Press, 1997), 136; see also Blake, *Land Into Water*, 81-83; McCally, *The Everglades*, 89; and Light and Dineen, "Water Control in the Everglades: A Historical Perspective," 53. The traditional historical accounts of Disston's death label it as a suicide, but more recent publications, including works by Joe Knetsch, a historian with the Florida Division of State Lands, and Michael Grunwald, a *Washington Post* reporter, attribute his death to heart problems, citing the coroner's report and several obituaries at the time. See Joe Knetsch, "Hamilton Disston and the Development of Florida," *Sunland Tribune* 24, no. 1 (1998): 5-19; Grunwald, *The Swamp*, 96.

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COLLIER-LEE CHAPTER
FLORIDA SURVEYING & MAPPING SOCIETY

3RD ANNUAL

CLAY TOURNAMENT

SATURDAY – NOVEMBER 11, 2023

Bermont Shooting Club

40571 Bermont Rd
Punta Gorda, FL 33982

50 Bird Tournament

8:00 AM Registration
9:00 AM Start

Must arrive by 8:30 AM for a mandatory safety lesson

Lunch and awards ceremony after the tournament

Challenges /Raffles / Prizes

- Prizes for **1ST**, **2ND**, and **3RD** place teams
- Prizes for **1ST, 2ND, and 3RD** place individual
- **Green Bird Challenge** for shotgun entry
- 50/50 Raffle

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Our mission is to expand our community outreach to help provide school supplies for children in need and continue providing Christmas gifts and holiday dinners to families within Lee and Collier County.

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FOURSOME **$520**

Pricing includes golf cart for a foursome, ammo, entry fees, breakfast, and lunch.

Shotgun rental is available for $20
(limited supply)
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There are only 28 golf carts available, act quickly!!

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PLEASE BRING CASH FOR ALL SPECIALTY STATIONS

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GREEN BIRD CHALLENGE

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SHOOTER #3				
SHOOTER #4				

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The Swamp

A PLAT

EXHIBITING THE STATE OF THE SURVEYS

in the

STATE OF FLORIDA

WITH REFERENCES.

Scale 18 miles to 1 inch.

Surveyor Generals Office
St. Augustine Oct. 1855

Approved
John Forster Al
Surveyor General

Those Townships with the letter S in them have been Sectioned
Those Townships which have been only in part sectioned have the unsectioned part designated thus or have P.S. written in them
Those Townships having the letters R.S. in them, have been Resurveyed
Those Townships with the letter T in them have only the exterior run
Those Townships with the letters P.T. in them, have only part of the exterior lines run
*Those Townships now under contract and expected shortly to be returned are designated thus **
The Florida Key's and Reef were taken from Sketch E. Sec. 6 of the Coast Survey Report 1848-51.

Lith. by A. Hoen & Co. Balto. Md.

From the desk of Rick Pryce:

Surveying Maps.....especially old Survey/ Military Maps hold a special place for me as a surveyor, as an artist, and a history buff.

I do a lot of personal research on different areas of the USA related to surveying and mapping, always looking for uniqueness in maps, Florida has many.

Surveying never disappoints on these matters. The surveyors, cartographers and geographers of old were true artists in their own right and their works are worth the effort when you find them.

I found this beauty last night by Surveyor General John Wescott 1855 and figured I'd share with all.

It shows the state of surveys and resurveys in Florida just 10 years after statehood. Below is a link to a high resolution copy I made (29mg PDF).

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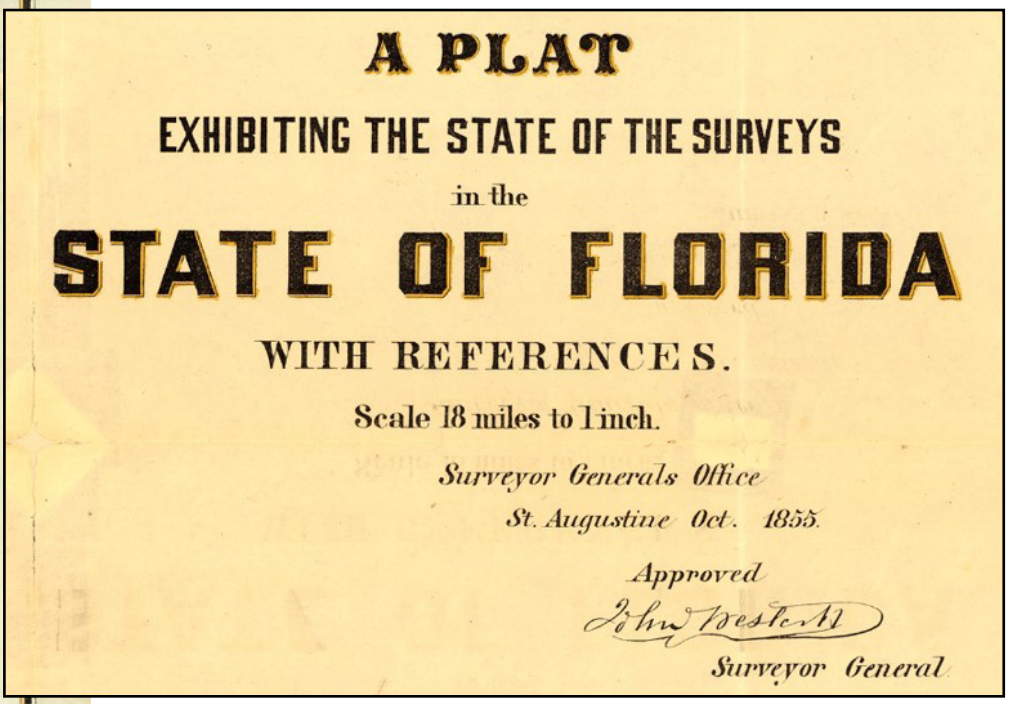
A PLAT

EXHIBITING THE STATE OF THE SURVEYS

in the

STATE OF FLORIDA

WITH REFERENCES.

Scale 18 miles to 1 inch.

Surveyor Generals Office

St. Augustine Oct. 1855.

Approved

John Wescott

Surveyor General

From the desk of Rick Pryce:

Survey Maps — Part 2

This map I found by chance some time ago. It's an 1829 Topographic Map of the North Flori
time to splice them together with minimal distortion so you can get the full effect and majes

Now even at that time they were contemplating a canal route between the Atlantic Ocean an
of two separate routes that are shown on the top of the map.

I have highlighted them on the map to make them easier to see, and color coded the Profiles

I drew out the southern route (blue) in Google Earth trying to use the landmarks to match as
in Google Earth to check the 1829 topography, and the results were surprising. I have attach

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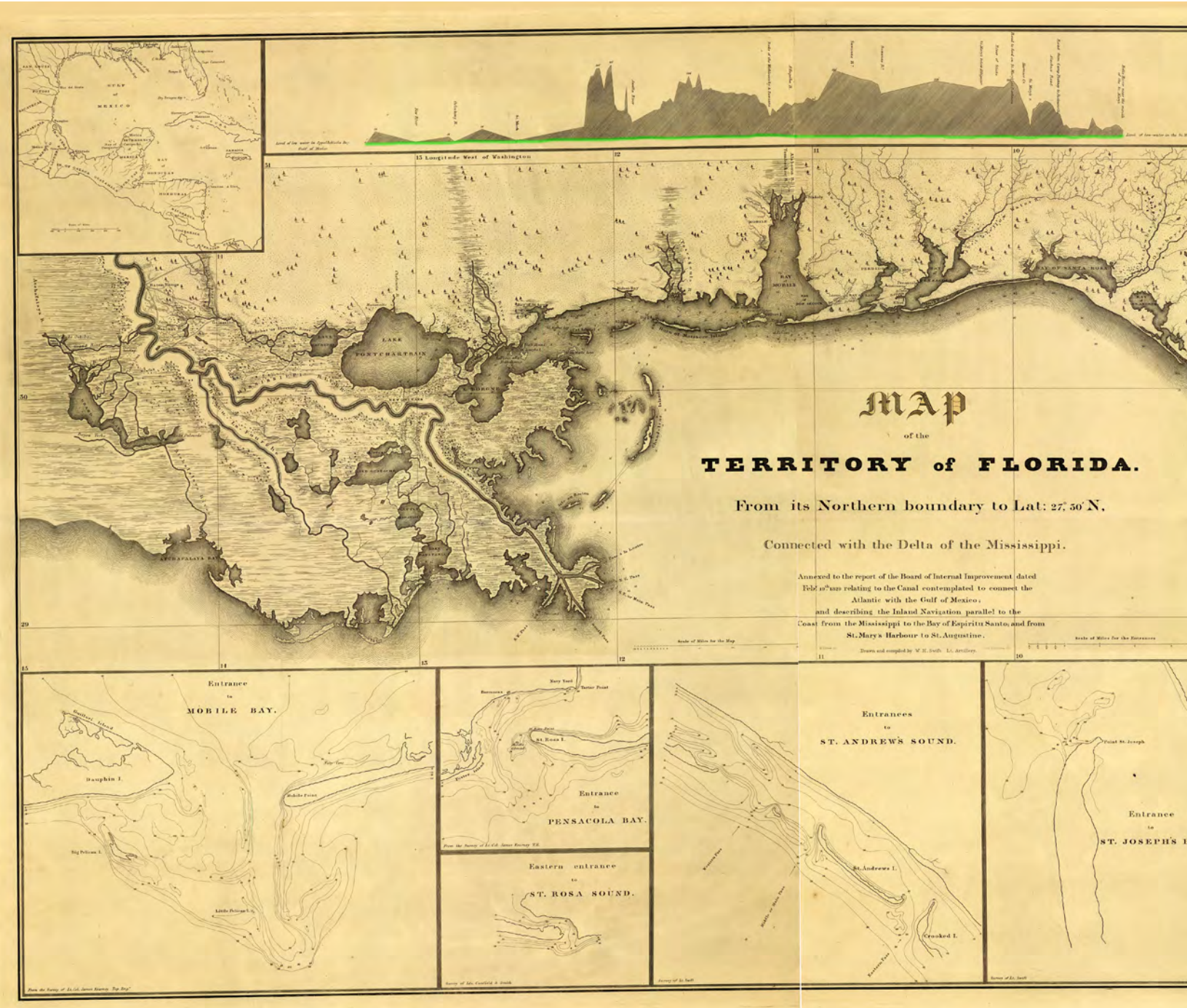
https://fsms.memberclicks.net/assets/docs/SurveyingDocs/2_FloridaNorthernTerritory_



da Territory with exquisite detail. This map was cut into three pieces, so I took the
sty of the original drawing.

nd the Gulf of Mexico. So the Surveyors performed a topographic survey with profiles

at the topo of the map.

s close as I could visually and following what the map details show. I then did a profile
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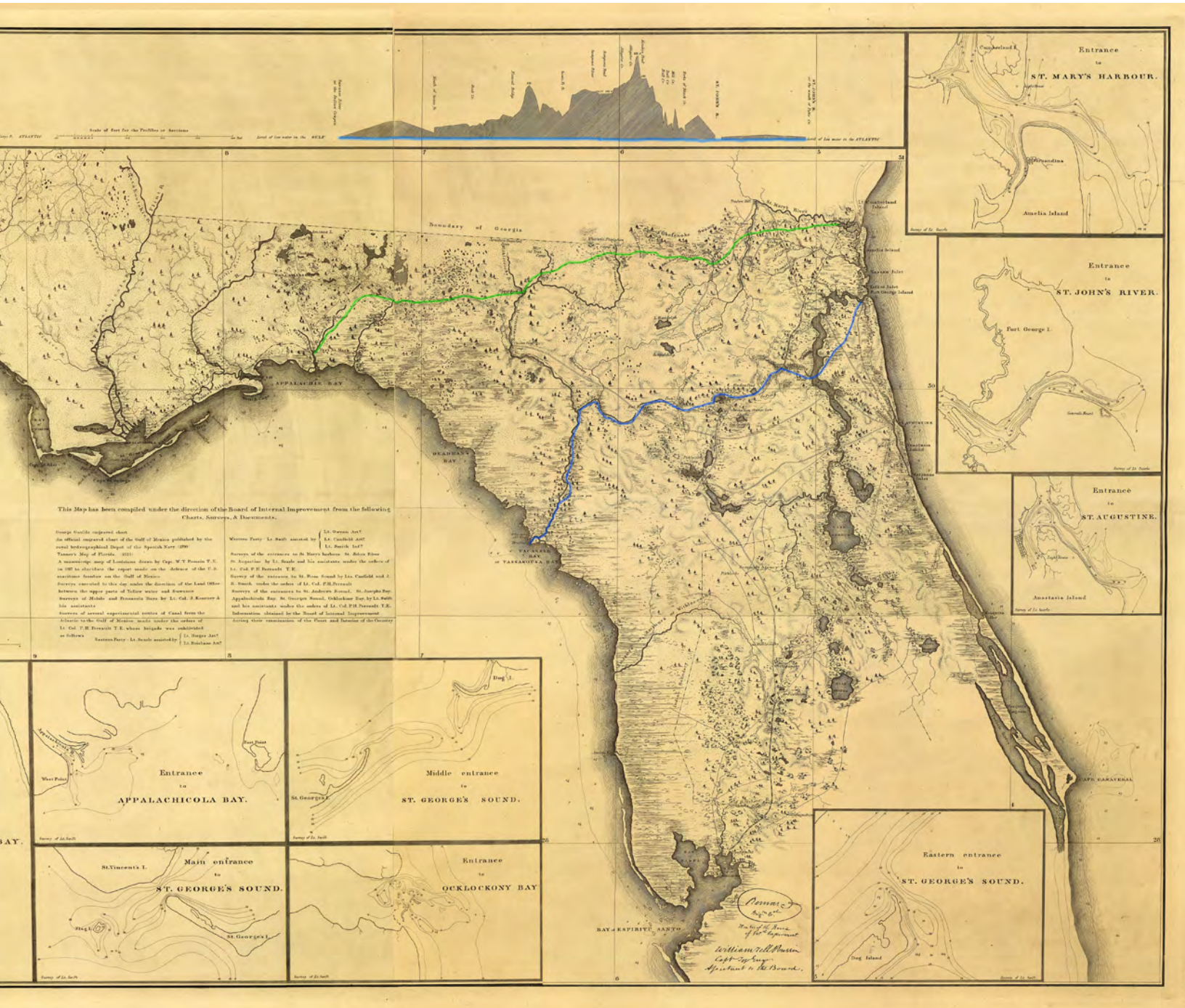
_Feb19_1829.pdf



This Map has been compiled under the direction of the Board of Internal Improvement from the following Charts, Surveys, & Documents.

George Gaulds engraved chart

An official engraved chart of the Gulf of Mexico published by the royal hydrographical Depot of the Spanish Navy. (1799)

Tanner's Map of Florida. (1825)

A manuscript map of Louisiana drawn by Capt. W.T. Poussin T.E. in 1817 to elucidate the report made on the defence of the U.S. maritime frontier on the Gulf of Mexico

Surveys executed to this day under the direction of the Land Office between the upper parts of Yellow water and Suwanee

Surveys of Mobile and Pensacola Bays by Lt. Col. J. Kearney & his assistants

Surveys of several experimental routes of Canal from the Atlantic to the Gulf of Mexico made under the orders of Lt. Col P. H. Perrault T. E. whose brigade was subdivided as follows

Eastern Party – Lt. Searle assisted by { Lt. Huger Artᵞ, Lt. Brisbane Artᵞ }

Western Party – Lt. Swift assisted by { Lt. Gwynn Artᵞ, Lt. Canfield Artᵞ, Lt. Smith Infᵞ }

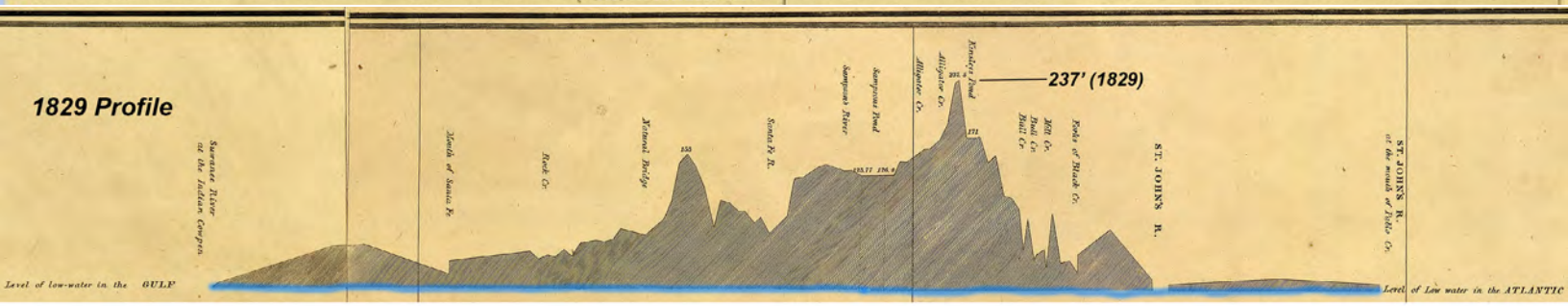
Surveys of the entrances to St. Mary's harbour St. Johns River St. Augustine by Lt. Searle and his assistants under the orders of Lt. Col. P.H. Perrault T.E.

Survey of the entrance to St. Rosa Sound by Lts. Canfield and J. R. Smith under the orders of Lt. Col. P.H. Perrault

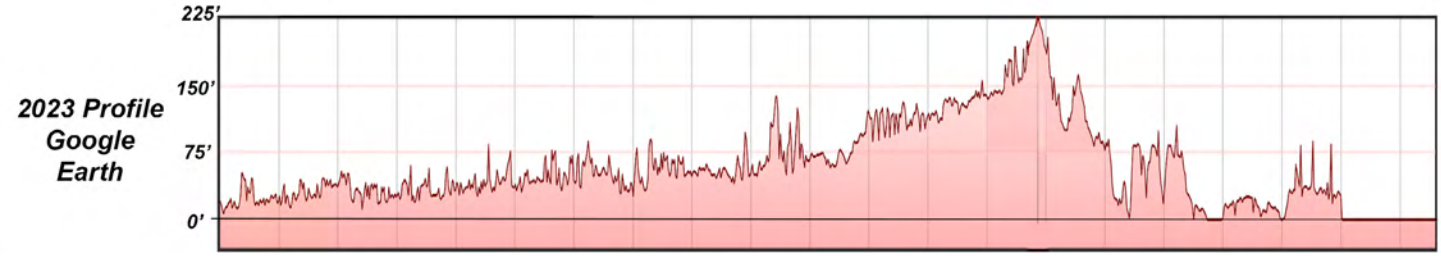
Surveys of the entrances to St. Andrew's Sound. St. Joseph's Bay. Appalachicola Bay. St. George's Sound. Ocklockony Bay. by Lt. Swift and his assistants under the orders of Lt. Col. P.H. Perrault T.E.

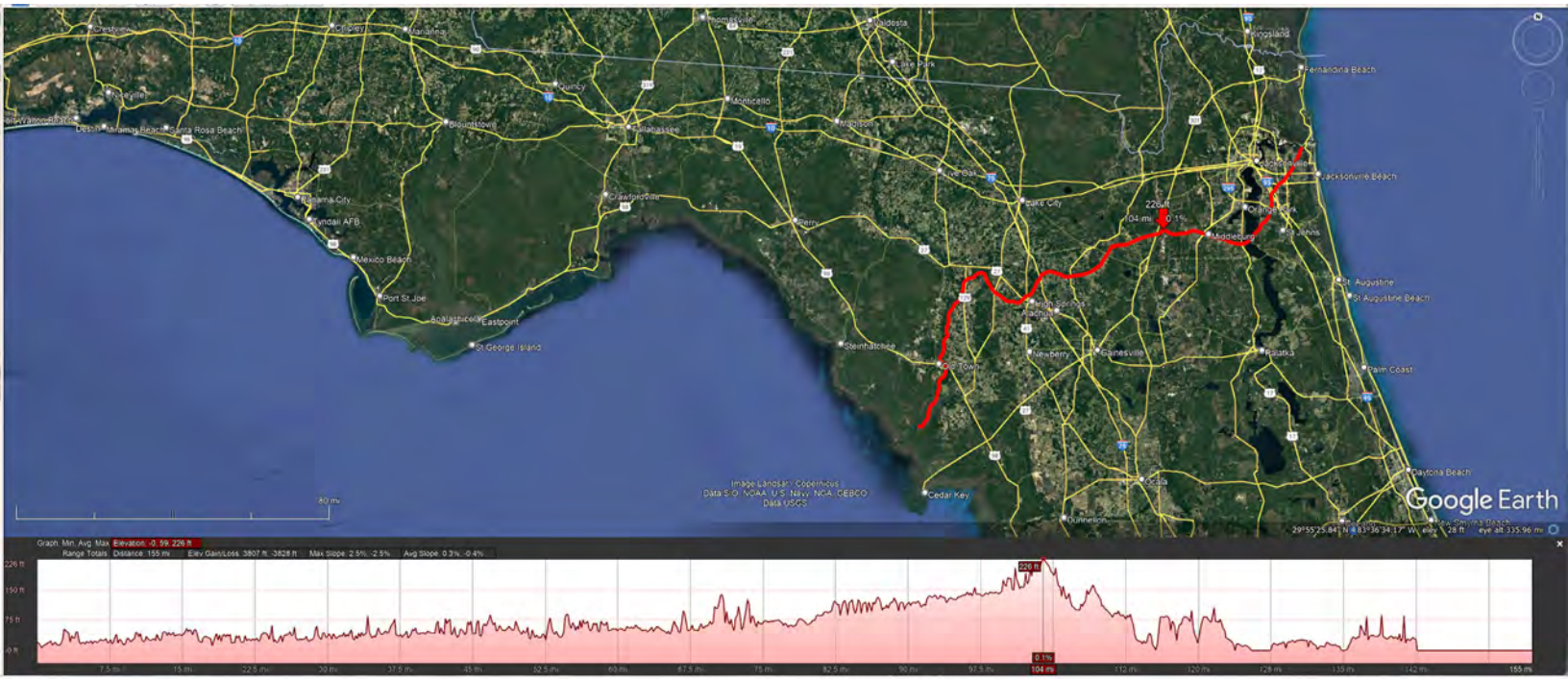
Information obtained by the Board of Internal Improvement during their examination of the Coast and Interior of the Country

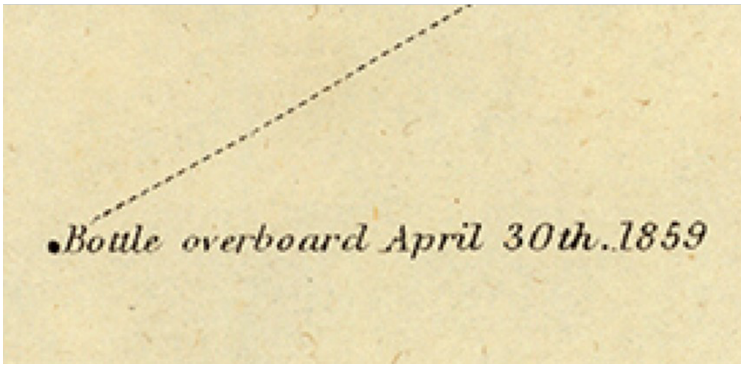
1829 Profile

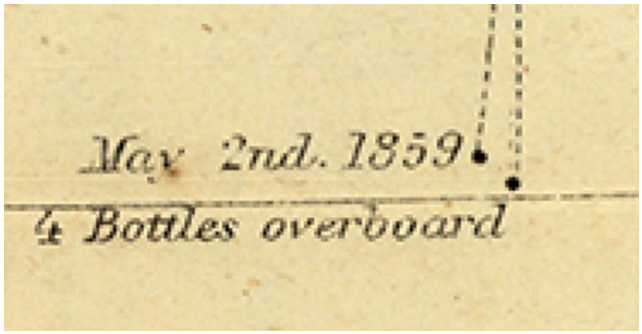


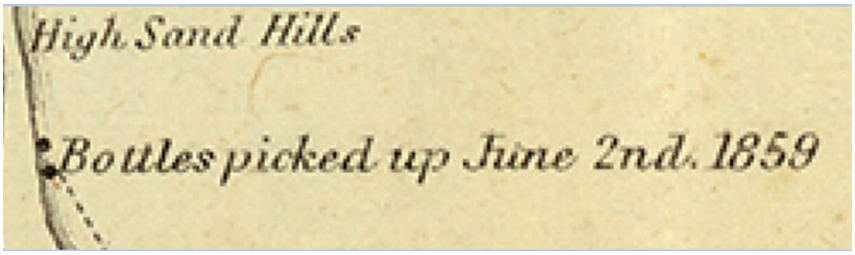
2023 Profile Google Earth











From the desk of Rick Pryce:

Just because it's on this map got me curious about what they actually drank back onboard ships. A little research and …..turns out they really did drink a lot of beer/rum, a daily ration and a reward, times haven't changed that much. Would be Pirates……

"It cannot be denied that sailors drank large quantities of alcohol. The average alcoholic beverage consumption across the drinking-age population in the early Republic stood at about 6.8 to7.1 gallons per person per year, whereas a sailor receiving his full spirit ration every day consumed slightly over 27 gallons per year." *USS Constitution Museum*

Drink in the "Grog" Tub: Beer, Rum, and Whiskey

Beer on Board in the Age of Sail — Smithsonian Libraries and Archives/Unbound

No. 25

U. S. COAST SURVEY
A. D. BACHE SUPERINTENDENT

SKETCH F

Showing the Progress of the Survey in

SECTION VI

With a General Reconnoissance of the

COAST OF FLORIDA

1848-56

Scale 1/200,000

1856

CHARLOTTE HARBOR

Gasparilla Pass 4½ Ft. Make Gull pines on main land to bear N. E. ½ Fathoms water base towards N. side of the pass, and run into 3 fathoms.

Boca Grande 12 Ft. Boca Grande opens when N. end Lacosta I. bears E. Make that point bear E. N. E. distant 5 miles, and keep so till S. end Gasparilla bears N. E. Then steer for that point due N. E. When inside and near Gasparilla, steer N. E. by E. to anchorage.

Captiva Pass 6 Ft. Approach from South distant 4 mile from land and cross the bar sailing due N. then bear N. E. to and through the pass with plenty water inside N. end of Captiva Island.

Sanibel Pass 8½ Ft. (perhaps 10 Ft.) Approach from S. and bring Points Boca to bear N. W. distant 21 miles, sail inside point of Sanibel I. to deep anchorage.

This Sketch of the Western Coast of Florida is based on a reconnoissance & observations by F.H. Gerdes Asst. U.S.C.S. on reconnoissance and a sketch by Capt. Casey U.S.A. & on the Maps of the Topographical Engineers. The triangulations and reconnoissances on the Florida Keys & vicinity shown in the succeeding sketches were made by parties on the Coast Survey. For detailed information concerning the Western Coast of Florida see Gerdes reconnoissance in annual report of 1851.

The Reconnoissance of the Eastern Coast of Florida to Miami R. was made by Maj. H. Prince U.S.A. Assist. U.S.C.S.

A ..... Signifies Astronomical Station
M ..... " Magnetic Station
X ..... " Current Station
T ..... " Tidal Station
_____ Lines between secondary occupied stations
_ _ _ _ _ _ do. do. do. occupied and unoccupied stations
. . . . . do. do. do. unoccupied stations
Topographical Sheets
Hydrographical do.

Continuation of The Eastern Coast

Sub-Sketch

Showing the progress of the Survey of

ST. JOHN'S RIVER

Scale 1/80,000

1856

Statute Miles

Statute Miles

From the desk of Rick Pryce:

To continue on with this series, we come to the US Office of the Coast Survey.

The surveys conducted and produced under them of the entire coast of the United States were extensive. The results of which were all works of art based on Surveyors, Cartographers, and Scientists, the brightest minds of the time. The one I have attached and provided a link to download is *"Sketch F – Section VI"*, just one in a series produced under A.D. Bache (great grandson of Benjamin Franklin) that shows the progression of the Coastal Surveys 1848-1856 of the Peninsular portion of Florida. The details and art work is amazing.

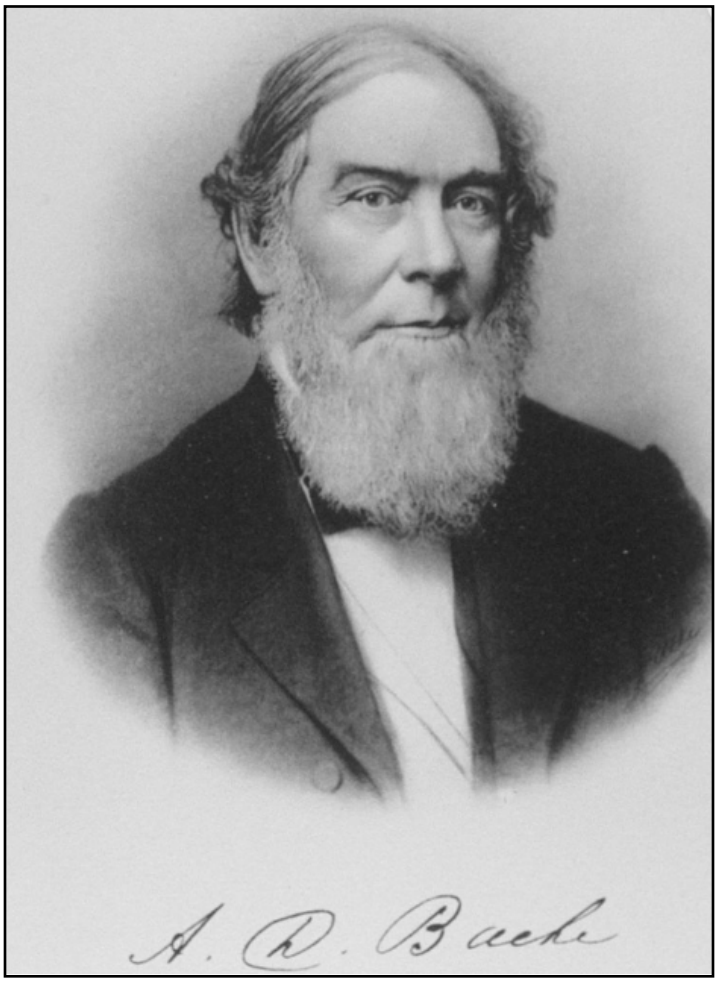
Side note: The bottles thrown overboard were to map and understand the currents along the coast and yes most of the bottles used were Rum bottles.

Download Map 3: https://fsms.memberclicks.net/assets/docs/SurveyingDocs/3_SketchF_USCoastalSurvey1856.pdf

From the desk of Rick Pryce:

History:

The Office of the Coast Survey, founded in 1807 by President Thomas Jefferson and Secretary of Commerce Albert Gallatin, is the oldest scientific organization in the U.S. Federal Government. Jefferson created the Survey of the Coast, as it was then called, in response to a need for accurate navigational charts of the new nation's coasts and harbors.



Those performed in 1843-1867 were extensive under Superintendent A.D. Bache.

Alexander Bache 1806-1867 was born in Philadelphia, the son of Richard Bache, Jr., and Sophia Burrell Dallas Bache. He came from a prominent family as he was the nephew of Vice-President George M. Dallas and naval hero Alexander J. Dallas.

He was the grandson of Secretary of the Treasury Alexander Dallas and was the great-grandson of Benjamin Franklin.

U.S. Coast Survey (Office of Coast Survey)

The Office of Coast Survey is the official chart-maker of the United States. Set up in 1807, it is one of the U.S. governments oldest scientific organizations. In 1878 it was given the name of Coast and Geodetic Survey (C&GS). In 1970 it became part of the National Oceanic and Atmospheric Administration (NOAA).

The agency was established in 1807 when President Thomas Jefferson signed the document entitled An act to provide for surveying the coasts of the

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United States. While the bills objective was specific—to produce nautical charts—it reflected larger issues of concern to the new nation: national boundaries, commerce, and defense.

The early years were difficult. Ferdinand Rudolph Hassler, who was eventually to become the agency's first superintendent, went to England to collect scientific instruments but was unable to return through the duration of the War of 1812. After his return, he worked on a survey of the New York Harbor in 1817, but Congress stepped in to suspend the work because of tensions between civilian and military control of the agency. After several years under the control of the U.S. Army, the Survey of the Coast was reestablished in 1832, and President Andrew Jackson appointed Hassler as superintendent.

The U.S. Coast Survey was a civilian agency but, from the beginning, members of the Navy and Army were detailed to service with the Survey, and Navy ships were also detailed to its use. In general, army officers worked on topographic surveys on the land and maps based on the surveys, while navy officers worked on hydrographic surveys in coastal waters.

Alexander Dallas Bache, great-grandson of Benjamin Franklin, was the second Coast Survey superintendent. Bache was a physicist, scientist, and surveyor who established the first magnetic observatory and served as the first president of the National Academy of Sciences. Under Bache, Coast Survey quickly applied its resources to the Union cause during the Civil War. In addition to setting up additional lithographic presses to produce the thousands of charts required by the Navy and other vessels, Bache made a critical decision to send Coast Survey parties to work with blockading squadrons and armies in the field, producing hundreds of maps and charts. Bache detailed these activities in his annual reports to Congress.

Coast Survey cartographer Edwin Hergesheimer created the map showing the density of the slave population in the Southern states. Bache was also one of four members of the governments Blockade Strategy Board, planning strategy to essentially strangle the South, economically and militarily. On April 16, 1861, President Lincoln issued a proclamation declaring the blockade of ports from South Carolina to Texas. Baches Notes on the Coast provided valuable information for Union naval forces.

Maps were of paramount importance in wartime:
It is certain that accurate maps must form the basis of well-conducted military

operations, and that the best time to procure them is not when an attack is impending, or when the army waits, but when there is no hindrance to, or pressure upon, the surveyors. That no coast can be effectively attacked, defended, or blockaded without accurate maps and charts, has been fully proved by the events of the last two years, if, indeed, such a proposition required practical proof.
— Alexander Dallas Bache, 1862 report.

Coast Survey attracted some of the best and brightest scientists and naturalists. It commissioned the naturalist Louis Agassiz to conduct the first scientific study of the Florida reef system. James McNeill Whistler, who went on to paint the iconic Whistlers Mother, was a Coast Survey engraver. The naturalist John Muir was a guide and artist on Survey of the 39th Parallel across the Great Basin of Nevada and Utah.

The agency's men and women (women professionals were hired as early as 1845) led scientific and engineering activities through the decades. In 1926, they started production of aeronautical charts. During the height of the Great Depression, Coast and Geodetic Survey organized surveying parties and field offices that employed over 10,000 people, including many out-of-work engineers.

In World War II, C&GS sent over 1,000 civilian members and more than half of its commissioned officers to serve as hydrographers, artillery surveyors, cartographers, army engineers, intelligence officers, and geophysicists in all theaters of the war. Civilians on the home front produced over 100 million maps and charts for the Allied Forces. Eleven members of the C&GS gave their lives during the war.

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OUR PAC WANTS YOU

From the desk of Rick Pryce:

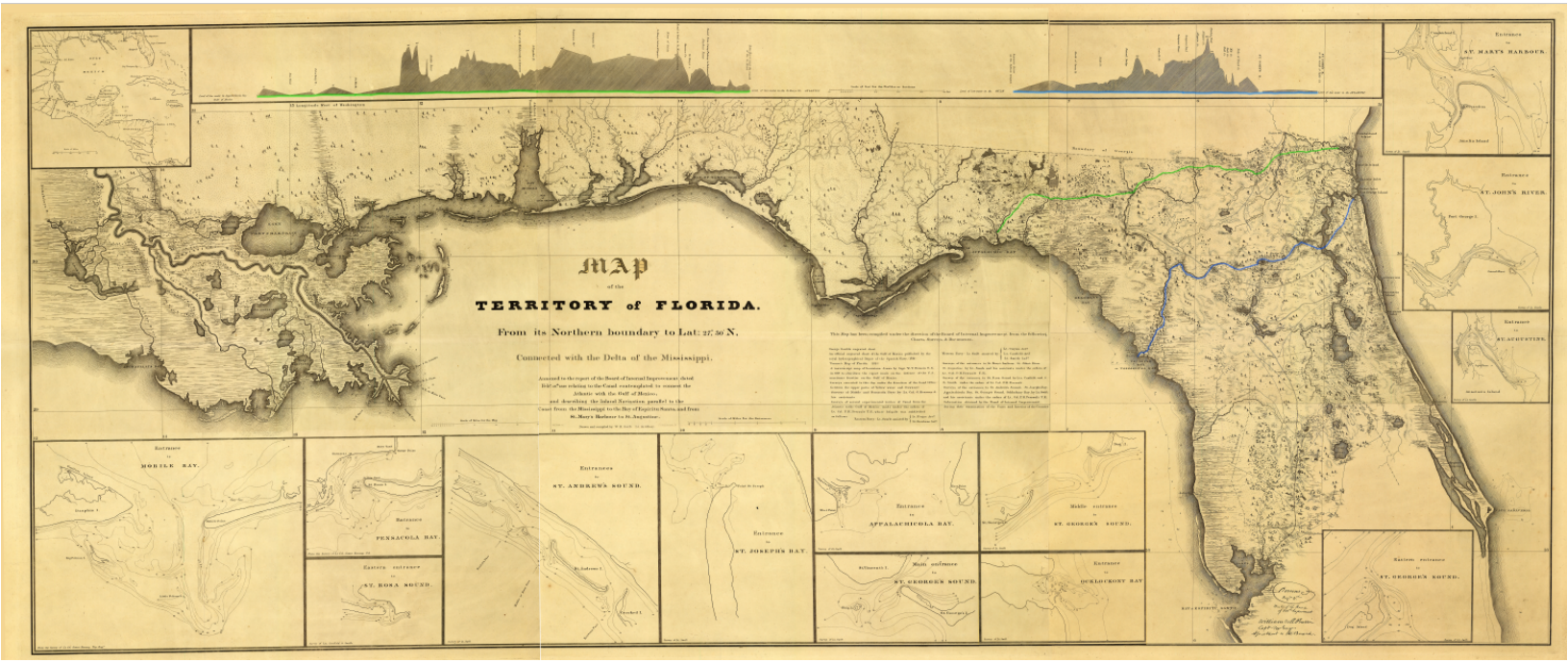
I try to ensure these maps are the highest quality so you can print and display them to others. There's just something about a great map. It creates thoughts and discussions between professionals, scholars and lay persons. It transports you back in time to when it was created, what they were doing and planning, and how they saw the world. And if done with the eye of an artist, the detail of a Cartographer/Surveyor, it creates a masterpiece, one of a kind.

We'll continue this map series with the Cross-Florida Canal saga that never got built. I just love a Great map with a back story .....

Embraced in the preliminary Survey and Examination of the Peninsula of Florida with a view to the construction of a Ship Canal from the St. Mary's River to the Gulf of Mexico

Made in 1879

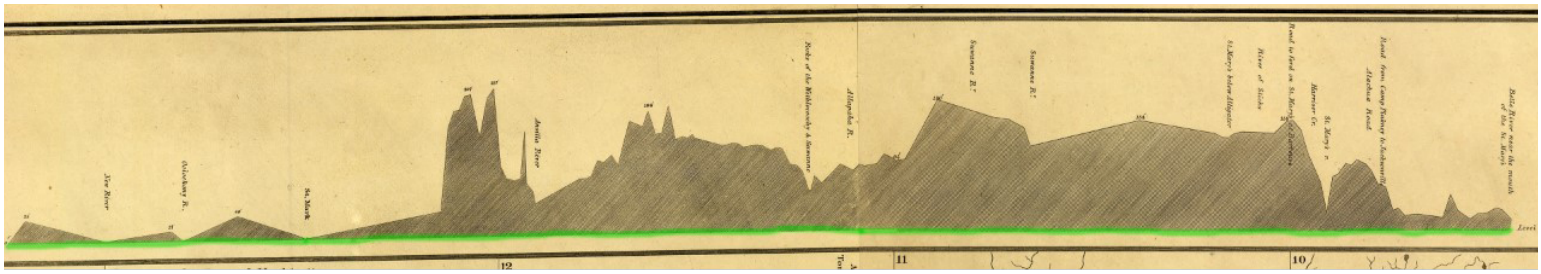
Remember this image below from Part 2, and I compared the blue line profile with Google Earth profile today?



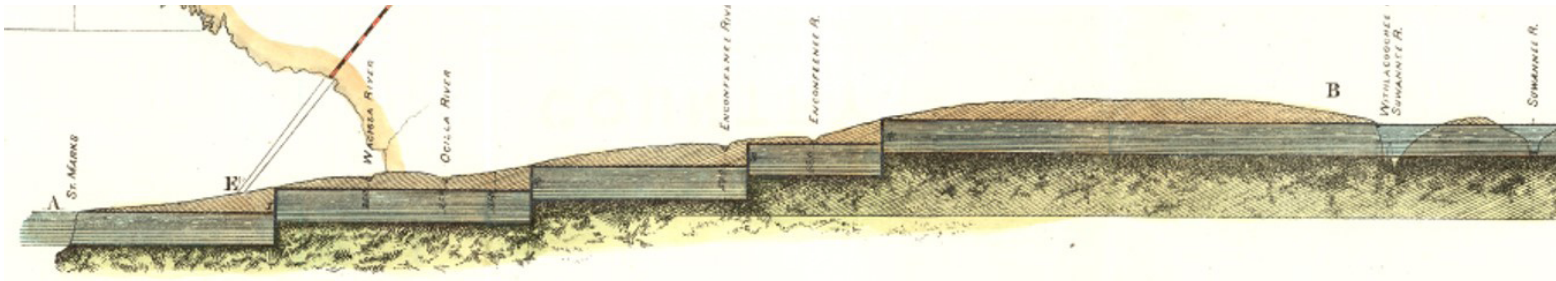
Well in 1879 they revisited the Cross-Florida Shipping Canal with a more extensive and detailed survey along the northern (Green) route, and created an exquisitely fine map of the project showing the original proposed barge canal route from 1829, the new route based on the survey, and a proposed alternate route.

From the desk of Rick Pryce:

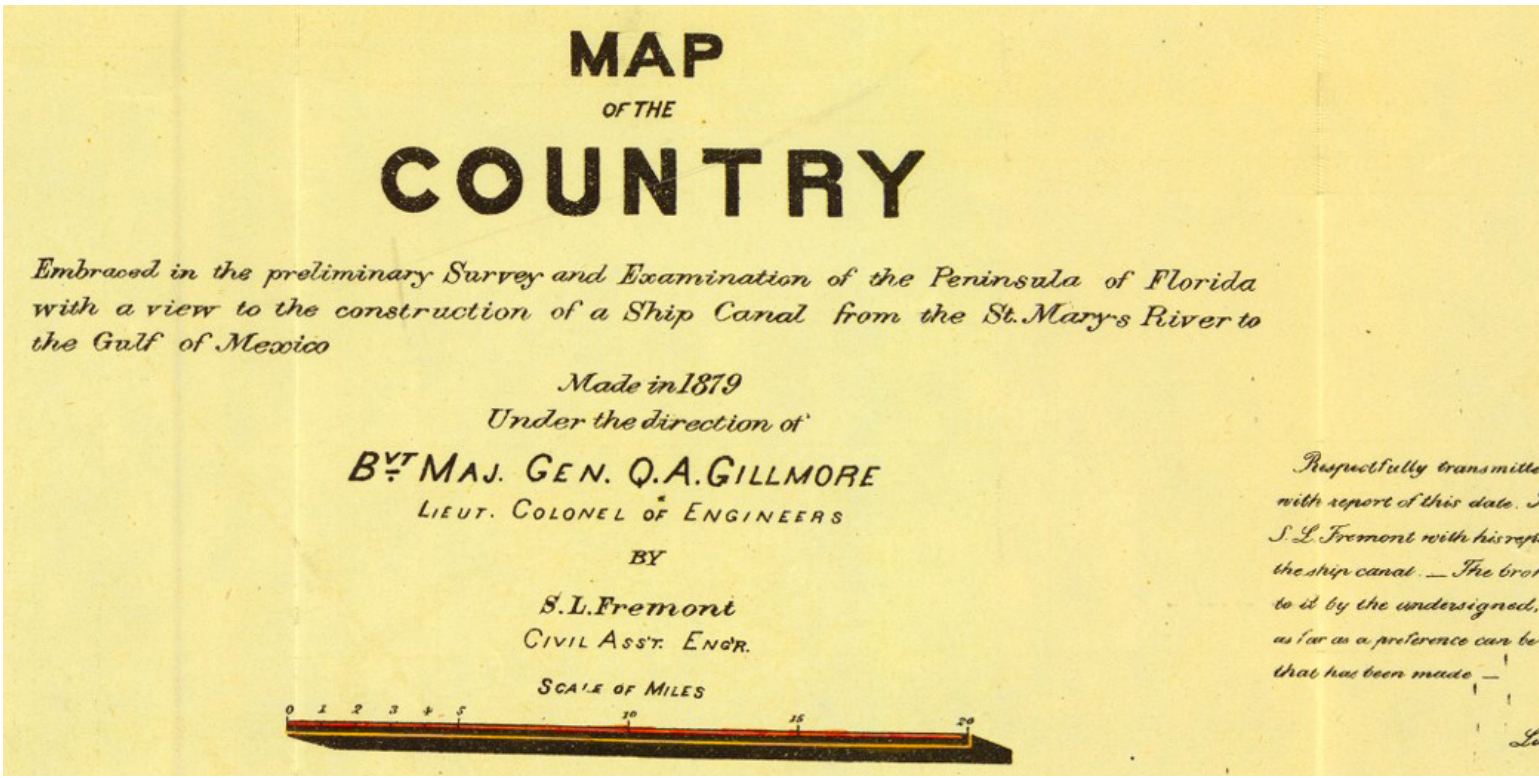
What started as the profile from February 1829 below,



Grew into a serious topographic survey and engineering project design with a series of proposed locks starting at Camp Pinckney of the St Mary's River and running to St Marks River south of Tallahassee. (Below)



The Map is titled below:



MAP

OF THE

COUNTRY

Embraced in the preliminary Survey and Examination of the Peninsula of Florida with a view to the construction of a Ship Canal from the St. Marys River to the Gulf of Mexico

Made in 1879

Under the direction of

BVT MAJ. GEN. Q.A. GILLMORE

LIEUT. COLONEL OF ENGINEERS

BY

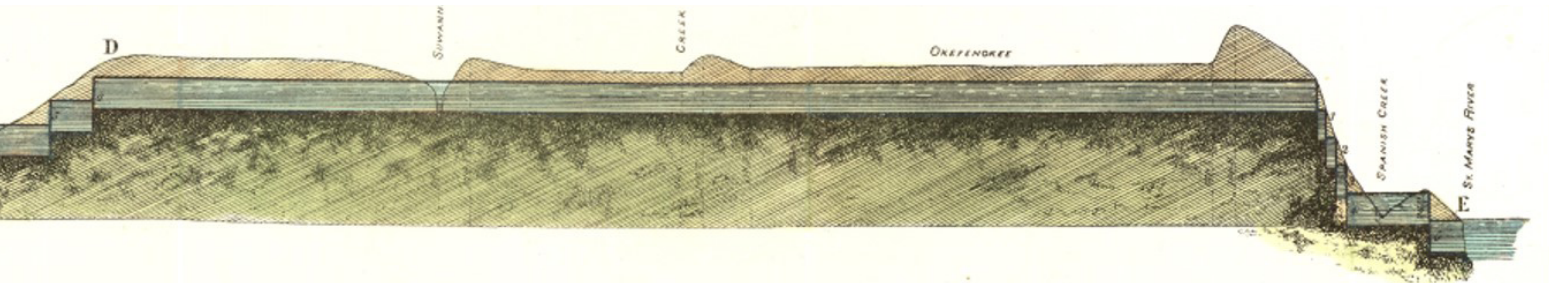
S.L. Fremont

CIVIL ASS'T. ENG'R.

SCALE OF MILES

0 1 2 3 4 5 10 15 20

Respectfully transmitte
with report of this date.
S.L. Fremont with his rep
the ship canal. — The bro
to it by the undersigned,
as far as a preference can be
that has been made —



New York, April 6. 1880

...d to the Chief of Engineers, U.S Army.

This map was submitted by Asst. Engr. ...

...ort of the survey and his project for ...

...ken line E.B.C.D has been added ...

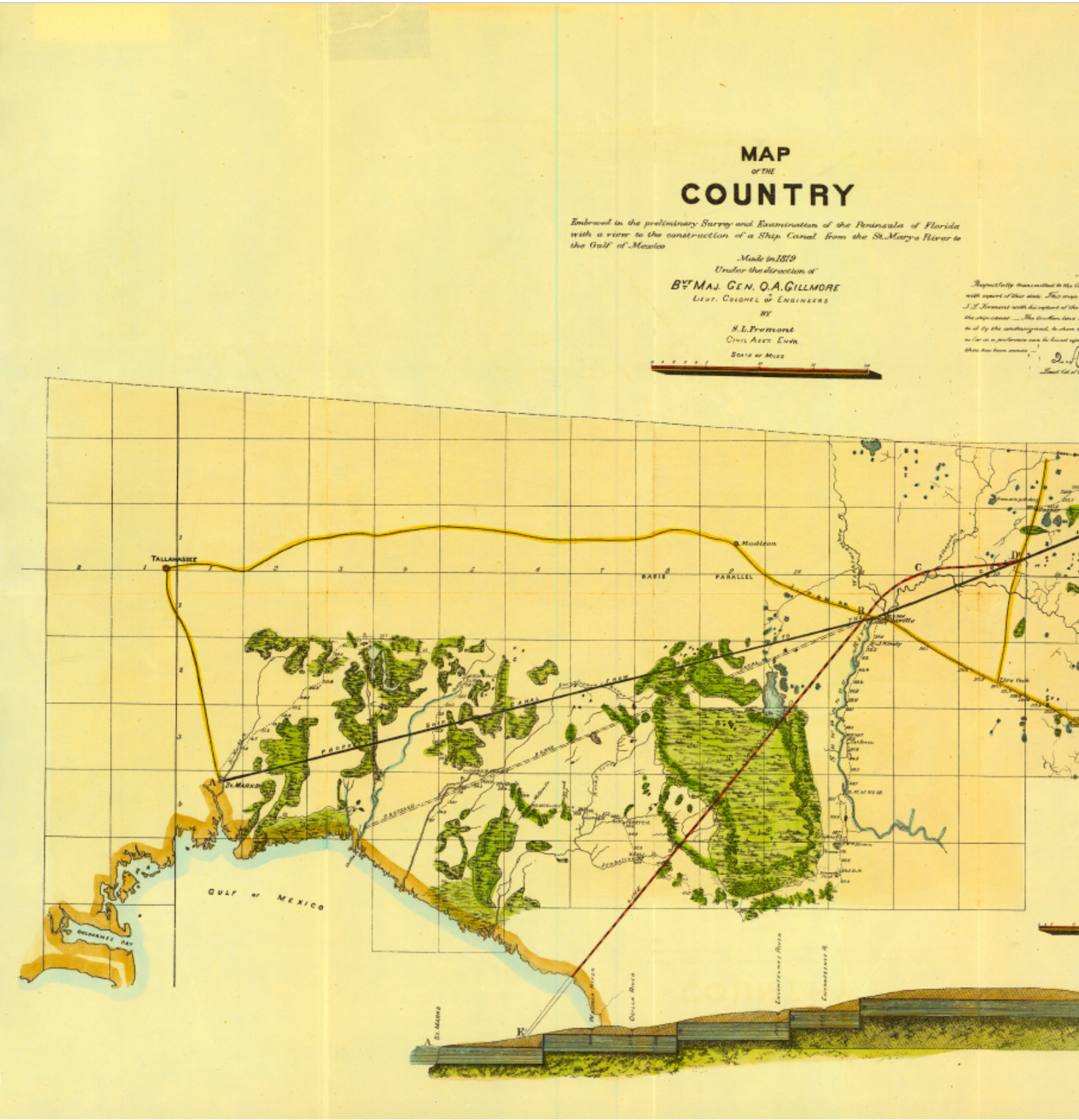
... to show the route preferred by him, ...

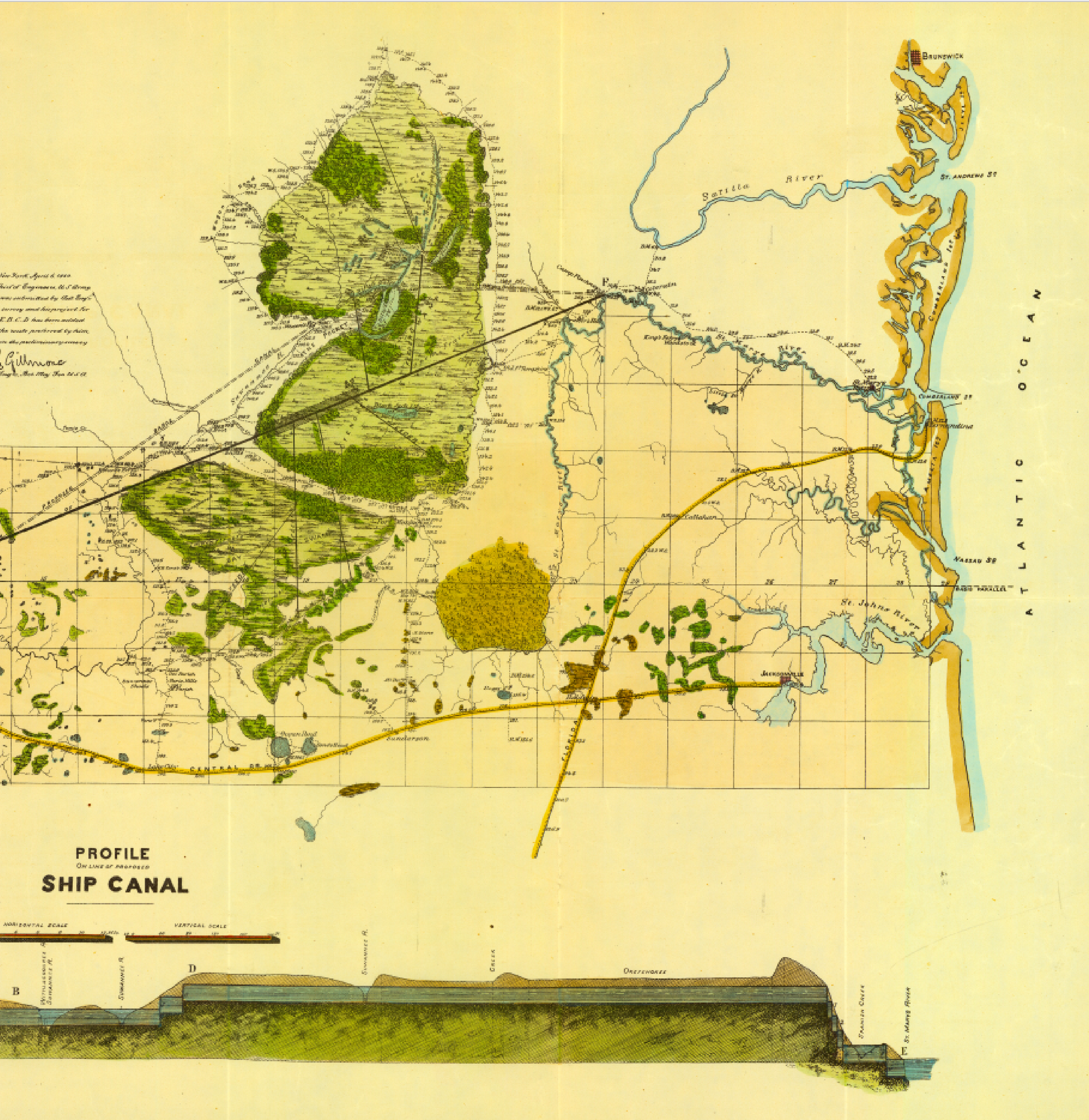
... based upon the preliminary survey

Q. A. Gillmore

...ieut. Col. of Eng'rs, Bvt. Maj. Gen. U.S.A.

See the full map below and download a high-resolution version (72megs) here: https://fsms.memberclicks.net/assets/docs/SurveyingDocs/4_FLoridaShipCanal1879.pdf




BRUNSWICK
Satilla River
ST. ANDREWS SD
CUMBERLAND SD
NASSAU SD
BASIS PARALLEL
ATLANTIC OCEAN
St. Johns River
JACKSONVILLE
PROFILE
ON LINE OF PROPOSED
SHIP CANAL
HORIZONTAL SCALE
VERTICAL SCALE
SUWANNEE R.
CREEK
D
B
E
ST. MARYS RIVER

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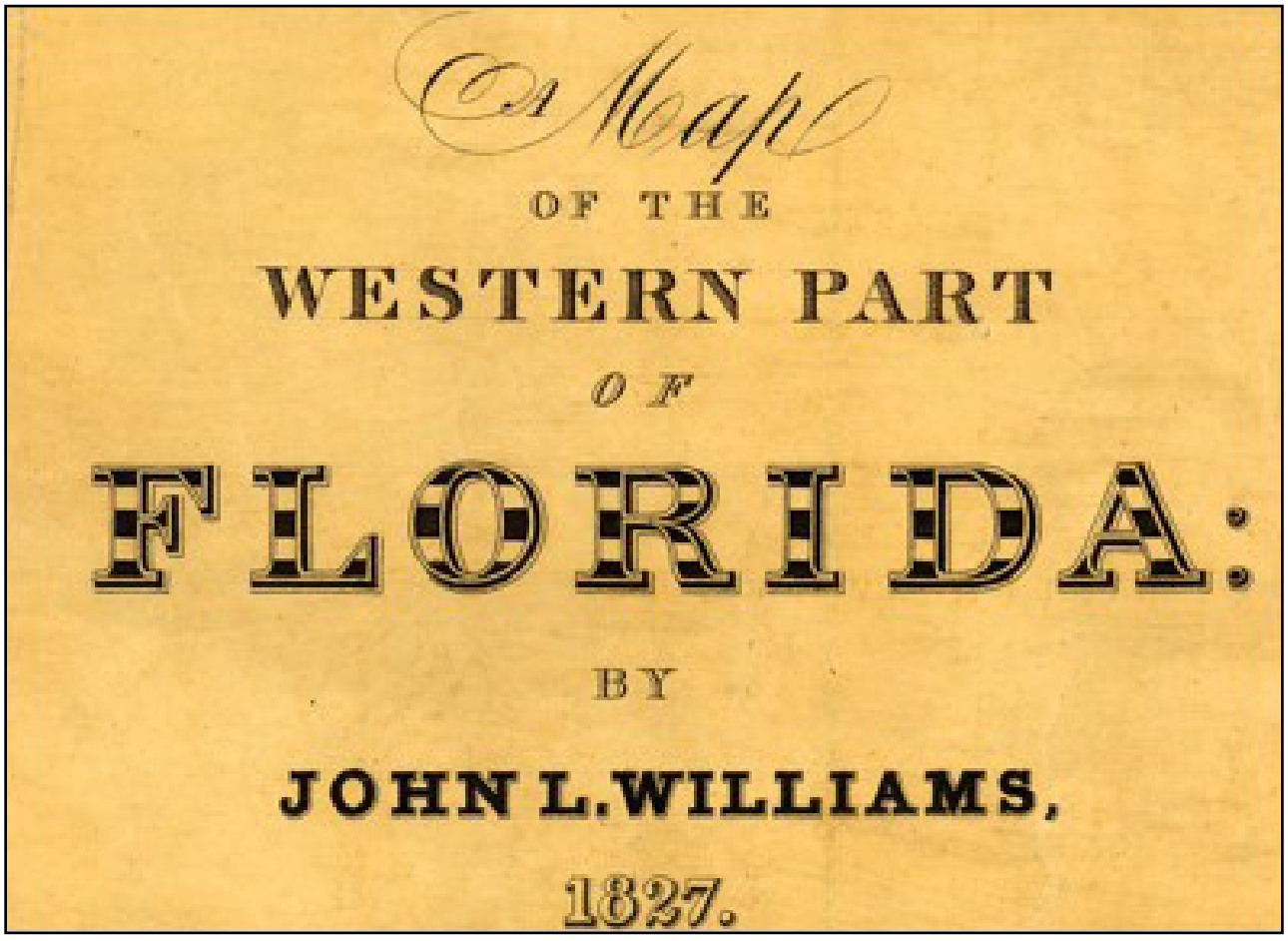
From the desk of Rick Pryce:

Let's all take a step back in time to see the progression of Maps & Surveys of Florida in sequence and the years leading up to Civil War and after Statehood. I have hand picked seven of the best quality for you in this series, all in color, and each one is a large high-quality PDF so downloads are available.

As a Surveyor, artist, and survey history buff, these reflect the wild Florida in its early stages of development, from some of the best map makers in the country at the time. The last two are particularly nice and in full color and highest of quality for the time.

Hope you enjoy them.

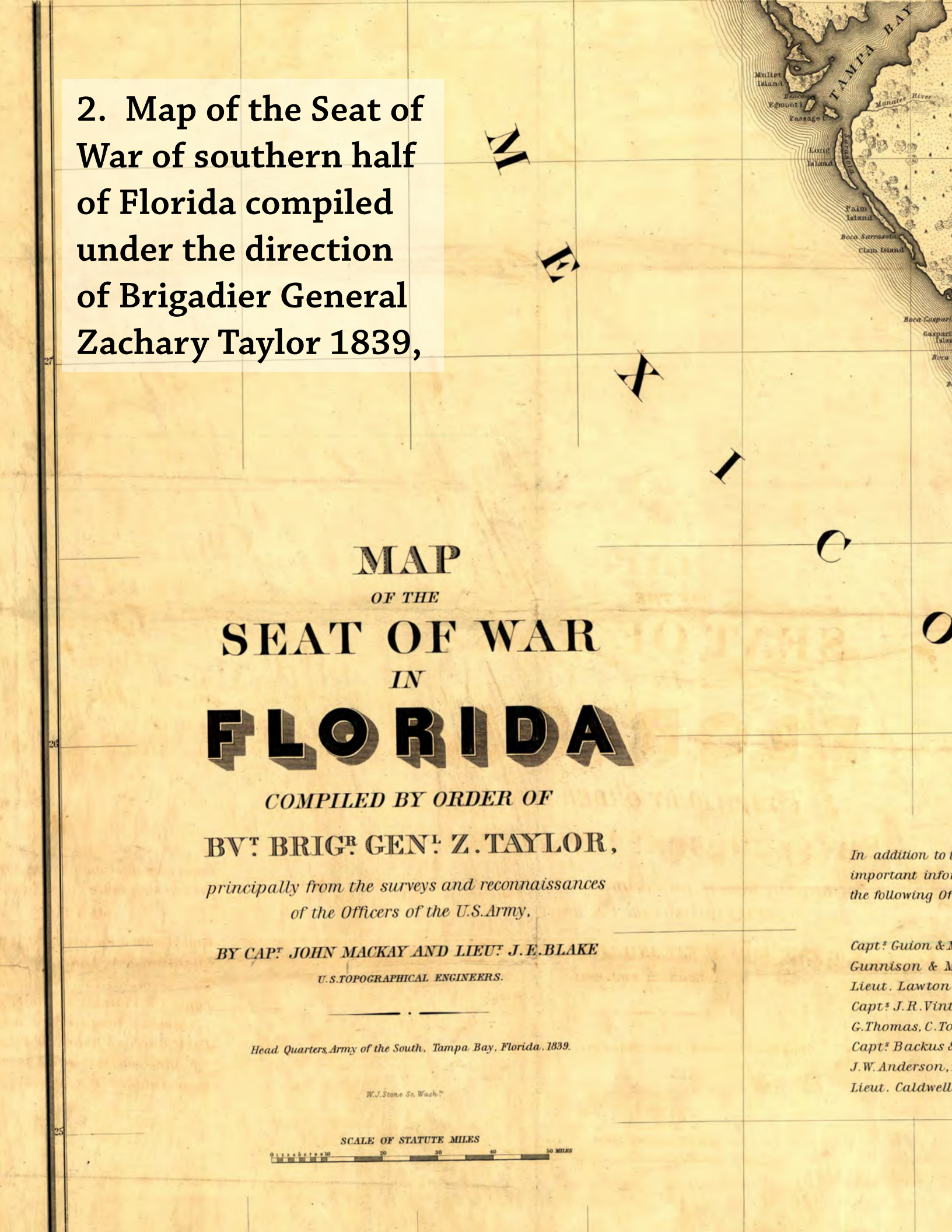
1. John Williams Map of Western part of Florida 1827,



10
9
8
31
30
29
A L A B A M A
ESCAMBIA
WALTON
JACKSON
WASHINGTON
MOBILE BAY
Blakely
Belpre
Gonzalez
Florida
Bonifay
Camp Clinch
PENSACOLA BAY
St ROSA SOUND
St ROSA ISLAND
CHACTAWHATCHEE BAY
Natural Bridge
Big Spring
Wapalaxy Bay
West Lagoon
East Bay
Crooked Island
Cape Fair
St Blass Cape
APPALACHICOLA BAY
Break Water Shoal
Grey Sand & Mud
Black Sand
Mud Sand & Shells mixed
White Sand
Coarse Sand
Spotted Sand
Small Gravel
Coral
Ooze
Sand & Shells
Shells & Coral
Hard Sand & Shells
GULF OF MEXICO
PLAN of PENSACOLA
Ft St Bernard
Ft St Michael
Pond
Vacant
Road to Camp Clinch
Spring
KING & HAINES CLAIM
WATSONS TRACT 800 ARPANTS
SMITH & RALMSONS TRACT 400 ARPANTS
BAYOU TEXAR
Burying Ground
Garden Street
Cadets Spring
PEDRO REGIS 130 ARPt
MITCHELETT 19 ARPt
PUBLIC SQUARE
A Market House
B Custom House
C Chappel
D Court Ho & Jail
E Old Collaboosa
F Public Store
LONGITUDE ST FROM WASHINGTON

1. John Williams Map of Western part of Florida 1827,

2. Map of the Seat of War of southern half of Florida compiled under the direction of Brigadier General Zachary Taylor 1839,



MAP
OF THE
SEAT OF WAR
IN
FLORIDA

COMPILED BY ORDER OF

BV^T. BRIG^R. GEN^L. Z. TAYLOR,

principally from the surveys and reconnaissances of the Officers of the U.S.Army,

BY CAP^T. JOHN MACKAY AND LIEU^T. J.E.BLAKE

U.S.TOPOGRAPHICAL ENGINEERS.

Head Quarters, Army of the South, Tampa Bay, Florida. 1839.

W.J.Stone Sc. Wash^n

SCALE OF STATUTE MILES

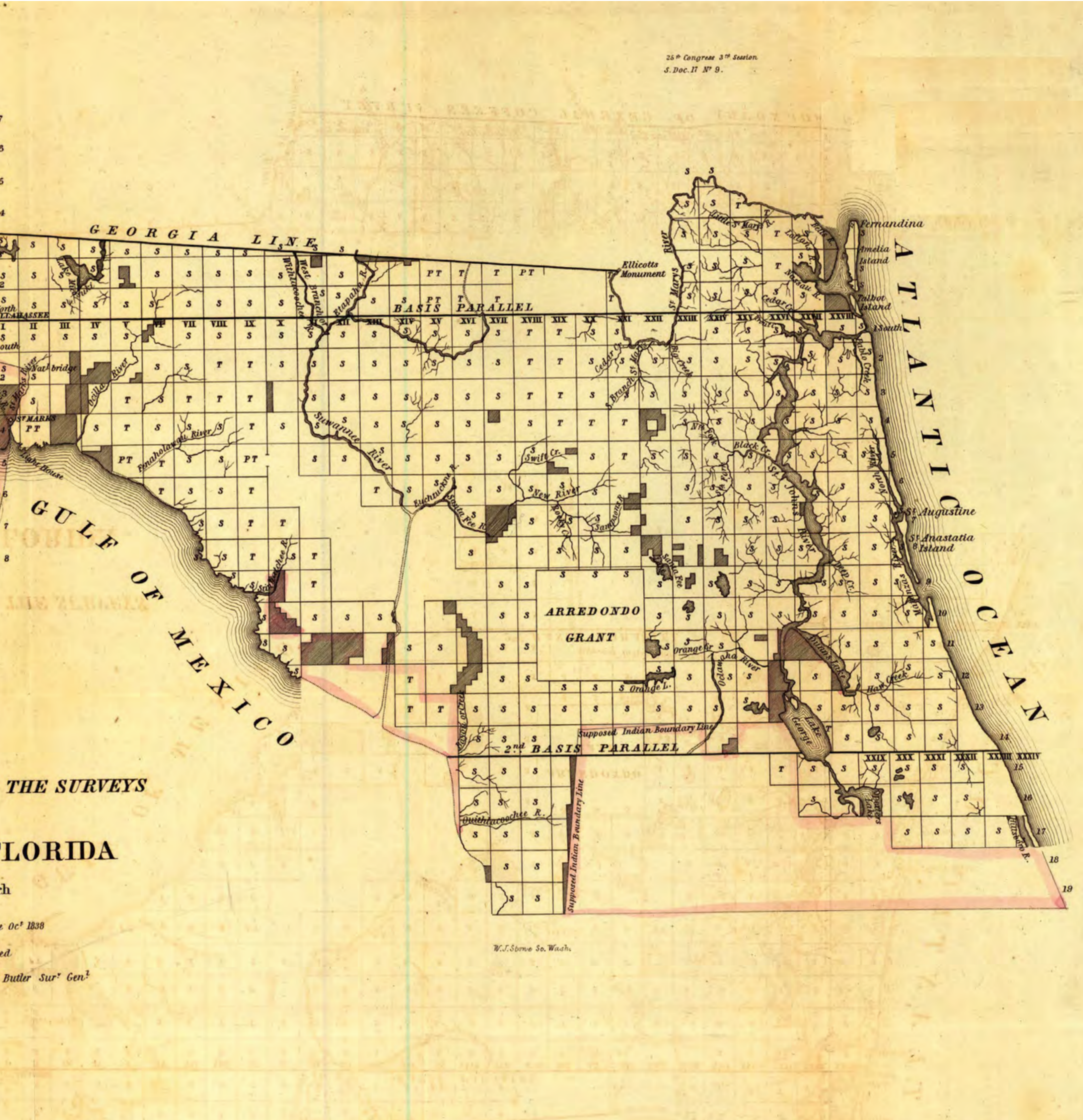
0 1 2 3 4 5 6 7 8 9 10 20 30 40 50 MILES

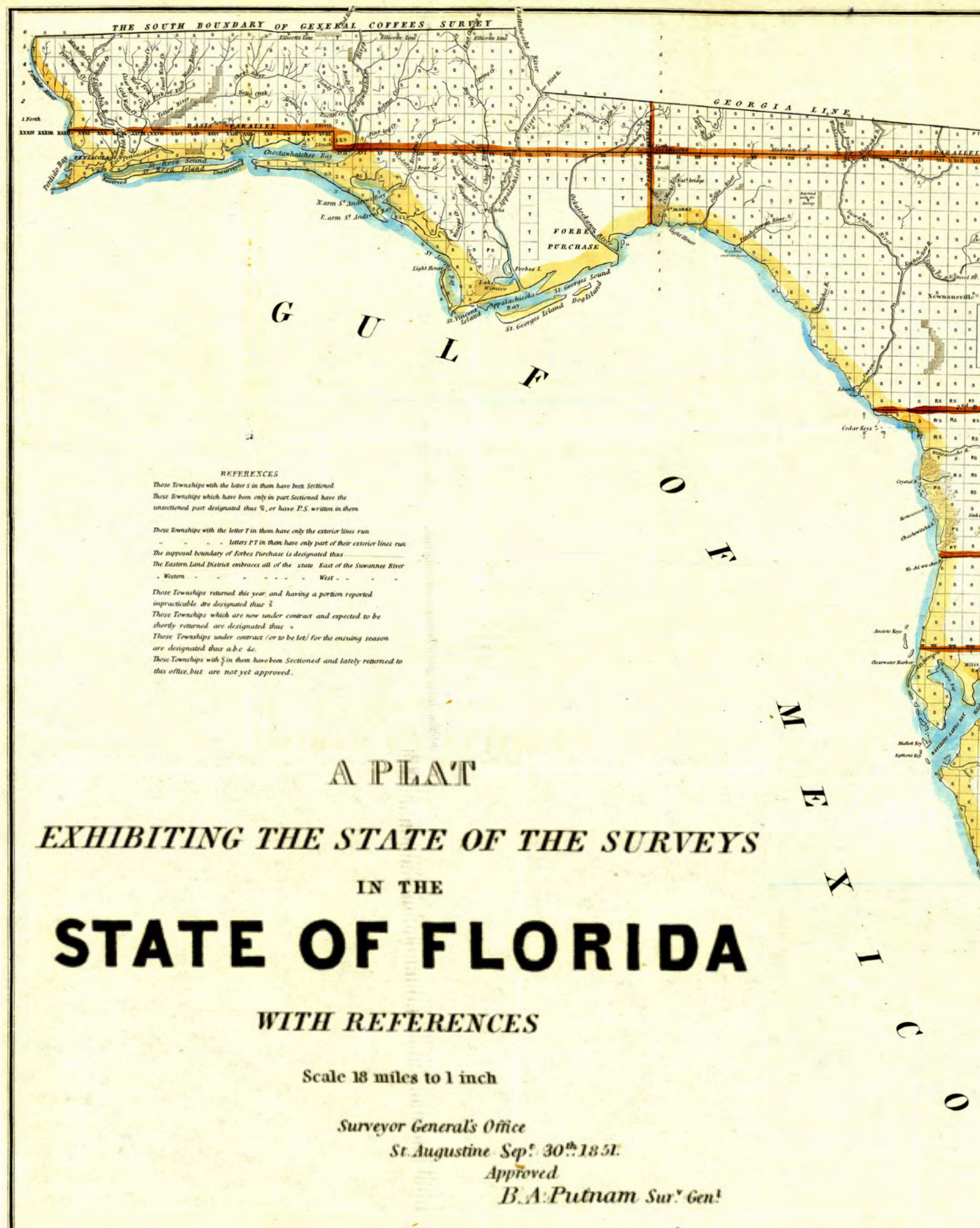
In addition to t
important infor
the following Of

Capt^s Guion &
Gunnison & M
Lieut. Lawton
Capt^s J.R.Vint
G.Thomas, C.To
Capt^s Backus &
J.W.Anderson,
Lieut. Caldwell

LAKE ISTOKPOGA
KISSIMMEE RIVER
Ft. Basinger
Ft. Loyd
Battle of Okeechobee 25th Decr. 1837
Ft. Van Swearengen
Ft. Pierce
Indian River Inlet
ST. LUCIE SOUND
AL-PAT-IO-KEE SWAMP
LAKE OKEE-CHO-BEE OR BIG WATER
Good Water
Col. P. Smith's
Ft. Center
Ft. Thompson
Fort T.B. Adams
Ft. Deynaud
Old Canal
CHARLOTTE HARBOR
PINE ISLAND
Captive Island
Boca Seca
SANYBEL ISLAND
Dulaney
Trading House
District assigned to the Seminoles by the Arrangement of Genl. Macomb May 18th 1839
Gillberts Bar
Ft. Jupiter
Jupiter Inlet
Mound
Fort Keais
BIG CYPRESS
Indian Camp
Boca Ratone Sound
Hillsborough Inlet
Ft. Lauderdale
New River Inlet
PAY-HAI-O-KEE OR GRASS WATER
Passage for small boats across the Everglades as reported by the Indians
Caximbas River
CAPE ROMAN
GALLIVANS BAY
Fort Dallas
Boca Ratones
Bear Cut
Key Biscayne
Light House
KEY BISCAYNE BAY
CAPE FLORIDA
Soldier Key
Elliots Key
Sharks River
Ft. Poinsett
CAPE SABLE
BARNES SOUND
27
26
25
the Maps heretofore published
rmation has been obtained from
fficers in the compilation of this
MAP.
Mackay, Lieuts. Linnard, Blake,
Mc. Lane.
Topogl. Engs.
U.S. Dragoons.
son & Searle; Lieuts. Bainbridge,
ompkins & J.M. Ketchum.
Artillery
& Rains; Lieuts. Long, Burnett,
H. Prince & Reynolds.
Infantry
, U.S. Marines.
J. Mackay
Captn. Corps Topogl. Engs.
J.E. Blake

3. 1838 Plat of Surveys Territory of Florida by Survey General Robert Butler,


25th Congress 3rd Session
S. Doc. 17 No 9.
GEORGIA LINE
BASIS PARALLEL
2nd BASIS PARALLEL
ARREDONDO GRANT
GULF OF MEXICO
ATLANTIC OCEAN
Fernandina
Amelia Island
Talbot Island
St. Augustine
St. Anastatia Island
Ellicotts Monument
St. Marys River
Suwannee River
Lake George
Supposed Indian Boundary Line
THE SURVEYS
FLORIDA
Butler Surr Genl
W.J. Stone Sc. Wash.



REFERENCES

These Townships with the letter S in them have been Sectioned.
These Townships which have been only in part Sectioned have the unsectioned part designated thus ⅋, or have P.S. written in them.

These Townships with the letter T in them have only the exterior lines run.
" " " " letters P T in them have only part of their exterior lines run.
The supposed boundary of Forbes Purchase is designated thus ——
The Eastern Land District embraces all of the state East of the Suwannee River
" Western " " " " " " West " " " "

These Townships returned this year, and having a portion reported impracticable are designated thus ⅔
These Townships which are now under contract and expected to be shortly returned are designated thus ×
Those Townships under contract (or to be let) for the ensuing season are designated thus a.b.c &c.
These Townships with § in them have been Sectioned and lately returned to this office, but are not yet approved.

A PLAT

EXHIBITING THE STATE OF THE SURVEYS

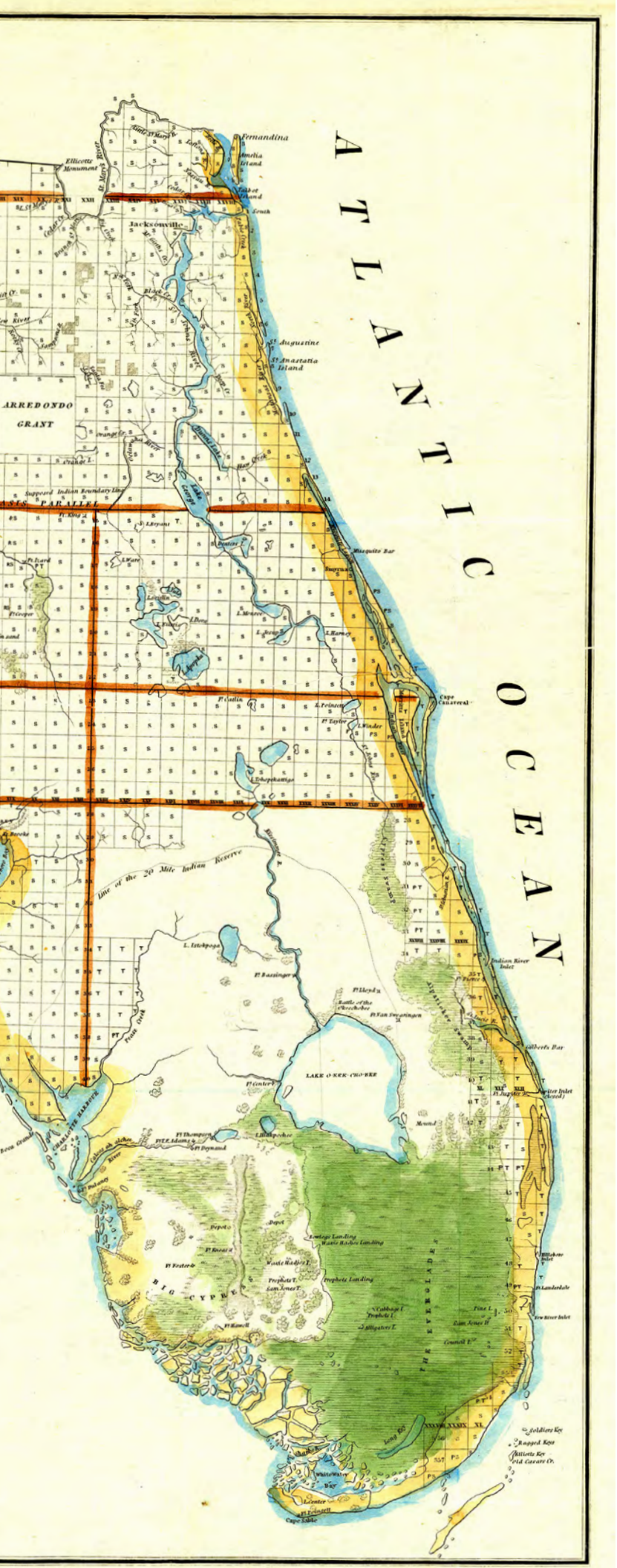
IN THE

STATE OF FLORIDA

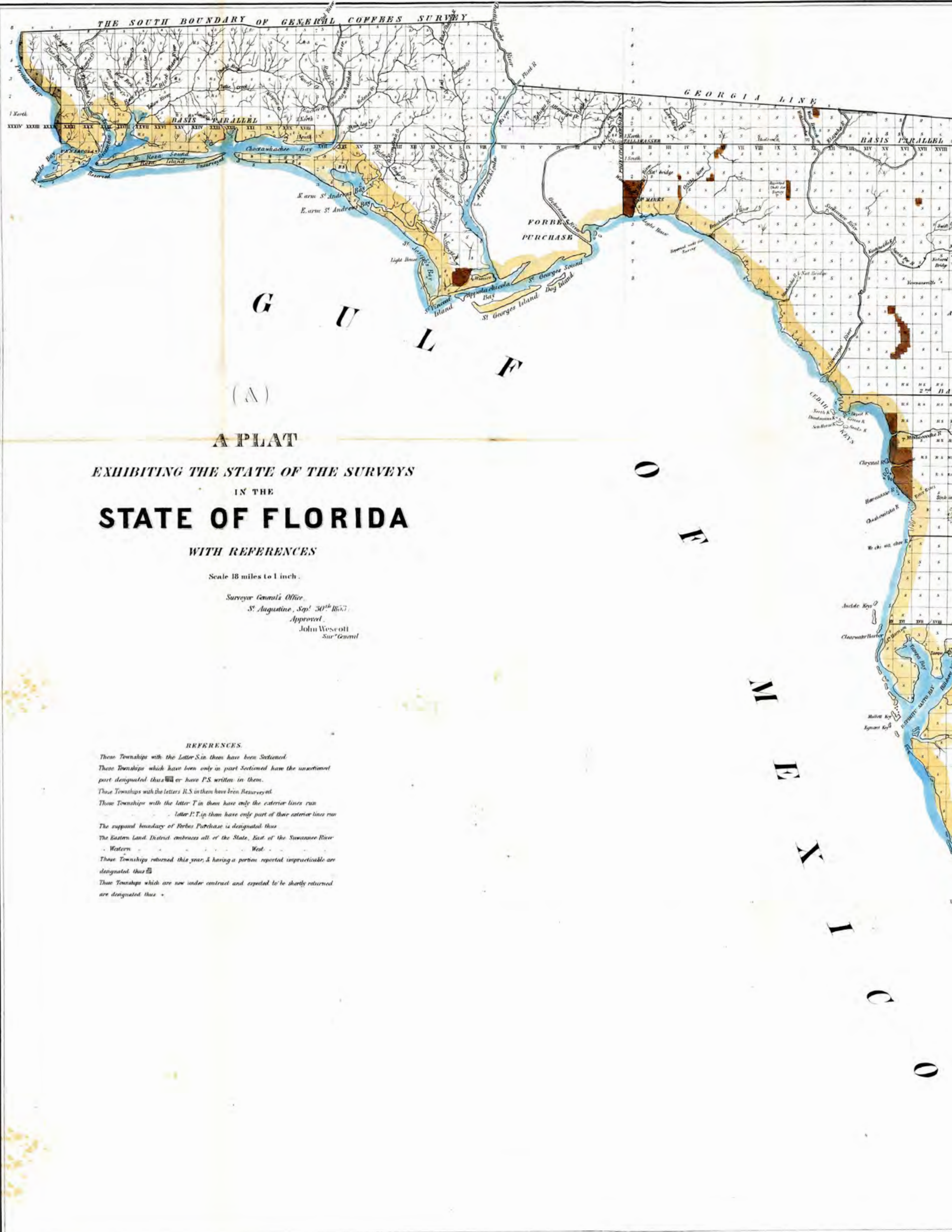
WITH REFERENCES

Scale 18 miles to 1 inch

Surveyor General's Office
St. Augustine Sep.r 30th 1851.
Approved
B. A. Putnam Sur.r Gen.l



4. 1851 Plat of Surveys in the State of Florida by B.A. Putnam, Survey General,



(A)

A PLAT

EXHIBITING THE STATE OF THE SURVEYS

IN THE

STATE OF FLORIDA

WITH REFERENCES

Scale 18 miles to 1 inch.

Surveyor General's Office,
St. Augustine, Sept. 30th 1853.
Approved.
John Wescott
Surr. General

REFERENCES.

These Townships with the Letter S. in them have been Sectioned.

Those Townships which have been only in part Sectioned have the unsectioned part designated thus ▪ or have P.S. written in them.

Those Townships with the letters R.S. in them have been Resurveyed.

Those Townships with the letter T in them have only the exterior lines run

" " " letter P. T. in them have only part of their exterior lines run

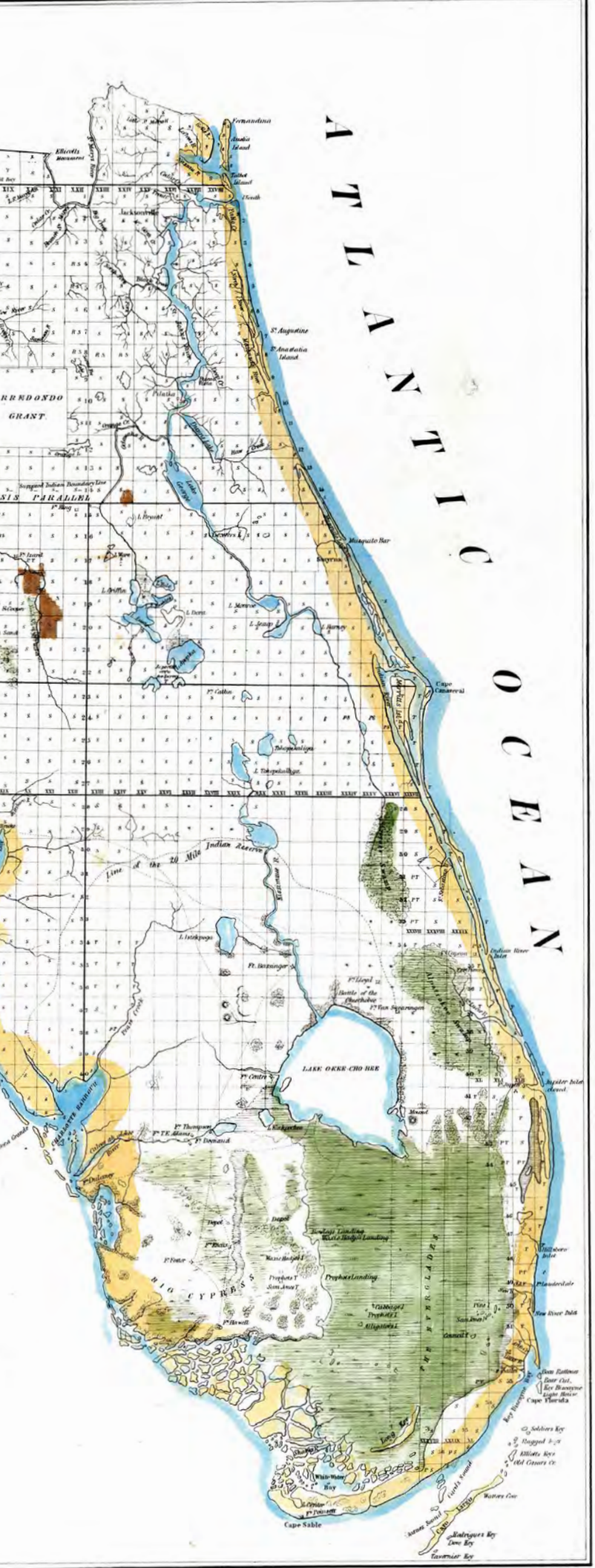
The supposed boundary of Forbes Purchase is designated thus

The Eastern Land District embraces all of the State, East of the Suwannee River

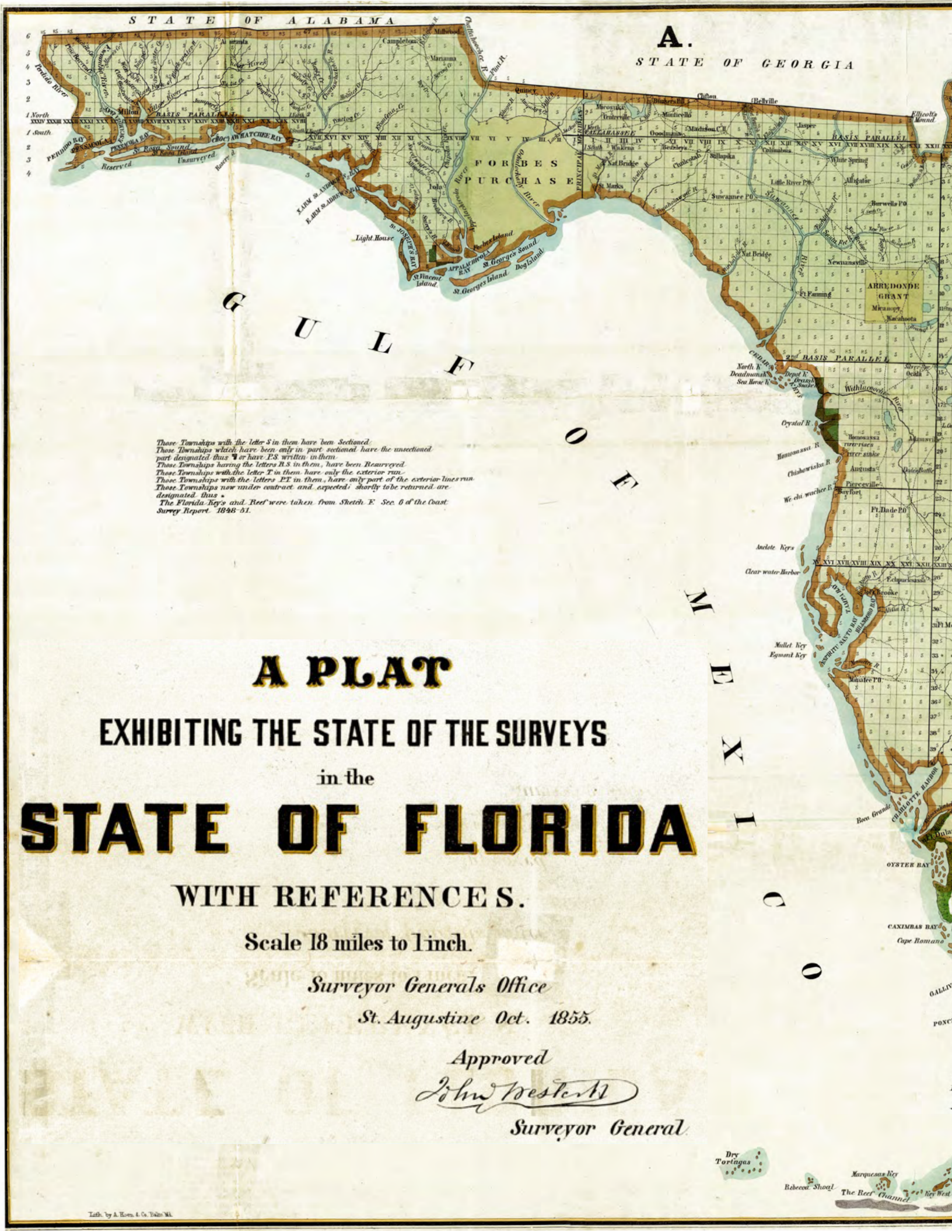
" Western " " " " " West " "

Those Townships returned this year, & having a portion reported impracticable are designated thus ▪

*Those Townships which are now under contract and expected to be shortly returned are designated thus **



5. 1853 Plat of Surveys in the State of Florida by John Wescott, Survey General,



A PLAT

EXHIBITING THE STATE OF THE SURVEYS

in the

STATE OF FLORIDA

WITH REFERENCES.

Scale 18 miles to 1 inch.

Surveyor Generals Office

St. Augustine Oct. 1855.

Approved

John Westcott

Surveyor General

Lith. by A. Hoen & Co. Balto. Md.

6. 1855 Plat of Surveys in the State of Florida by John Wescott, Survey General,


COLTON'S
NEW TOWNSHIP MAP
OF THE
State of Florida,
Compiled from the Official Records of the General Land Office U.S.Coast Survey
U.S.Engineers, Post Office Dep't, Rail Road surveys and other authentic sources.
PUBLISHED BY G.W.& C.B.COLTON & Co. 172 WILLIAM ST. NEW YORK
1873.
MAP SHOWING THE RELATION
OF FLORIDA TO THE
WEST INDIES
CENTRAL AMERICA, THE ISTHMUS OF PANAMA ETC.
THE BERMUDA ISLANDS
HAVANA
GULF OF MEXICO
ATLANTIC OCEAN
CARIBBEAN SEA
PACIFIC OCEAN
SANTA ROSA
WALTON
HOLMES
JACKSON
GADSDEN
LEON
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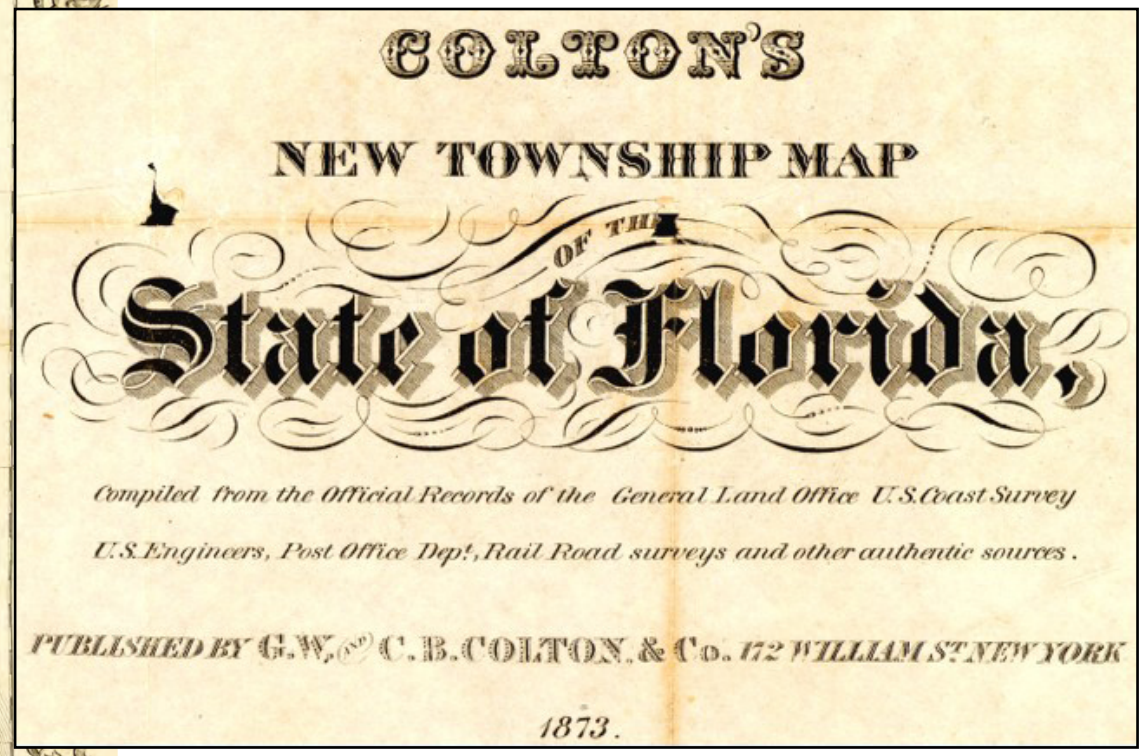
FRANKLIN
WAKULLA
LEVY
MARION
ALACHUA
PUTNAM
SUMTER
HERNANDO
PASCO
POLK
MANATEE
MONROE
DADE

7. And Finally the exquisitely detailed and colored 1873 Colton's New Township Map of the State of Florida


COLTON'S

NEW TOWNSHIP MAP

OF THE

State of Florida,

Compiled from the Official Records of the General Land Office U.S.Coast Survey

U.S.Engineers, Post Office Dep't, Rail Road surveys and other authentic sources.

PUBLISHED BY G.W.& C.B.COLTON & Co. 172 WILLIAM ST. NEW YORK

1873.

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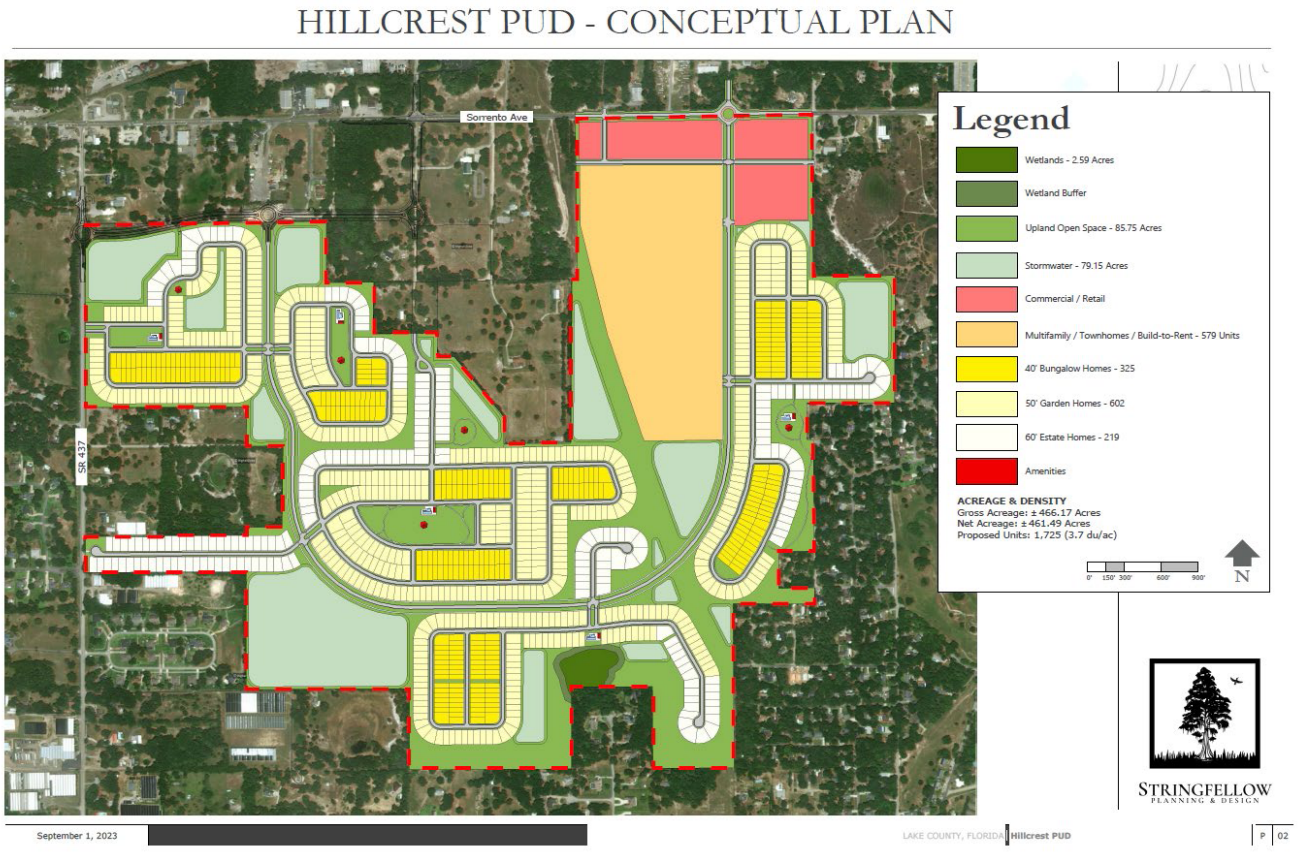
Surveyors in Government

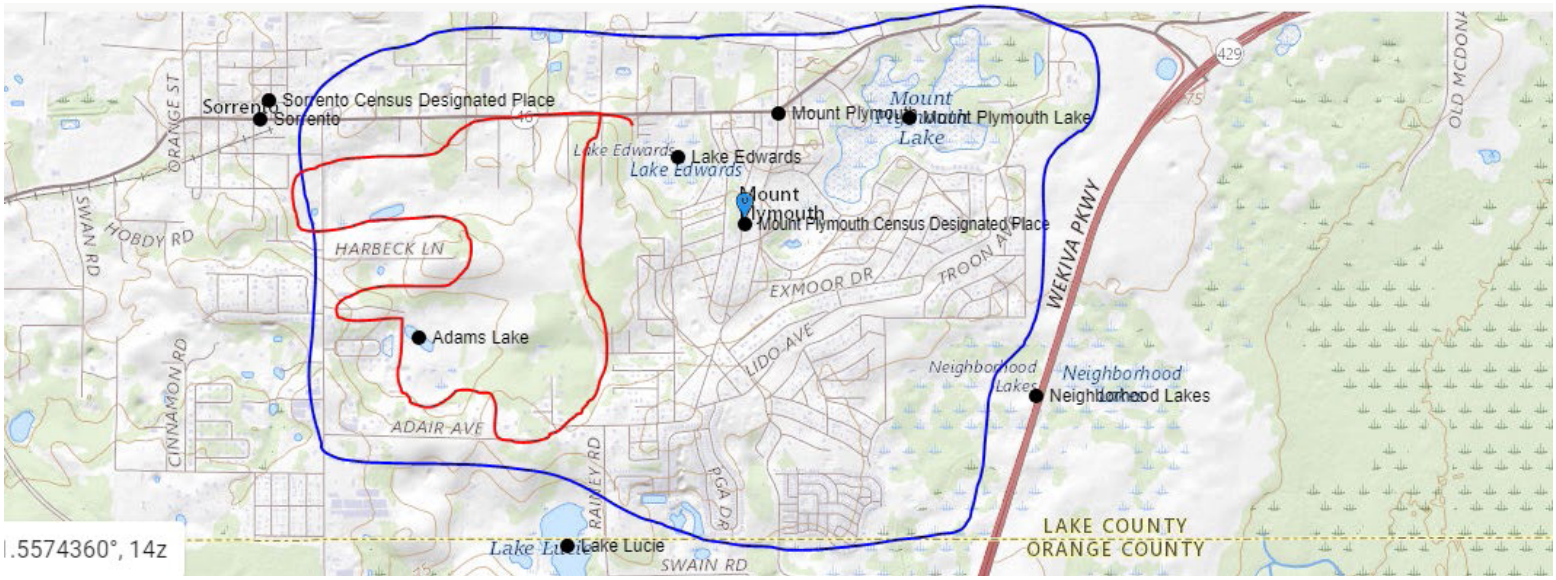
Greetings once again to my fellow surveyors in government and those who read this article. It has been a few months since my last article, and my apologies for that. I am trying to get back on the monthly ball of having an article ready. I know in the past I had a big talk about environment preservation for infrastructure. I know I have talked to a number of other government surveyors about the state of development within their jurisdictions. As you look at Florida, most of the counties are still rural. I work in a heavily developed region of the state, and as we know the south Florida region is heavily developed as well and forever pushing into sensitive lands.

Although I work in a heavily developing region, I live in an area that is not heavily developed but is on the cusp of being impacted by development, just as many other other rural jurisdictions are experiencing. As surveyors we find that development is good for business, but we all find we are left with congested roadways, depleting infrastructure, impact on wildlife, and a change of community.



Surveyors in Government

In my neighborhood of Mount Plymouth, it is a close-knit community of less than 1,000 people. I have read some numbers of less than 750 people as it is a combination of many old subdivisions and large tracts of land. In the map below you can see the area in blue is the existing community and the red is the Hillcrest PUD, which proposes to put 1,752 homes on 461 acres. For me in this area that I have spent most of the 45 years of my life living, it is heart breaking. As a surveyor, this is good work but as surveyors we are not all just about build, build, build!



I think a large number of us like land conservation and preventing urban sprawl, but that is hard to do when everyone wants to move here. We are an income tax free state as you know. In addition, our lack of snow and good weather are not helping us either. I do like all that but it can be heart breaking. Couple this with the rate of investors buying up real estate and making it difficult for our children to be able to afford to buy a home is concerning as well. Development can be a good thing for our industry but it can be detrimental as well.

I could not imagine the strain of development has put onto rural communities who have a lack of resources to keep up with demand. I am fortunate that it is not just me representing survey for the City of Orlando, I have a number of staff that work with me to insure development is done properly. I know there are many communities that are lucky to have a licensed surveyor or a field crew.

I find the more you can check what is being submitted the more likely you are to keep developers honest. Old saying of you build fences to keep the honest people out.

For those lifelong Floridians I want to ask you, what is your legacy that we leave to our children and grandchildren? Do we leave them a bunch of houses and strip malls? Do we leave them a community? Or does it matter what we leave them? A home is whatever we make of it, but it can be difficult to adjust to what an overdeveloped home may be. At one respect we are surveyors but in another we are constituents who must express what we envision for our community and place we call home.

Thank you for taking the time to read this article!

Sincerely,

Richard Allen,
City Surveyor for the City of Orlando
FSMS Surveyors in Government Liaison
407.246.2788 (office)
Richard.Allen@orlando.gov

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FACES ON THE FRONTIER

FLORIDA SURVEYORS AND DEVELOPERS IN THE 19TH CENTURY

by Dr. Joe Knetsch

CHAPTER 1

A BRIEF LIFE OF ROBERT BUTLER: SURVEYOR GENERAL OF FLORIDA

On February 22, 1824, Andrew Jackson wrote to John Coffee the following, "I found shortly after my arrival here that the surveyor Genls office for the Floridas was intended for Colo Preston late governor of Virginia, he had been appointed commissioner of land claims, held it nearly two years, recd the emoluments, and never went there. I had, in justice to Colo Butler, to interpose his claim, and bring to Mr Monroes recollection his promise to do something for Butler, and I have obtained his promise that he shall be provided for in Florida, and Mr Preston provided for otherwise."[1] Thus, through the direct intervention of Andrew Jackson, Robert Butler became the first Surveyor General of Florida in 1824. This office carried with it very heavy responsibilities, including setting out the territorial capitol, hiring the first surveyors and establishing the integrity of the surveys offered for acceptance. In performing these duties over an extended period of time from 1824 to 1848, Robert Butler performed a service for the State of Florida that should never be forgotten.

---

[1]The following sketch of the life of Robert Butler was presented on behalf of the Northwest Florida Chapter's nomination of the Butler grave site for the National Register of Historic Places. Its purpose was to quickly show the importance of Florida's first Surveyor General to the history of the Territory and the Nation. His life needs little introduction to the professional land surveyors of Florida because each follows,

to some degree, the dictates, orders or instructions Butler sent to the pioneer surveyors of Florida's vast frontier. In the daily life of most surveyors, the name of Robert Butler appears on plats, instructions or some other historic document that sets the pattern for public land surveys in our state. It is hoped that this brief biography will add a bit more depth to our understanding of this cautious and steady leader of Florida's first surveys.

The Correspondence of Andrew Jackson, Volume III, 229.

Butler began life on December 29, 1786, the eldest son of Colonel Thomas Butler, a Pennsylvania born Revolutionary War veteran and career officer in the United States Army. The life of a career officer led Thomas Butler through many moves and family displacements. One of the moves, however, put him in Davidson County, Tennessee, and a near neighbor to Andrew Jackson, with whom he became close friends. Upon Thomas Butler's tragic death in 1805 from the Yellow Fever epidemic in New Orleans, at the request of the father, Andrew Jackson extended a "father's guidance" over the career of young Robert A. Butler. At this point in his life, the young Butler was over six feet in height and noted for his fine physical appearance. Being reared in a military family, young Robert A. Butler turned to the military for his career, although the exact nature of his training is unclear.[2]

[2]Mary L. Davis, "Robert Butler: An American Pioneer," 1939.

Being the eldest son also gave young Butler much of the estate that his father had accumulated, including plantation lands near to Jackson's. The nearness to Jackson and the society of Nashville gave Butler some advantages in social learning and economic advancement. One of the main advantages was the love of horse racing, the favorite sport of the planter class. Also a lover of this sport was Rachel Jackson, the General's wife, and her favorite niece, Rachel Hays. Miss Hays was one of the more attractive and sought after young ladies of her day and Robert Butler became the victorious suitor. They were married at the "Hermitage" on August 29, 1808. The marriage not only made Butler a "relative" of Andrew Jackson, but also of the Hays and Donelson families, two of the more important families in frontier Tennessee. The marriage also brought other economic advantages that allowed Butler to advance in the amount of land and slaves owned. Robert Butler was well on the way to becoming one of the more successful planters in western Tennessee.

At this point in his life, the United States went to war with Great Britain in the War of 1812. In recognition of his previous military training and political contacts, he began the conflict with the rank of captain. According to his "memoir", published in the Nashville *Union*, in 1849, Butler served in some of the more important campaigns in the western theater of the war. He served in the investment of Camp Meigs under General Clay Green, of Kentucky, in early 1813. He accompanied General, later president, William Henry Harrison on his campaign into Upper Canada and fought at the Battle of the Thames. He was present at the re-occupation of Detroit, serving as the Adjutant-General for the Eighth Military Department. Presumably, he was promoted to the rank of major with this assignment, for when he is transferred to the Seventh Military Department, then under Andrew Jackson, he is listed as "Colonel" Robert Butler. For Butler, one of his most important services was the service on a board of officers that was "mainly instrumental in saving the troops from famine," in Detroit, the lakes being frozen over in that year.[3]

[3]Davis, 51.

His transfer led him into the thick of the fighting verses the Creek Indians in Southern Alabama. Here he raised troops to assist in the fighting under General John Coffee, later Surveyor General of the lands south of Tennessee. The object was to chastise the commander at Pensacola, who was correctly suspected of providing the Creeks with weapons. Jackson's force soon penetrated Florida and proceeded to Pensacola, where, by rapid movements, the General essentially surprised the enemy and with quick charges took the out-lying batteries. After entering Pensacola and dispatching the Indian faction, Jackson's men, including Butler, returned to Mobile, reinforced its defenses and headed toward New Orleans, the suspected target of British operations.[4]

[4]*Ibid*

The transfer to the Southern District, as Jackson called it, brought him into contact with many of his former friends and future associates, including Richard Keith Call, two-time governor of Territorial Florida, who frequently shared mess with him. Call also recalled sharing the privations

of campaigning and his tent with "the friend of my youth."[5] He was soon assigned recruiting duty in western Tennessee. Butler arrived back at headquarters in time to actively participate in the famed Battle of New Orleans. According to Call, he was heavily engaged in the fighting on January 8, 1815, when General Packenham and many others fell to American arms. For his part in the battle, he was one of three officers chosen to accept the surrender from the British commander at the close of the battle.[6] After this service, he immediately resumed his recruiting duties, assisting General Coffee in raising a force to fight the "Red Stick" faction of the Creeks.[7]

[5]J. Roy Crowther, *The Grand Lodge of Florida Free and Accepted Masons History, 1839-1989* (Jacksonville: Drummond Press, 1990), 10.

[6]Donald E. Merkel, *Colonel Butler and The Public Land Survey of Florida (1824-1849)* (Tallahassee: Florida Department of Transportation, 1974), 2.

[7]Davis, 52.

Shortly after the triumph at New Orleans, Jackson and his staff returned to Tennessee. Although Butler had been assigned to assist Coffee, he soon was back at his plantation attempting to get his affairs in order. In December of 1817, Jackson received orders to move his men out and drive the Creeks and Seminoles out of American territory and then out of Florida, technically a neutral area. The march took Butler through western Georgia and into Florida on the Apalachicola River. From Fort Gadsden, on said river, the march went nearly straight to the heart of the Miccosukee territory near the lake of the same name. There, a brief skirmish with the Indian forces under Kinhage took place and many cows, scalps and other goods were taken. As the enemy fled south, Jackson's forces followed hotly in pursuit. Another skirmish was fought near Suwannee Old Town and many prisoners and cattle were taken. The army then, after the capture of Arbuthnot and Armbrister, two British subjects suspected by Jackson of arming the Indians, held a court martial at St. Marks, Florida. Robert Butler, who had participated in the trial in which both men were found guilty as charged, signed the execution order. The executions caused a major international incident, which was soon smoothed over by tactful diplomacy.

After this exciting and dangerous mission had been completed, Butler was assigned to be the secretary to the commission negotiating with the Chickasaw nation. As secretary, Butler was assigned the duty of delivering the treaty in person to the president, James Monroe. Jackson wrote to the president, "Sir, This will be handed you by Colo. Robert Butler Adjutant Genl of the Southern Division, and who acted as Secretary to the commission charged with holding a treaty with the chikisaw [sic] nation, who I beg leave to introduce to your personal knowledge as a good citizen & valuable officer who has served throughout the whole Southern campaigns in the late war, and accompanied me in the late campaign against the Seminoles, and to whom I beg leave to refer to you for any information on the subject of the latter campaign."[8] Although Calhoun, in his efforts to embarrass Jackson, accused Butler of putting in "exorbitant" rates for his rooms and meals, Butler had the total confidence of Jackson, and later, Monroe.[9] Butler remained in Washington after delivering the papers and kept Jackson fully informed on the actions of his enemies and the passage of the treaty.[10]

[8]*The Papers of Andrew Jackson*, Volume IV, *1816-1820*, 1994, 245.

[9]Davis, 55.

[10]*The Papers of Andrew Jackson*, VI, *1816-1820*, 255-56.

Upon returning to Tennessee, Robert Butler began to get his affairs in order. He remained on "duty" as Jackson's Adjutant, a very important post in the turbulent political climate of the day. In early 1819, he began getting Jackson's papers in order and notified the General of a certain letter book that had disappeared from the collection. He voluntarily took it upon himself to oversee the organization of these papers so Jackson could quickly and effectively answer his many critics, especially Calhoun and William Crawford of Georgia, both of whom viewed Jackson as a dangerous political rival for the presidency. During this period, Jackson frequently called on Butler's services to answer his critics and those who may have felt slighted by certain rumors or comments in the press.[11] As an honorary reward for his contributions during the Florida campaign of 1817-18, Butler was given the command of the party overseeing the exchange of flags at St. Augustine, in 1821.

[11]*Ibid*, 290-91; 400-01.

As a reward for his many services, Monroe, on Jackson's urging, appointed Butler the first Surveyor General of Florida in 1824. The tasks before him were of great magnitude. As the government depended upon the sale of public lands for financial support, there was a great urgency in the directives coming from the General Land Office to Butler. After seeing that the confirmed Spanish land grants were laid off and separated from potential public lands, Butler was charged with running out the Prime Meridian, Basis Parallel and laying out the new capitol, Tallahassee. Recruiting some of the finest public surveyors available, Butler had these tasks accomplished in remarkably quick time. However, the very nature of Florida's land, the belief that the rainy season was unhealthy, nay deadly, and the lack of transportation led to a slow start for the public surveys and the sale of usable, cultivatable lands. The large number of "impassable swamps" in Florida made the accomplishment of any survey very difficult. Because the 1820s were, apparently, very wet, many surveyors had to request extensions of time for the completion of their contracts. Additionally, experiments in surveying, such as the "compound meander", were tried but proved ill-advised, taking up additional time and public monies. His task as the first Surveyor General was not an easy one.

After laying out Tallahassee, where he purchased a lot, Robert Butler began to purchase land around the beautiful Lake Jackson, name in honor of the General. The plantation he established was situated on the northern shore of the lake with a beautiful view and fertile land. For some, yet unknown reason, he attempted to sell the plantation in 1833, but, luckily, found no takers and remained on the land until he passed from this world. The advertisement for the land, however, gives the excellent picture of the extensive nature of his holdings:

> Plantation for Sale.— Considerations of private interest in the west, induce me an offer for sale, my tract of hammock land, on which I reside, bordering on Lake Jackson, five miles from Tallahassee. This tract, combining quality, fertility, & beauty of situation, together with extensive improvements, is perhaps not surpassed by any other in the Territory of Florida, and affords at once a residence for a large

> family, with every convenience suiting taste and comfort. An extensive dwelling-house & kitchen, cotton-gin, and press, corn-mill, sugar-house, stables, etc. etc., of the best materials with a beautiful garden spot, well supplied with choice fruit and shrubbery, and a young orchard in a state of towardness of choice fruits of different kinds, and many springs of delicious water. Nearly three hundred acres in cultivation, and about five hundred under fence, wanting but little repair. Time will be afforded to meet the payments, for a large portion of the purchase money, they being well secured, and an indisputable title will be given the purchaser…Apply to the subscriber on the premises. Robert Butler. Lake Jackson, November 16th 1833.

From the first purchase of portions of this land, in 1825, until just eight years later, all of these improvements were made. The fact that this extensive plantation existed at all at this period is remarkable and speaks to the industry of Butler and his labor force.[12]

[12]Tallahassee *Floridian,* November 30, 1833.

This plantation became one of the showplaces of Middle Florida and the center of much of its social life. Ellen Call Long, in her famous *Florida Breezes*, and others, have described the life of the Colonel and his family on his Lake Jackson plantation. Mrs. Long, the daughter of Richard Keith Call, noted in her volume that the roses were the Colonel's pride and joy. His farm included an orange grove (in first bearing), a sugar cane field that stretched to the lake's shore and, of course, cotton fields. She also wrote of the main house as having two halls, one crossing the other, where dances and other social events took place, "detached rooms, called offices," which were where the men retired to discuss business, and other family rooms. The halls were described as "spacious." The main social event of the season was held at Butler's estate and was known as the "feast of roses." The food and drink consumed there were of the finest quality and in ample quantity. Although it was situated five miles from Tallahassee, the social season always included Butler's feast.[13]

[13]Long, Ellen Call, *Florida Breezes,* (Gainesville: University of Florida Press, 1962. Reprint of 1883 edition), 116-18.

Colonel Robert Butler was an active participant in the affairs of the community. In conjunction with other Masons, he was instrumental in founding the Andrew Jackson Lodge in Tallahassee, on December 19, 1825. He was also a mover behind the founding of the first school in Tallahassee, the sessions being held in the Mason Lodge building. He was also active in the affairs of the Presbyterian Church and was the vice-president of the Agricultural Society of Middle Florida.[14]

[14]Crowther, *The Grand Lodge of Florida Free and Accepted Masons History, 1830-1989,* 12-13.

It is not surprising that four other of the first masons were U. S. Deputy Surveyors, who served under Butler. Romeo Lewis, later Sheriff of Leon and Jackson Counties, LeRoy May, Davis Floyd and Major Benjamin Clements, who surveyed the Prime Meridian and the Western half of the Basis Parallel, were these surveyors. Included in the first group of surveyors that were hired by Robert Butler, was Henry Washington, considered by the Bureau of Land Management's historian as one of the nations finest and most accurate, the Donelson brothers—Butler's cousins—Charles C. Stone, who ran the eastern half of the Basis Parallel, Thomas White, William McNeill, who ran one of the lines between Georgia and Florida, and R. C. Allen, later territorial Circuit Judge. These men, all whom were leaders in the community in their own right, made up the core group of surveyors in early Florida. Although some "mistakes" did occur, on the whole, these surveyors were remarkably accurate for the first run. Butler, whose integrity was never in doubt, always supported his men when the occasion arose and often encouraged them to exercise their best judgment. From the large volume of correspondence available, it is readily apparent that these men held their leader in high esteem.

Butler was not only the first but also the longest serving Surveyor General in Florida's history. Therefore, he may be judged fairly on the accuracy of the surveys completed under his regime and the lack of controversy about the surveys in general. Overall, professional land surveyors of today give Butler very high marks because most of the early surveys, considering the relatively crude instruments used, are remarkably accurate and can be followed in the field to this day. This holds true, especially, for the work done by Washington, Clements, Benjamin F. Whitner Jr., Arthur M. Randolph and others. Of course, some of the early surveys contained major

errors or incorrect directions, however, compared to his immediate successor and other state surveyor generals, Butler still ranks as one of the best.

From the above description of this important man's life, it can be readily seen that his homestead deserves to be placed upon the National Register of Historic Places. However, the dwelling house and some of the out buildings were burned in 1886, long after the Colonel had passed to his reward, in 1860. While he lived there, he fathered ten children and provided well for them. Unfortunately, eight of his children preceded him in death and may be buried on the property in the family graveyard. However, the only surviving evidence of the entire family is the gravesite of Robert Butler, whose grave was remarked in 1901 by the Mason Lodge and another monument was placed there more recently. The Butler gravesite sits just outside of the boundaries of Lake Jackson Mounds Historic Site and on private property just off Crowder Road.[15]

[15]Elizabeth Smith, "The Fighting Butlers Come South," *Magnolia Monthly,* Volume 14, No. 2, 1976.

Next Week …

CHAPTER 2

BENJAMIN PUTNAM

Joe Knetsch has published over 170 articles and given over 130 papers on the history of Florida. He is the author of *Florida's Seminole Wars: 1817-1858* and he has edited two additional books. *Faces on the Frontier: Florida Surveyors and Developers in 19th Century Florida* is a history of the evolution of surveying public lands in Florida and traces the problems associated with any new frontier through the personalities of the majort historical figures of the period. As the historian for the Division of State Lands, Florida Department of Environmental Protection, he is often called to give expert witness testimony involving land titles and navigable waterways issues.

F.S.M.S. 2023 CHARITY SPORTING CLAY SHOOT

WHEN:

November 3rd 2023

Check in 9a - 10a
Clay shoot 10a - 1p
Awards & lunch 1p - 2p

WHERE:

Talon Range

550 Commerce Blvd, Midway FL 32343

REGISTRATION DEADLINE:

October 27, 2023

SUBMIT TEAM INFORMATION TO:

Chad Thurner – (850) 200-2441 chad.thurner@sam.biz
Melissa Seitzinger – (850) 566-5518 mseitzinger@bowman.com
2844 Pablo Ave, Tallahassee FL 32308

ADVANCE TICKETS

$400 – per 4-person team
$100 – Individual shooter

SPONSORSHIPS

Due Oct 23rd
$150 – Per Station
$75 – Score card
*Donations welcome

BENEFITING

Local Community Initiatives such as Honor Flight

INFORMATION

Bring your own gun & shells
100 rounds per person
Target load 7.5-9
Breakfast & Lunch Included
Complete online waiver at Talon.com

PAYMENTS

Checks payable to "FSMS NW Florida Chapter"
Credit Cards
Https://paypal.me/NWFSMS

NGS Releases Tool to Dynamically Create CORS Short-term Time-Series Plots

The CORS Time-Series Tool allows users to evaluate the performance of a CORS in the NOAA CORS Network over any period of time from October 27th, 2018, to the present (the former date coinciding with the completion of the Multi-Year CORS Solution II, or MYCS2). Currently, NGS only offers time-series plots for either the entire data record of a station, or for the past 90 days.

The new tool, currently on our Beta site, allows the user to enter a list of station names and a date range, and the output are:

- time-series graphs showing the residuals or deviations from the published coordinates, and
- a table showing the mean, standard deviation, and root mean square error of these residuals.

The data can also be downloaded.

The tool also plots time-series graphs for multiple stations on the same page, which is helpful for quickly comparing stations. For processing projects older than 90 days, this new tool will provide users with helpful data when choosing stations for controlling their GPS projects.

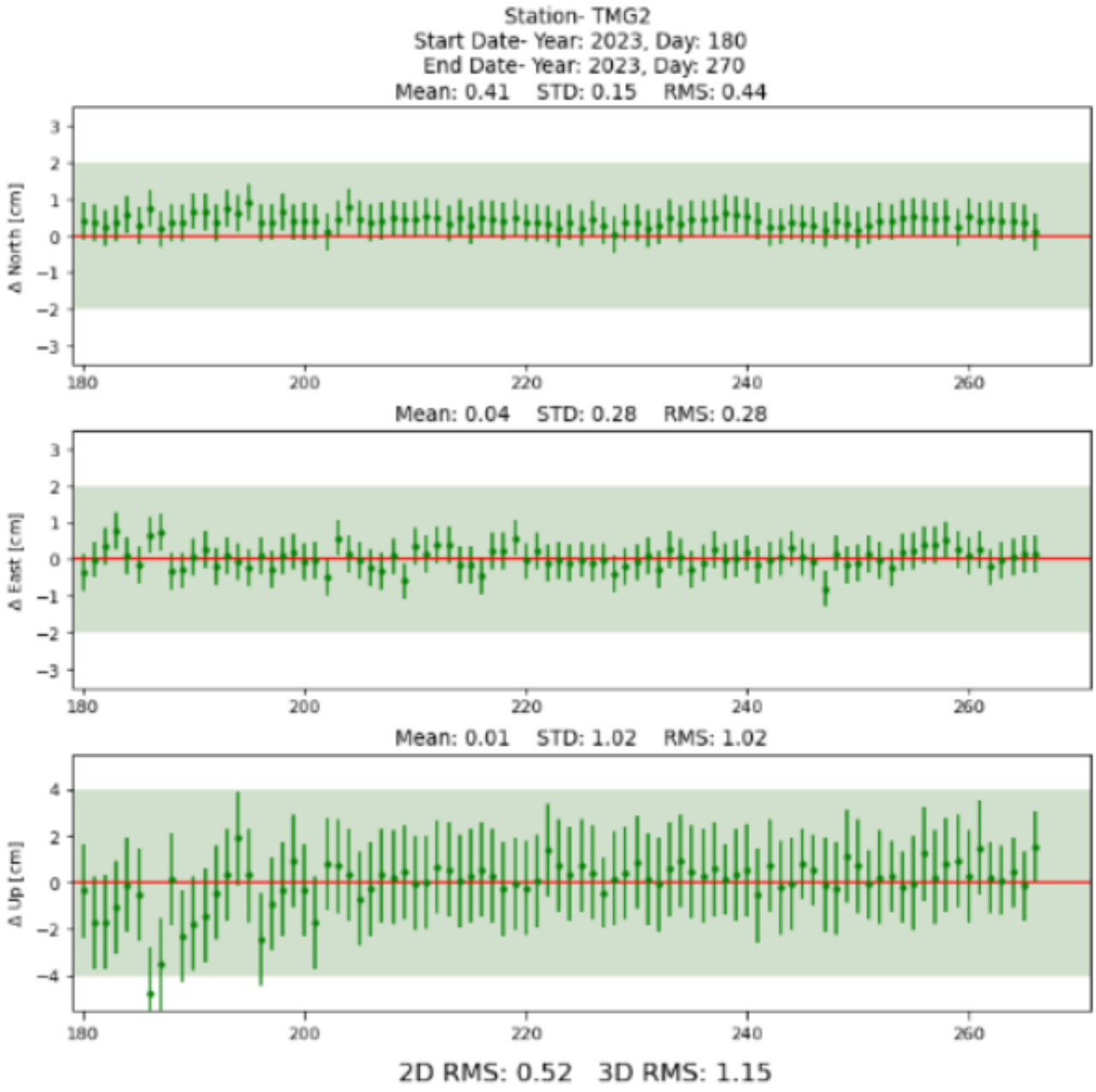
NGS Welcomes Your Feedback

To help ensure that we are meeting your needs, NGS provides users with an opportunity to beta test our tools before their development is finalized. Please give this new tool a try and let us know what you think.

Email ngs.feedback@noaa.gov with your your comments and suggestions at any time.

Summary Table

CORSID	# of points	Mean_N	Std_N	RMS_N	Mean_E	Std_E	RMS_E	Mean_U	Std_U	RMS_U	2DRMS	3DRMS
TMG2	87	0.41	0.15	0.44	0.04	0.28	0.28	0.01	1.02	1.02	0.52	1.15



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Lunch sponsor: $500	Hole sponsor: $500	Longest P sponsor: $
Cart sponsor: $500	Longest Drive sponsor: $500	Shortest M Put spons

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HOTGUN START: 8:30 a.m.

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$500

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FROM THE ARCHIVES

SCENES

IN A

SURVEYOR'S LIFE;

OR A

RECORD OF HARDSHIPS AND DANGERS ENCOUNTERED.
AND AMUSING SCENES WHICH OCCURRED,

IN THE

Operations of a Party of Surveyors

IN

SOUTH FLORIDA.

By W. L. PERRY.

JACKSONVILLE:
C. DREW'S BOOK AND JOB PRINTING OFFICE 1859.

PREFACE

THIS little volume is respectfully offered to the public, not without some "misgivings" as to how it will be received. Trusting, however, to the kindness of the indulgent reader, it is sent forth with the sincere hope that it may contribute in some degree to the pleasure and amusement of those into whose hands it may chance to fall. If so, the author's object will have been attained. The following pages contain a record of the dangerous and exciting, as well as amusing scenes encountered by a party of surveyors in South and East Florida, whilst engaged in the labor of laying out the public domain. There is, perhaps, no class of men who endure so many hardships and privations–whose fortitude and energy, whose intellectual powers, are taxed to a greater extent than the Government surveyor in his operations in the wild forests of the Southern and Western portions of the United States, in paving the way for the future wealth and aggrandizement of his country; and yet there is no class of men, of useful occupation, who receive a less share of consideration and sympathy.

In justice to himself, the author feels called upon to plead the very unfavorable circumstances under which the manuscript was written, arising from the fact that it was prepared at moments spared from the press of business, and not intended when first written as an offering to the public in the form of a book. This, then, is offered to the considerate reader as an apology for the very many imperfections which the volume contains. He is aware it should have been revised before it was handed over to the publisher; but his

situation has been such as rendered it impossible for him to bestow the time and labor necessary to such a purpose. Relying upon the kind disposition of the reader, he determined to publish as originally written.

Scenes in a Surveyor's Life.

CHAPTER I

If the life of the frontier settler, in his little log cabin, situated on the line of demarcation between civilization on the one hand and a wilderness of savages and ferocious wild animals on the other, whither he has gone to blaze the way for a more enlightened era, be one of danger, toil, and wild adventure, that of the surveyor, who goes far beyond the settler, even into the very heart of the wilderness, to mark out the land-lines for approaching settlements, is one certainly not less so. Indeed, when we calmly study and compare the pursuits of the two, it cannot but be conceded that the surveyor is surrounded with more dangers, the subject of more toil and hardships, and the recipient of fewer of those articles denominated the luxuries of life.

Let us for a moment more particularly examine and compare the life and pursuits of the surveyor and frontier settler.

When the latter returns from a day's hunt, which, aside from a small pumpkin and potato-patch, is his principal business, tired and hungry, he is sure, on entering his humble cabin, of finding the steaming coffee and smoking venison all ready for him, prepared by his better-half, whose affectionate smile, and the joyful outbursts of whose prattling progeny, bid him welcome. When his hunger is satisfied he repairs to a comfortable moss-mattress for rest, made smooth by a hand of affectionate regard for his welfare and comfort.

When the former, on the contrary, returns from a hard day's work, lugging the heavy implements necessary for his business through swamps, lagoons,

saw-grass, and palmetto hammocks, he enters no cabin, meets no smiling wife, hears not the clamors of his little children, sees no smoking viands, but is forced to prepare his own supper as best he can, by thrusting his venison or bear's meat on a sharp stick and holding it over the flames until half cooked, which he ravenously devours, with a cake of bread of his own make, and then retires to the damp earth for a bed, a pine-knot for a pillow, and the broad sky for a covering.

When the heavens open and the rains descend, the settler enters his log-cabin, unpretending as it is, and he is secure from the beating storm.

Under similar circumstances, the surveyor has no alternative but to lay his troubled head on a soft lightwood knot, his body on the wet ground, and let it rain, thanking his stars it isn't a hailstorm instead of a rain.

Such are some of the advantages of the frontier settler over the public land surveyor, briefly stated. I will not tax the time or patience of the reader adducing others, but proceed at once to the object in view, which is simply to give an unvarnished historical account of a tramp of the writer and others in a survey of Government land in South Florida, and some of the many adventures connected with it.

The kind reader, who patiently follows me through, will find recorded many hardships, and dangerous, exciting, as well as amusing scenes, which transpired while we were engaged in that work, and which, I trust, may prove of interest to while away an hour of leisure.

* * * * * * * * * * * * * * *

Captain – having procured the services of several persons, whom I shall denominate as Ralf, Sile, Tap, Shepley, Major – John Smith, Joe Rogers, and your humble servant, to assist him in executing his contract, we began at once making preparations for departure to our field of operation. As the journey to Jacksonville was coupled with nothing of interest, we pass over it, and commence at that place in our history.

It was arranged that Tap, with other boys, should proceed with the team, consisting of a yoke of oxen and a pair of marsh ponies, by land to Enterprise, while Sile and myself should go up the St. Johns River per steamer for the purpose of taking up a yawl boat to be used in shipping our plunder down

Indian River to the nearest point to our work, and all meet at Enterprise, and there wait the arrival of Capt. –, who was to follow in the next steamer.

In accordance with this arrangement, both parties left Jacksonville on Saturday, September 2, 185–. On Saturday evening, the Darlington (the steamer on which Sile and myself took passage) reached Palatka, a flourishing little village some seventy-five miles up the river from Jacksonville, where she remained until Monday morning, in order to make connection with the Sunday's steamers for Savannah and Charleston. Early Monday morning we loosed from Palatka and sailed for Enterprise, which is situated on Lake Monroe, some hundred and twenty-five miles above Palatka.

Of the St. Johns River it is only necessary to say that it is universally admitted to be, by those who have enjoyed the pleasure of a steamboat ride upon its placid bosom, one of the most magnificent streams in all the country. Properly speaking, we think the St. Johns could hardly be called a river at all, but an immense chain of lakes, stretching itself through the territory. At its entrance into the Atlantic it is, perhaps, not more than half a mile in width, while at Jacksonville (twenty-five miles above) it spreads out to the width of more than a mile. From Jacksonville to Palatka it varies from three to seven; but as you ascend from the latter place it gradually contracts until, in some places before reaching Lake Munroe, one might almost step from either guard of the boat on shore.

Immense numbers of alligators inhabit the river, and a prolific source of amusement is offered to the passengers on board the boat in shooting them from the deck as she passes swiftly along.

The scenery on this river is not very magnificent or grand, there being no towering mountains or lofty hills to draw out the poetic imagination or excite a feeling of admiration; yet the variety of scenery renders steamboat-traveling on the St. Johns any thing but irksome. Here you pass through a wide lagoon literally covered with myriads of wild ducks and geese, whose tremendous roar, as they rise like a thunderstorm from the surface of the water, may be heard even above the din of machinery; there you guide by some small island in the river, clothed in flowers of the most beautiful hue, around whose fragrant petals a thousand hummingbirds hover; here you sail along almost within arms-length of a magnificent orange grove, loaded down with its golden fruit, presenting a delightful contrast with the luxuriant green of the surrounding forest; there,

again, you suddenly shoot out from the narrow confines of the river into an immense lake, which at once brings to remembrance all those strange emotions you experienced when, for the first time, you launched out upon the bosom of the great deep.

One of the most beautiful sheets of water is Lake George, situated about thirty miles above Palatka. It is eighteen miles broad, and twenty in length. The river enters it at the southern extremity and passes out at the northern. On an island of considerable extent, near ,where the river passes out, is the residence of the late Dr. Calhoun, son of the South Carolina statesman.

Another of those lakes is Monroe, but not so large as the one just described, being only eight miles in length, and five in width. The river passes through it from east to west.

On the northern shore of this lake is Enterprise, our place of destination on the steamer, which we reached safely on Monday night.

It being dark when we arrived, we chose to remain on board the boat, as it did not leave on its downward trip until morning.

Enterprise is not, as erroneously supposed by many, a city, or even a village, but simply a hotel, built by the enterprising commander of the steamer Darlington, Capt. Brock, for the accommodation of those of a more northern latitude, suffering under pulmonary and other diseases, who may wish to spend their winters in a more genial climate. And certainly a more beautiful place–a place better adapted to the physical wants, and a place affording a greater variety of amusements to while away the time–could nowhere be found in the sunny South.

Situated as it is on the northern shore of the lake, the susceptible frame of the invalid is protected from the chilling northern blasts by the heavy pine forests which lie in that direction, while the balmy, bracing southern breezes sweep the bosom of the tranquil lake to fan his feverish brow. The woods in the vicinity afford an abundance of game; and those who love the sport of hunting, and possess the strength to enable them to with stand the fatigue, need never complain at Enterprise.

On the morning after our arrival, Sile and I brought ashore our camping equipage, consisting of pots, kettles, fry pans, blankets, knapsacks, etc., and struck camp near Enterprise, in the edge of a wood, to await the coming of the

boys with the team, and whom we expected that day, and also for the Captain, on the next boat. The team arrived in due time, and we waited patiently a week for the boat, but, to our great disappointment, the Captain did not come. He had been detained with his business longer than he expected, and we, of course, could do nothing but wait another week, which, in our excessive anxiety to be in the woods, was a long one. It rolled around, however, in due course of time, and the Captain came.

Next morning we began packing up for a start, but before we go through I was seized with a Georgia 'double wabble,' in the shape of an ague, which terminated in a severe spell of bilious fever. This misfortune detained us ten days longer. As soon as I was able to be hauled in an ox-wagon, I was tumbled in with the other rubbish, and we started.

From this point our route lay south, about one hundred and seventy-five miles, down Indian River, which stream, or rather inlet, runs parallel with the Atlantic coast. The St. Johns and Indian rivers approaching within eight or ten miles of each other, some twenty-five miles above Enterprise, the Captain determined to send four men with the yawl up St. Johns to the nearest point on Indian River, and there meet them with the team and haul the boat and load across to the latter stream. The boat was dispatched accordingly, and the men directed to proceed to Lake Harney, and there await our arrival. Now, it happened that neither of the men knew the river between Enterprise and Lake Harney, and it was difficult to navigate on account of islands and a great number of channels running here and there among them. There is also a Lake Jessup between the two places, of which fact the men were not aware, and as a very natural consequence mistook it for Lake Harney, and struck camp to wait our coming. In the mean time the Captain, with the rest of the company, pushed forward to Lake Harney and encamped, every moment expecting the boat's crew to heave in sight. It did not come.

Having waited, and whooped, and fired off guns at various points up and down the lake and river for three long days, the Captain set out to hunt in good earnest the missing men, and after two more days of laborious search, found them snugly ensconsed on Lake Jessup, enjoying themselves in fishing, shooting alligators, and occasionally taking a pull at the bunghole of the keg of *snake medicine*.

About this time we learned, contrary to first information, that it was not only impracticable, but utterly impossible to transfer our boat and chattels from one river to the other, as designed. There was no road, besides several creeks and many impassable swamps intervened. We had no alternative but to retrace our steps to Enterprise and take some other course, after a clear loss of eight days, and no inconsiderable amount of provisions.

At Enterprise we fortunately succeeded in procuring wagons to haul our boat and goods across to Smyrna, and sent our own team immediately on to Fort Capron, laden with as much of the plunder as it could conveniently carry, in charge of the Major, Ralf, Rogers, and Smith, at which place we hoped to meet them in nine or ten days.

The Captain, Tap, Sile, Shep, and myself fell to loading the teams we had hired, with the residue of our effects, which was soon accomplished; and about three o'clock in the afternoon we took up our line of march for Smyrna. From Enterprise to Smyrna the distance is thirty miles, through an open pine country, interspersed here and there with large, clear water lakes, and dense scrubs, with an occasional swamp. The course is a little north of east.

Being heavily laden, we made slow progress, but reached Deep Creek about sunset, where we encamped for the night.

On former surveys the Captain had been in the habit of taking flour to make bread of, or soldier's biscuit, but experience had taught him that it was difficult of preservation, exposed, as it must necessarily be, to all the inclemencies of the weather; so this time he concluded to take corn instead, and a steel mill to grind it in. It is possible he had also another motive in view, if the men had their corn to grind, they would probably be less apt to waste.

The night we camped on Deep Creek, as soon as the cattle were properly attended to all hands set in to bear an equal part in preparing supper, our regular cook having gone with our wagon. On rummaging around in the wagon for the cooking utensils, we found, to our dismay, that in the hurry of the morning, in getting our team off for Fort Capron, all the pots were inadvertently put into it, and were gone, save only a small frying pan and a tea-kettle. I went to bring out the mill to grind corn for bread, but the handles were missing; they had dropped somewhere on the road, and, of course, the mill was of no use without the handles to turn it. However, this was no very serious difficulty, as

we had a good supply of rice. A fry pan of rice was soon boiled, and a kettle of coffee drawn. We then emptied the rice on palmetto leaves, and used the pan again for frying bacon. Supper now being ready, we seated ourselves on the grass around it, except Shepley, who went to fetch some tin-cups from the wagon, out of which to sup the coffee. After a long search, Shep reported no cups to be found; then Tap suddenly remembered he had put them all into our wagon, and they were gone with the pots. Here was a new, and decidedly the most serious difficulty yet. To do without the coffee was out of the question, for it is just as necessary an article to a man camping out as a pipe is to a grandmother; to drink it hot from the spout of the kettle was impossible, and, as we had eaten nothing since morning, to wait until it cooled was more than our hungry stomachs could submit to. Fortunately, I bethought me of a few large sweet potatoes we had purchased at Enterprise, and I directly converted one of them into a cup, by scooping out the pith, that held near a pint. All hands following suit, we were soon supplied with cups which answered every purpose of silver goblets, and lasted to Fort Capron.

After a comfortable night's rest on the luxuriant grass, we arose early in the morning and proceeded on our journey. It being only eighteen miles to Smyrna, we reached that place early in the afternoon, without any other serious difficulty.

* * * * * * * * * * * * * * *

As this is merely the introductory, I hope to make the next, and succeeding chapters, more interesting.–AUTHOR.

NGS Announces Geospatial Modeling Grant Awards

NOAA's National Geodetic Survey (NGS) is pleased to announce the projects selected for funding in response to the FY23 Geospatial Modeling Grant competition. Each of these projects will be cooperative agreements with NGS for a 5-year period, and all projects selected for funding address key issues facing the geodetic community.

NGS awarded approximately $4 million in grant funding to Oregon State University, Scripps Institute of Oceanography, Michigan State University, and the Ohio State University. These projects will research emerging problems in the field of geodesy and support a Geodesy Community of Practice to address a nationwide deficiency of geodesists. In addition, these projects will develop tools and models to advance the modernization of the National Spatial Reference System (NSRS).

Learn More About Federal Grant Resources

FY23 Grant Awards

System for Award Management (SAM)

Uniform Administrative Requirements, Cost Principles, Audit Requirements for Federal Awards

Photo: Collection of GNSS data to support VDATUM in Beavertail State Park, Rhode Island

National Geodetic Survey Positioning America for the Future geodesy.noaa.gov

Issue 33 July 2023

NSRS Modernization News

For all issues of **NSRS Modernization News**, visit:
geodesy.noaa.gov/datums/newdatums/TrackOurProgress.shtml

Introducing the NSRS Modernization Alpha Site

To provide early access to upcoming, yet incomplete, products of the modernized NSRS, NGS has created the Alpha NSRS Modernization website. That site provides examples of the content, format, and structure of select data and products that NGS plans to release as a part of the Modernized NSRS. Products found on this page are for testing purposes only and do not contain any authoritative NGS data or tools. They are under active development and are subject to change without notice. But early access to alpha products should enable a smoother rollout of the Modernized NSRS. As products are released to this site, NGS will refer to them as being "released to Alpha."

SPCS2022 Released to Alpha

An alpha version of the State Plane Coordinate System of 2022 (SPCS2022) and its implementation in the NGS Coordinate Conversion and Transformation Tool (NCAT) has been released to the Alpha site. This includes:

- Alpha SPCS2022 website
- Alpha NCAT with SPCS2022 conversions enabled
- Online interactive maps of SPCS2022 zones
- Tables of zone definitions and example coordinates
- Maps of linear distortion with performance statistics
- Updated SPCS2022 Policy and Procedures

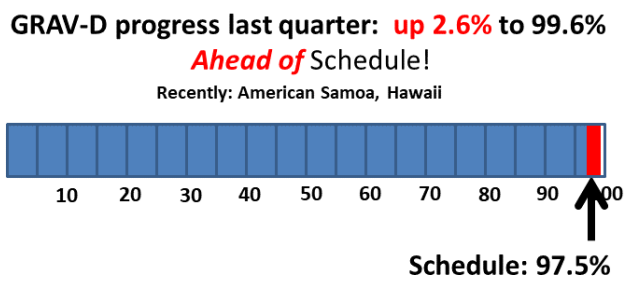
Alpha SPCS2022 content will be updated and augmented as it evolves toward completion.

Progress in Ongoing Projects

There are currently **32 ongoing projects** related to NSRS modernization around NGS. Here are some highlights.

GRAV-D (Project Manager: Jeffery Johnson)

In June of 2023, NGS's Gravity for the Redefinition of the American Vertical Datum (GRAV-D) project completed the airborne data collection effort in the American Samoan and Hawaiian regions. NGS teamed up with NASA Langley Research Center's Research Services Directorate to use their Gulfstream IV jet (Tail # N522NA) for this project. These remote Pacific islands were the largest hurdles for the GRAV-D project to finish before December 2023 so that the geoid team can have a complete airborne gravity data set as they build the North American-Pacific Geopotential Model of 2022 next year.



Past Presidents

1956 - 1957
H.O. Peters

1957 - 1958
Harry C. Schwebke

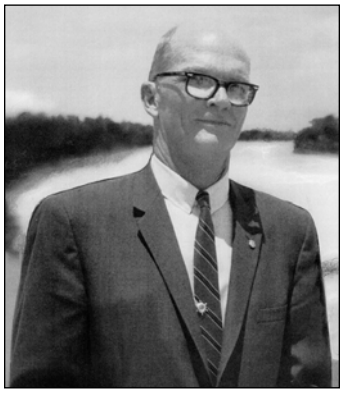
1958 - 1959
John P. Goggin

1959 - 1960
R.H. Jones

1960 - 1961
Hugh A. Binyon

1961 - 1962
Russell H. DeGrove

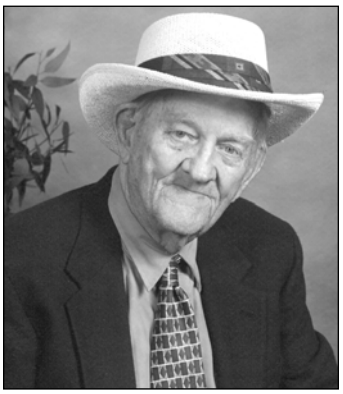
1962 - 1963
Perry C. McGriff



1963 - 1964
Carl E. Johnson

1964 - 1965
James A. Thigpenn, III

1965 - 1966
Harold A. Schuler, Jr.



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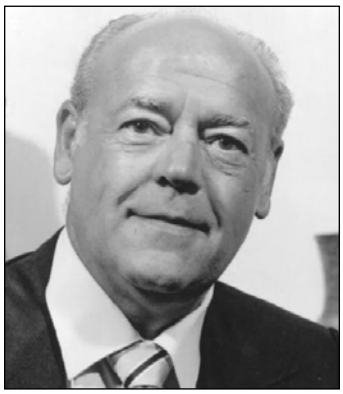
Shields E. Clark



1967 - 1968
Maurice E. Berry

Past Presidents

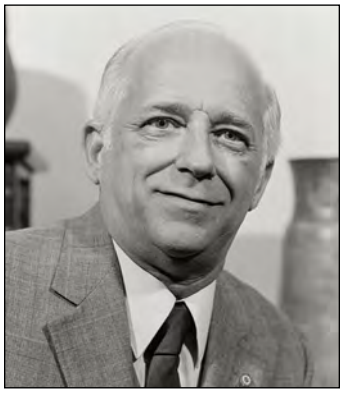
1968 - 1969
William C. Hart

1969 - 1970
Frank R. Shilling, Jr.

1970 - 1971
William V. Keith

1971 - 1972
James M. King

1972 - 1973
Broward P. Davis

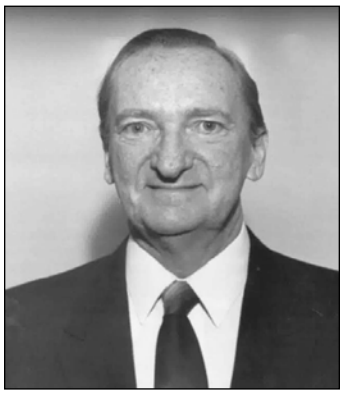


1973 - 1974
E.R. (Ed) Brownell

1974 - 1975
E.W. (Gene) Stoner

1975 -1976
Lewis H. Kent

1976 - 1977
Robert S. Harris



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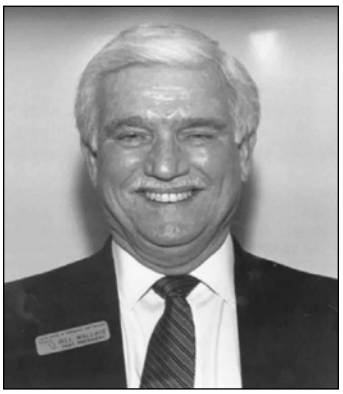
Paul T. O'Hargan



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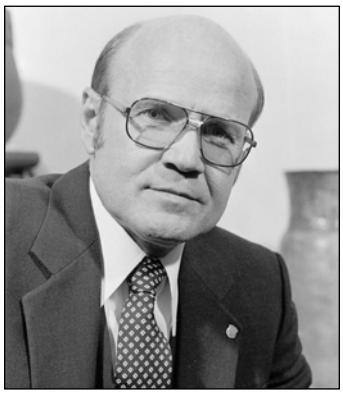
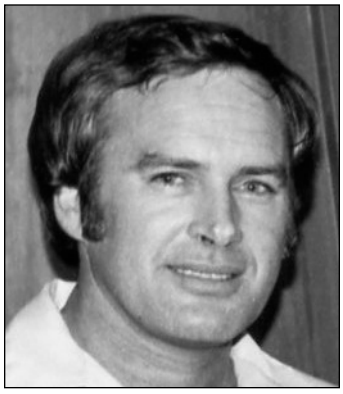


1979 -1980
Robert W. Wigglesworth

Past Presidents



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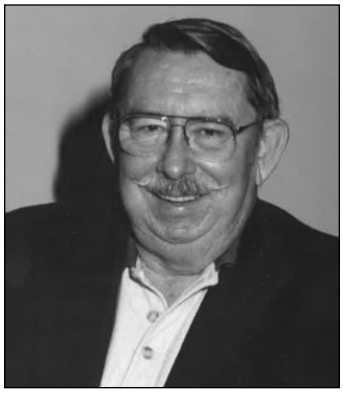
Ben P. Blackburn

1981 - 1982
William B. Thompson, III

1982 - 1983
John R. Gargis



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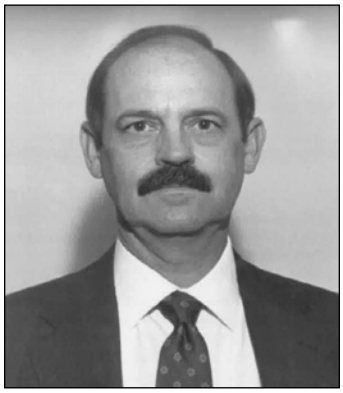
Robert A. Bannerman



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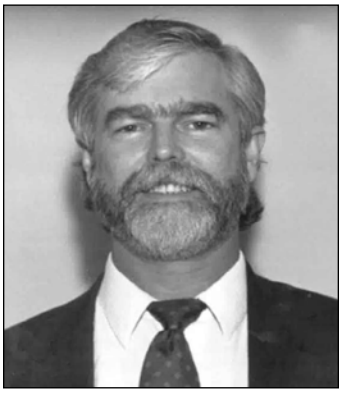
Buell H. Harper

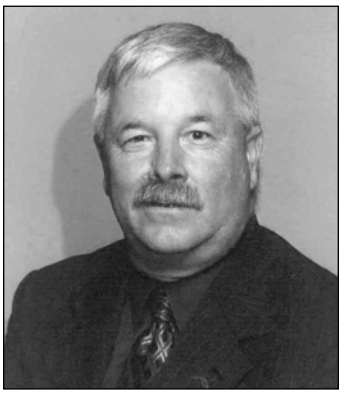
1985 - 1986
H. Bruce Durden



1986 - 1987
Jan L. Skipper

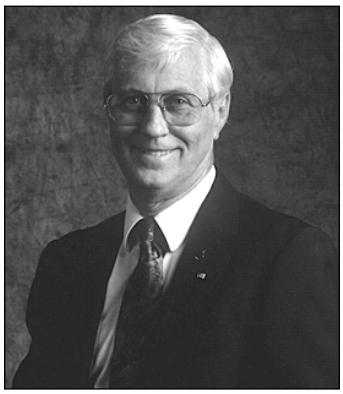
1987 - 1988
Stephen M. Woods

1988 - 1989
Stephen G. Vrabel



1989 - 1990
W. Lamar Evers

1990 - 1991
Joseph S. Boggs



1991 - 1992
Robert L. Graham

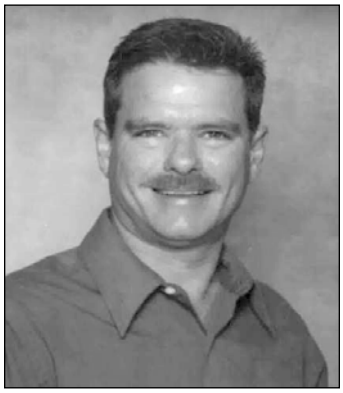
Past Presidents

1992 - 1993
Nicholas D. Miller

1993 - 1994
Loren E. Mercer

1994 - 1995
Kent Green

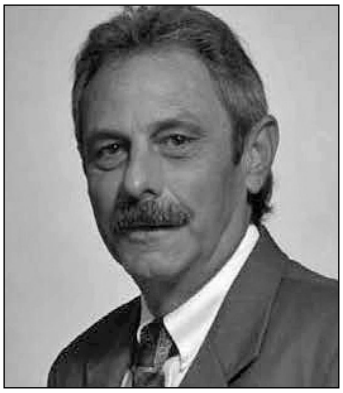
1994 - 1995
Robert D. Cross



1995 - 1996
Thomas L. Connor

1996 - 1997
Gordon R. Niles, Jr.

1997 - 1998
Dennis E. Blankenship



1998 - 1999
W. Lanier Mathews, II

1999 - 2000
Jack Breed

2000 - 2001
Arthur A. Mastronicola

2001 - 2002
Michael H. Maxwell

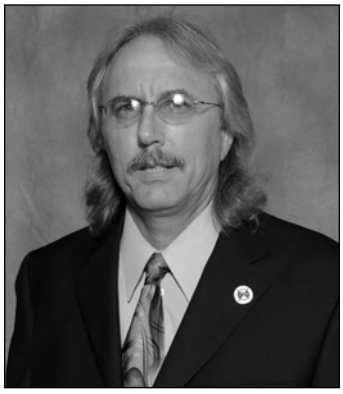
2002 - 2003
John M. Clyatt

Past Presidents

2003 - 2004
David W. Schryver

2004 - 2005
Stephen M. Gordon

2005 - 2006
Richard G. Powell

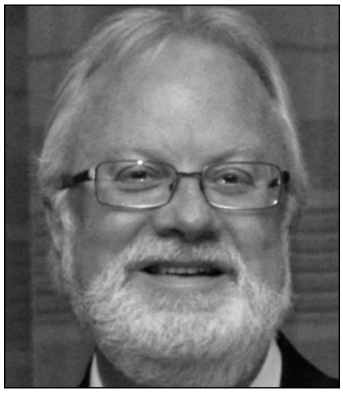


2006 - 2007
Michael J. Whitling

2007 - 2008
Robert W. Jackson, Jr.

2008 - 2009
Pablo Ferrari

2009 - 2010
Steve Stinson



2010 - 2011
Dan Ferrans

2011 - 2012
Jeremiah Slaymaker

2012 - 2013
Ken Glass

2013 - 2014
Russell Hyatt

2014 - 2015
William Rowe

Past Presidents

2015 - 2016
Dale Bradshaw

2016 - 2017
Lou Campanile, Jr.

2017 - 2018
Robert Strayer, Jr.

2018 - 2019
Dianne Collins

2019 - 2020
Don Elder

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Hal Peters

2021 - 2022
Lou Campanile, Jr.

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