Frank Bryant Stoneman  
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Frank Bryant Stoneman

by MARJORY STONEMAN DOUGLAS*


How can such dry details give the measure of a man? There is nothing in them of the color and vigor of the times that he has known, of nights, noons and mornings that have shaped him subtly, nothing of the character by which he was recognized or the influence which he carried with him, walking quietly and straightly in these beloved streets.

He was known and unmistakable; the six feet of his height topped by the crest of hair still gray in back, the craggy jut of his Roman nose, the direct look of brown-hazel eyes, young live eyes, that watched with humor and with tolerance the endless parade of human folly and of human grief. Try lying to those eyes, however, and watch them turn cold granite.

When I remember him first he wore one of those brown walrus moustaches much affected by young men from the West. But old photographs show the sensitive lips of a boy grown up early in a frontier world. Like his ancestors, he was always to be a pioneer, like those

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early Stoneman scholars and doctors maintaining their own thoughts, taking their own plain Quaker way, unaffected by the turmoil of new cities boiling about them.

To trace that in him you have to go back to old James Stoneman, living on the Thames river in England, after 1735, who found fellowship for his own stiff back among the Society of Friends. England had no place for men who chose to worship the God of Quietness directly, in their unheard-of way, so that James arrived in Virginia with some batch of evicted Quakers, his Roman nose stiffly facing west. There was starch in him also, for he carried a musket with the militia. He married a Quaker woman, practiced medicine in one of those early Quaker communities where the first schools in this country were maintained, and begat Joshua. Joshua was another doctor, married Elizabeth Davis of Montgomery county, Virginia “after the manner of Friends.” She was a daughter of another fighting Quaker, Mark Davis, a lieutenant in the Revolutionary war. Their son, Mark Davis Stoneman, was to find the western urge too powerful to be resisted longer. The country was too full. He took his diploma in medicine in the early days in Cincinnati, Ohio, married a Quaker, had a second son, Frank Bryant Stoneman, served as surgeon in the Civil war and after the battle of Shiloh moved west, with his young family, to the new town of St. Anthony, on the Mississippi, now Minneapolis.

So that our young Frank had as his earliest recollections the rumor of the war, the long trek westward, the trip by slow-pushing flatboats up the Mississippi, the muddy streets of little St. Anthony and a great flight of passenger pigeons, darkening the air. There were Indians in the dark forests beyond and famine possible in the 40 below zero winters. But there were Friends in St. Anthony and his father could settle down to his doctoring, rude enough in those rude days.

Our man was brought up like any Quaker boy of his time in spite of the fact that he did not belong to meeting. It may have been a frontier town, but there was strict tradition to guide him, the tradition of “Yea and nay,” the tradition of plain living and clear and independent thinking, and there were family stories to point up the stiff-backed breed. They may have been plain people but they were colorful.

There was Uncle Levi, for instance. Uncle Levi was a great old Quaker. He had traveled widely in Europe, on some Quaker concern. Back in Indiana he had maintained one of the stations of the Underground railway, shipping hundreds of escaping slaves to Canada. One evening
he was standing at his gate when a young colored fugitive, ragged and breathless, limped by. Uncle Levi with one jerk of his thumb motioned him inside. A few minutes later a posse hunting him stopped at his gate. “Did you see a fugitive slave around here?” they asked him. “Yes,” said Uncle Levi stoutly, “a young negro just passed this gate.” The posse went on, but Uncle Levi’s wife, having settled the fugitive in the clean room out back, heard her husband’s reply. “Levi, thee has told a lie,” she said, very shocked. “He passed this gate,” Uncle Levi said calmly. “He passed it coming in.”

But I like the one best about Uncle Levi’s hat. You can imagine the great grey Quaker brim, well worn and brushed. Uncle Levi had some occasion to testify in a court trial. In the courtroom he wore his hat. Uncle Levi paid no attention when the bailiff said, “Take off your hat.” The bailiff said again, “Take off your hat.” “Friend,” said Uncle Levi, “I have worn this hat before kings and I intend to wear it here.” The bailiff snatched it off. Uncle Levi eyed him calmly. “Friend,” he said, “thee can put it on again.” And the bailiff did.

There was always that Quaker touch about Frank B., the plainness of his speech, his hatred of profanity and gaudy statements, his unpretentiousness, even his grey suits. But another strain accounts for the occasional mild red tie, a French strain, that came into the family with the Bondurants, Huguenots, this time. There was a sword in that tradition, and a long yarn of a Bondurant adventurer who fought with the Swiss against the French kings and went to England before sailing, in his turn, to America. If you watched the Stoneman hands you would see that in moments of oratory they jerked in emphasis. He told it himself that once in making a speech to a congregation in Miami’s colored town he grew lavish with his gestures and a fat mammy on the front seat began to roll and shout, “Hallelujah.” The French strain may account also for the fact that as a young man he astonished the family by joining the Episcopal Church. The color of the ritual, the nobility of that service, second only to the King James version as fine English evidently proved relief from plain Quaker ways and pioneer harshness. The rites of the Ancient and Accepted Order of Masons must also have offered much the same rich color and sense of formal tradition in a pioneer world.

But within the family house itself there was no lack of the books which were always to provide for him education, recreation, escape and study. No Quaker family of that day would be without them.
Schools in the pioneer town of St. Anthony, with its three thousand people, were plentiful, but there was no perceptible system. So that the Stoneman boys and girls passed at will from school to school. The family library and reading aloud in the evenings of the long winters made up for everything. His love of history may have begun then, listening to his mother reading aloud from the little red Abbott histories of Marie Antoinette and Peter the Great. They read “The Prince of the House of David” and Pope’s Iliad and Odyssey and “The Report of the English Commission of the White Slaves of England” and “Incidents of the French Revolution.” He was supposed to have read Josephus at the age of seven.

Hunting and fishing were all about the small town in abundance and the Stoneman boys were early accustomed to the use of firearms. They chopped wood and fought both the uptown boys and the downtown boys. The older brother, Orville, was the aggressive one, fighting at the drop of a hat, and it was long-legged Frank, who had to rally to his defense, fight off the assailants and bring the wounded warrior home. His nickname was always “Ben” because they said he always had his nose in a book like Benjamin Franklin. It stayed there all his life.

He went to the University of Minnesota in its infancy and then to Carleton College in Northfield, where he was a classmate of Thorstein Veblen. He had even then the idea of reading law.

But in the vacations the smell of printer’s ink captured him for life. He got a part-time job in a print shop and learned to hand-set type with the best, among the shifting, rare population of old-fashioned journeymen printers of that day. Always later, when he was in doubt of the spelling of a word, he could think how it would feel to pick the letters out of the case. He was for years in Miami very proud of being an honorary member of the Typographical union. He began his journalistic career as a boy by printing his own newspaper, one of the first junior papers in Minnesota. At the same time, he wanted to be a lawyer.

But his father died in 1875 and he went to work, school teaching first in one of the earliest Swedish communities in Minnesota. After that Uncle Luther Johnson sent him and young Fred Johnson out to the new town of Billings, Montana, to open a grocery store. Billings was then 1,000 miles ahead of the Northern Pacific railroad, a sure-enough frontier town, Indians, emigrants, cowboys and all. Frank grew that
mustache, learned to wrap beans or brown sugar in a flat piece of paper and dole out five dollars worth of flour, dollar by dollar, to some befeathered Indian. But better than that, he had a lot of real hunting, rode all over the Bad Lands, shot his bison and saw the town fill up. He is still remembered in the Billings Lodge of Masons.

Then the boom in the northwest began rolling up, not unlike Miami in '25. He went back to Minneapolis and into business, married, had a daughter and very shortly saw the panic of '93, which upset all that country and taught him lessons which were to be invaluable to Florida later. It took a panic to shake him loose from those cold winters. Then for the first time since 1750 a Stoneman set the prow of his nose to the South.

Florida was being much spoken of, in those cold and shattered northern lands. Cuba, restive under Spanish rule, might have possibilities. He made a trip south to Tampa, Key West and Havana, where the Spanish army strutted its colors along the Prado and for the first time the tropic sun baked the long Stoneman bones. It was an unforgettable impression. The grey and crowded East held nothing like that for him. The cities were too finished. There was nothing there for a pioneer to do.

So he came to Orlando in Florida in the old days when the great live oaks shadowed quiet streets and in the country round about the orange groves roofed the white sand roads with shadow. He saw the freeze of '94 devastate the country, houses left standing unpeopled, food on the tables, with the exodus of the ruined. There was talk of the railroad going farther south than Palm Beach and a frostless country below there, where this town of Miami huddled, a few shacks among the untrampled palmetto, where the river flashed lonely under passing flocks of parakeets. He started raising chickens outside Orlando and studying to pass the Florida bar exams. It is recorded that the chickens died, but the exams were successful and he moved into town to practice law. Then printer's ink came into his life again. Some unfortunate job printer in Avon Park could not pay a bill for legal services. Lawyer Stoneman took an ancient flatbed press for the debt, had it hauled to Orlando by ox team and found his right hand moved readily between upper and lower type cases and the printer's stick in his left. The old press made a newspaper man of him, for life.

Now by this time the railroad had gone to Miami. The Florida East Coast railway was dominating Dade county politics. It was real pioneer
country, in contrast to the leasured leafy streets of Orlando, within sound of cathedral bells. So he and a man named LaSalle brought the old press down to Miami, where surreys stood under fringed canopies by John Seybold’s bakery and the Sewell Brothers were going into business and Isidor Cohen had dried out that first stock of goods he had dumped into Miami river and was looking upon the new town with brown and cheerful eyes. LaSalle and Stoneman set up a job printing shop and a four-page, sticky little paper, first called the Record, and then, taking over a dying and now forgotten sheet called the News, named it “The News-Record.” His purpose was to drive the railroad out of politics.

The old News-Record put up a stiff fight. The Florida East Coast was less active in politics, but the paper almost died of it. Meanwhile, there was a lot of work not associated with a newspaper for an Episcopalian and a Mason. At one time he was a lay reader for the church and was the only man who could bury people with the Episcopal church service, up and down the coast. Another time he was taking charge of Masonic funerals, and Masonic charities, walking gravely and calmly, while the new town boiled with energy and the Florida East Coast extension drove southward over the Keys.

The early News-Record was a slim and leisurely sheet, covering with well turned periods the fact that wire service was non-existent and news none too lavish. Father Friend, the beloved old priest of the Catholic church, planting the first bucidas in the Catholic yard, which he smuggled in from the Bahamas, gossiped with him of an evening on his boarding house verandah. Mrs. Krome, a bright-eyed girl, then, heard their slow voices arguing church history and who wrote Shakespeare, while the saloons were being moved to North Miami and someone argued that some day there would be houses on Miami Beach. Our man gave the first dollar for the establishment of Jackson Memorial hospital, as a member of the first hospital committee. He visited the sick. He served sometimes on the municipal bench, sentencing drunks rolled across the Miami line from North Miami saloons back on the job again. The small paper and job press business struggled along.

It was difficult to get from him any complete picture of those days. In the courthouse there was a trial of a negro behind whom sat a man with a drawn knife, prepared to slit the negro’s throat, if the verdict was “not guilty.” There were parakeets still in the grapefruit trees in
Coconut Grove, then spelled "Cocoanut Grove," an almost unknown village, a long buggy ride away. Collins bridge stretched across Biscayne bay and frame buildings were thicker along Twelfth street. People said some day there would be 10,000 people in Miami, believe it or not.

There were hurricanes, when the corrugated iron roofings spun along Miami avenue and the young palms thrashed and pine trees went down as far north as old Johnson street. The Presbyterian manse stood white among these new young trees. Dr. Gifford had introduced the quick growing Australians and there were revivals and prohibition campaigns and Masonic ceremonies at Christmas. The long-legged Quaker boy who had gone on studying history in 40 below zero winters in Minnesota watched the pageant of the streets with a glance lifted from more history books, reading Thackeray always when there was nothing else to read, and going back to history, any kind of history, but always American history, as if he found in that longer view meanings making themselves plain in the new town here.

For the story of his days after the founding of The Miami Herald, with Mr. Shutts at the business helm, one must go to the files of The Herald. He worked late at night in all those early years and at last walked home at 1 o'clock at night to the Sutcliffe apartments among the scent of night-blooming jasmine and the pale blossoms of that tremendous cereus vine, to his new wife, Miss Lillias Shine, of Orlando. An old Florida gentleman, hearing they were to be married, offered the last word on Miss Lilla. "Stoneman," he said, "you're marrying the finest damn woman in Florida." He never contradicted it.

Nobody but a Mason could write the story of his work for Florida Masonry. The very list of offices he has held one hesitates to copy for fear of inaccuracy. But the fore-and-aft hat with the feather that made him look like Admiral Farragut has covered a lot of secrets of good works, as carefully hidden as Masonic secrets. Nobody, I suppose, really will ever make a complete list of those quiet deeds. But every now and then some oldtimer turns up with gratitude still in his eyes.

His record on the Miami municipal bench, where he took a fiendish delight in fining his friends for speeding or passing lights, fought for 10 years a steady battle to clean up colored town, met with steady eyes the whole petty and whining and seamy tale of a growing town's misdeavors, and maintained justice and order with a dignity and simplicity worthy of the highest courts of the land, stands fixed. Yankee
women, having heard wild tales of the South's injustice to negroes, came into morning court often to witness horrors with their own eyes. They never failed to speak to him afterward. "Why," one woman said, "you treat negroes and white people with exactly the same justice, Judge Stoneman." He said, "Madame, that is the purpose of this court."

Two stories, one a breach of confidence in the telling, point up that 10 years as well as anything else. He came back to Miami after a vacation one year, and drove blindly across a stop light. The officer, after blowing his whistle shrilly, recognized him and apologized. "Make me out a ticket," Stoneman said grimly, "I never noticed that light at all." "Oh, that's all right, Judge," the officer said. "I wouldn't give you a ticket." He insisted. The case was entered on the docket, called next morning. He pleaded guilty, fined himself and paid the fine. They do say it was a great help to the force after that, in the matter of other public officials.

Here comes the breach of confidence. The people who really were terrorized by the presence of Judge Stoneman on the bench were employees of The Herald. He had issued orders that every one of them had to be absolutely above suspicion. A Herald employe, arrested, was a graver offender than anyone else. If that was unjust, they could make the most of it. On one occasion a Herald boy was arrested driving on the wrong side of the street taking another boy, seriously injured, to the hospital. The boy, in the court next morning, pleaded guilty, but told the story. The other boy had arrived safely at the hospital even after the arrest. But the boy was guilty and Judge Stoneman fined him. The secret leaked out around the Herald later. The Judge paid the boy's fine himself.

When he retired from the bench, because of temporary illness, it was with deep regret. The police force didn't like it either. They kept his hospital filled with flowers and one of his most prized possessions was a silver vase sent him by the wives of the policemen, the auxiliary to the police department. Always thereafter when you saw an oldtime member of the police force stiffen suddenly into a salute slightly modified by a broad and affectionate grin, you could note a quiet gentleman in a grey suit by the name of Stoneman, going down to buy his daily cigars at the corner drugstore, with a bright eye still for the proper conduct of the boys.

There are more stories than I can possibly tell. There are more than I have even heard of. It is difficult for me to speak flatly of the things
I know about him. It is silly to remark, for instance, that he was the most honest man I have ever heard of, because dishonesty was inconceivable to him. You cannot say that justice was a passion with him, because it was so much more than that. It was the breath of his way of thinking and of the manner of his speech, as it was of those fighting Quakers, who gave him the color of his eyes and his way of walking. That he was alive to the real meaning of democracy and of the United States of America, that its constitution, the forces and ideas which created it, were living forces to him, is also an understatement. Few men I have ever met saw so clearly what this country is all about and feared so little that it should fail in its destiny, of liberty and justice and democracy. It was to him a destiny always to be striven for, possible as a result only of eternal vigilance, and the best intelligence of thoughtful men.

It is an almost impossible thing to present the character of a man in the round, especially as the specimen presented had so rich and mellow and well-stocked a mind, so clear and yet so subtle a personality. As his sole descendant, it is doubly difficult. But there is one tribute to his work which I should like to make as a follower of his craft. In a pioneer town like Miami, when an editor writes what amounts to miles of words every single year, what the town sees plainly is the ideas presented, the thought which, day after day, is written. How it was written not so many notice, yet few editors of his day owned such a perfect fusion of matter and manner, which we call style. It would seem at first that his writing had a total absence of manner. But when you studied it day after day and year after year, you saw that he wrote one of the most beautiful English prose styles possible. It owns not a grain of affectation. There were no tricks, no elaborations, no non-essentials in his sentences. It was prose as fine and crystal as brook water, and as refreshing. It flowed daily in the columns of The Herald, unfailingly easy, accomplished, diversified. But clear, clear, always, with that quality of quiet luminescence that alone emerges from such clarity. He had no idea that it had a manner in itself. It was only the way he thought. But that is also the way of greatness.

Some years ago he was one of a group of 30 editors from all over the country to be sent to Europe by the Carnegie Foundation to make a study of European conditions. I think that the high moment of the trip for him came when he was to make a speech in Westminster Abbey, on the presentation of a wreath at the grave of the Unknown Soldier.
I should like to have heard that speech. His forebears had been kicked out of England as a penalty for thinking for themselves. He was not unaware of that, standing with bared head before the great grey arches.

I think he knew quite a pleasure in finding himself a witness there, for the country which that same toughness and wilfulness for freedom had helped found. I think he was a pledge, and knew himself to be, that in his country thought would maintain its own freedom, whatever the difficulties of the years to come.

He wrote me a letter that night about the Abbey service, which I shall always keep. He said nothing much about the speech itself. But in a postscript Mrs. Stoneman wrote in her own comment. “P.S.”, she wrote, “Frank did very well.” I think we’ll let it go at that.
During the summer of 1940 an archaeological survey was made of a portion of the Upper Florida Keys. The area covered was from Virginia and Biscayne Keys on the north to Lower Matecumbe Key on the south, plus a portion of the west shore of Biscayne Bay. Summer is the least desirable time to attempt work in this area, but circumstances offered no other choice.

The area in question was inhabited by the Tekesta* Indians. Apparently this tribe, like various others in the state, was more or less a political confederation of small local groups. There are many references to the presence of Indians on the Keys or “Los Martires” as the Spanish frequently called them, but few villages are named. Fontaneda does mention some towns, but they appear to have been located on the Lower Keys. In 1607 Governor Ibarra states that he received a visit from some chiefs, among whom were “. . . principal lords of the mouth of Miguel Mora.” According to Swanton “. . . this name was given to the opening between the Florida Mainland and the Keys on the eastern side.” This may be the present Card Sound. The one tribe or village that is mentioned rather commonly is Matecumbe. This was probably located on the present Lower Matecumbe Key, because on many early maps it is called Old Matecumbe to differentiate it from Upper Matecumbe Key. The earliest mention is in 1573, when the Matecumbe Indians attained notice by killing a number of Spaniards. It was again mentioned about

1. The author wishes to thank Dr. J. W. Goggin, of Miami, and Charles Brookfield, of Elliotts Key, Karl Squires and many others for the aid they have given him. Dorothy F. Goggin aided in the field and made the accompanying plates.
2. Goggin (1940a), 274. (Bibliographical references in full will be found in the bibliography at the end of the article. Ed.)
3. Swanton (1922), 342.
1628-1629. Bishop Calderón, in 1675, mentions two groups in the area covered by this survey. These, interestingly enough, are named after the extreme Keys which were covered in this survey. These tribes he calls the “Viscayños” and “Matecumbees.” According to his account they were very savage tribes, “having no fixed abodes, living on fish and roots of trees.” In 1697 it was reported that the Indians living on Matecumbe were “Catholics.” Romans states that Old Matecumbe was one of the “last habitations of the savages of the Calusa nation.”

By 1800, or a little later, all the Indians had disappeared from this area. It was probably even earlier, for by the last quarter of the 18th century mahogany cutters from the Bahamas overran the Keys. They had various skirmishes with the dwindling remnants of the aboriginal inhabitants.

Geographically, the Keys mentioned are quite uniform. Virginia and Biscayne Keys, the northernmost, are the only Keys not similar to the rest. Geologically, they are underlaid by the Miami Limestone formation. The Keys, from Elliotts Key south are all of the Key Largo Limestone formation, which is an elevated coral reef, while the Miami Limestone is oolitic. In flora, Biscayne is again atypical. The other Keys are clothed with a stunted “tropical hammock” vegetable complex. This is stunted because of the prevailing winds, occasional hurricanes, and the lack of soil cover due to the closeness of the rock to the surface. The trees are all broad-leaved, West Indian hardwoods, and many bear edible fruit.

Commonly, any typical Key may be divided into three physiographic zones. The outermost is the beach complex (on the east or southeast side). Here a narrow, coral-sanded beach comes down to the rock shore. This wind-swept beach is often separated from the main ridge by a narrow, shallow slough. The rocky ridge is covered with a stunted, though luxuriant, hammock growth. The western side is bordered by a thick, low mangrove swamp which covers the shallows up to the rocky ridge. On the edge of the mangroves are found most of the sites.

The mammalian fauna is rather limited. Bears were formerly common on Virginia and Biscayne Keys. As far as can be ascertained, deer were not commonly found on many of the Upper Keys. Romans says deer

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7. Swanton (1922), 343.
8. Romans (1775), xxxiv.
were found on Biscayne Key and "small deer" on Lower Matecumbe. These small deer are probably the same species as those now found on the group of Pine Keys to the east of Key West. The most common animal in all the Keys under discussion was probably the raccoon. Wading and sea birds of all kinds were found in great numbers.

There is (or was) no running water on any of these Keys. All fresh water was obtained by digging wells in sandy beaches or from pot holes and sloughs where rain water collected.

Previous archaeological work in this area has been very scant. A few early anthropologists may have visited the Keys, but we have no published data. Moore, despite his many travels, did not explore the Keys. The botanist Small mentions a kitchen midden on Biscayne Key, which is the only reference to that Key site. He later remarks that "as far as we know the only evidences of aboriginal occupation on the Upper Keys are two small Indian mounds near the middle of Key Largo." Stirling visited the Keys on various occasions between 1933 and 1935, but as yet has not published his work.

The area investigated is the southernmost part of the Glades Archaeological area. To be more specific, it is a portion of the Tekesta sub-area. This is differentiated from the Calusa sub-area by a number of traits ranging from pottery to mound forms.

This survey was started on Biscayne Key, which is physically the beginning of the Florida Keys. Geographically, as has been pointed out, it differs from the rest, but there is little possibility that its archaeology may differ. Until recently there was a midden about two-thirds of the way down from the north end of the key. This probably is the site to which Small referred. In 1926 certain parts of the Island were filled with dirt dredged from the bay bottom; at this time the mound was covered. The midden was about 75 feet long, of oval shape, and stood 2 to 3 feet above high tide level in the mangrove swamp. It was of typically black soil with few shells. This summer, thanks to

10. Romans (1775), x.
15. According to Small (1929), 96, there is a site on Virginia Key which is across Bear's Cut to the north of Biscayne Key. However, this mound could not be located.
Mr. Hugh Matheson, owner of that part of the Key, the midden was approximately located and a description of the site was obtained. Despite the fact that this mound is covered with from 2 to 5 feet of fill, it might be one of the most valuable middens in the area that has not been previously disturbed. This is Biscayne Key Site No. 1.

Site No. 2 on Biscayne Key is a sand burial mound situated behind the beach ridge a short distance north of the old lighthouse. It is quite possible that there may have been a midden at the point of Cape Florida. However, in the past 100 years it is known that the sea has cut in some 200 feet or so at this point. Near here on the beach, below high tide mark, one worn shard of Glades Gritty ware was found.

Sands Key, the next large island to the south, was not visited. According to reports there is a shell midden on the inside of the Key and a small shell deposit on the beach side. Romans, who visited here in the 1760's, called this key Las Tetas because of two small hills. There are no natural hills on this key so he may have been referring to mounds.

Elliotts Key, directly to the south, although very large (nine miles long) has no mounds discovered on it as yet. The southern end, however, is quite unknown. This end faces upon Black Caesar's Creek, a natural channel leading out of the bay, and more than likely a midden is somewhere near. From Elliotts Key south to Key Largo, there are a number of smaller keys about which nothing is known archaeologically.

Key Largo has a number of mounds upon it that are known and probably others will be found from time to time, especially on the northern end. This key is about 30 miles long, and not more than a mile wide at its widest part. It was formerly covered with a dense jungle of hardwoods. The beach on the Atlantic side is rocky, with a reef some distance offshore. The west side of the key faces Florida Bay and that shore is a muddy mangrove littoral.

Key Largo Site No. 1 is about 8 miles south of the entrance to the present highway (U. S. No. 1) into the key and some 200 yards west of the highway. It is situated on the edge of the rock ridge which drops...
abruptly into the mangroves. In aboriginal times the Indians could have brought their canoes up to the site at high tide.

This mound is a midden composed almost entirely of black soil and ashes with a mixture of shell and bones. In some parts there are strata of fish bones over a foot thick. Some sections are also composed of strata of pure ash from an inch to two feet thick. Only a small percentage of the total content of the midden is shell. There are mostly large *Fasciolaria, Strombus* and *Busycon* shells. Bivalves are not common.

The midden has been mutilated to a great extent by the removal of the rich soil for gardens. No excavation was attempted because of mosquitoes, although this site was visited on several occasions. A large number of artifacts, mostly shell picks and potshards, were collected on the surface.

The greatest length of the midden (northeast-southwest) is probably 175 feet and the width about 75 feet. It is not much more than three and one-half feet deep at the maximum.

Key Largo Site No. 2 is about 14.5 miles south of the highway (U. S. No. 1) entrance. It is in the hammock, about 200 yards from the closest water, on a small point of the high hammock that extends to the bay side. No excavations were made. Fortunately, there has been little disturbance. At its highest point the fill is only about 2 feet in depth. Because of the heavy hammock cover it was difficult to determine the exact size of the midden area, but it is at least 200 by 300 feet across. A few shell tools were found here, but potshards comprised the major portion of the artifacts collected.

About 200 yards east of Key Largo Site No. 2, in the thick hammock, is the famous rock mound, Key Largo Site No. 3. This is the best known of all the Key sites, mainly because of Matthew Stirling’s visits, and subsequent newspaper publicity, in the early 1930’s.

The most conspicuous section of this site is the rock mound itself. However, it is apparently only a part of a large area which includes a number of features. The heavy hammock cover makes it difficult to get a true idea of the site, but there is no question that it is similar to the intricate sites of the Ten Thousands Islands area. Here, however, the material used is limestone fragments instead of shell.

The large mound is built of limestone rocks 10 to 12 inches in diameter, laid in rough courses. The elevation of the mound is about 8 or 9 feet. A few holes have been dug into this mound by treasure seek-
ers, but the damage is slight. These do reveal the interior construction of the mound and show that it was apparently all made of stone.

The outline is hard to determine on account of the heavy hammock growth, but it appears, roughly, to be kidney shaped, about 100 feet long by 55 feet at the widest. To the east there was apparently a sloping ramp which led down to a stone causeway which was traceable for at least 25 feet. This path is 1 foot high, about 14 feet wide, and made of the same stone as is the mound.

Some 130 feet west of the north end of this mound is a wall or ridge made of limestone. This is 2½ feet high, 8 feet wide and 70 feet long. The southern end is well defined, but the northern end loses itself in a very rough part of the hammock. It is thus difficult to determine how far the ridge extends.

It is quite possible that there are other structures in the immediate vicinity, but the thick forest makes it difficult to find them. Some of the trees on the large mound are almost 2 feet in diameter and 50 feet high.

No potshards were seen at this site and the only artifact collected was a broken shell pick. The closeness of the midden (Key Largo Site No. 2) would make one suspect that they were contemporaneous, but there is no ceramic or artifactual evidence to prove it.

Without doubt this site was primarily used for ceremonial purposes and may have been of more importance than one would suspect at a first glance. However, as far as is known at this time, there are no similar sites on the upper Keys although there are rumors of one somewhere in the Everglades. The absence of potshards or other artifacts also tends to indicate that it was of special importance.

The next large island south of Key Largo is Plantation Key. About one-quarter of a mile from the south end of the key are mounds 1 and 2. These are situated on a bare, rocky flat behind the beach on the southeast shore of the Key.

Whether these are artificial mounds is doubtful, but it is very difficult to explain their occurrence from natural causes. They do not seem to be sand dunes because of the many large rocks and conch shells (Strombus) that are intermixed with the sand that forms the

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20. In 1943, a stone circle 45 feet in diameter and 3 to 4 feet wide was found on Boca Chica Key, and Romans states that "... remains of savage habitations built, or rather piled up of stone" were to be seen on Key Vaca and Key West in his time. Romans (1775), 291. These sites are all in the Lower Keys.
mounds; nor do they appear to be former beaches, because they are quite isolated on the flat rock, although their long axes are parallel to the present beach a short distance away. Close by are some depressions from which soil and rocks may have been taken to form the mounds.

Mound 1 is a low ridge, 20 feet wide, 65 feet long and 2½ feet high. It is largely composed of loose rock with some sand. The orientation of the long axis is 10 degrees east of the south.

Ninety feet northward is Mound 2. This is an irregular rectangle, 75 by 105 feet in dimensions, and 4 to 5 feet high. Its composition is similar to Mound 1, but it is more sandy, and more *Strombus* shells were noticed on the surface.

No pottery or cultural material was found at either mound. The absence of dark soil or bones would preclude the possibility of this being a midden site, leaving the probability that they were ceremonial or burial mounds. It could be possible that these are modern, but it is somewhat useless to speculate without excavation.

On the north end of the key is Site No. 3. This was a former midden, and is located .9 of a mile south of Tavernier Creek west of the highway and close to the mangrove lined shore.

There is no midden deposit of any extent remaining as the rich soil has been removed for gardens. However, potsherds were common and several shell artifacts were found in crevices in the bed rock.

Site No. 4 is a large midden a short distance northwest of Site No. 3. The mound is large, being approximately 200 by 300 feet and 6 to 7 feet high, with the long axis approximately north south. The predominant shells were *Strombus gigas*, *Livonia pica* and *Nerita versicolor*. Very few *Busycon perversa* were seen and although there were many bird and fish bones, artifacts were quite scarce. As a whole this mound has been very little damaged.

No sites were located on Windleys Key although it has been reported that a midden was formerly there which is now destroyed.

On the south end of Upper Matecumbe Key, west of the highway is a sizable midden. It is situated on the slope of the rock ridge where the latter meets the mangrove lined side of the key. At the deepest the deposits are about 4 feet. A small boat harbor has been dredged through the northeastern side and gives a good cross section. There does not

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21. Reported by Irwin Winte of Miami.
appear to be any particular stratigraphy and the composition is the usual mixture of soil and shells.

Potshards were common and a number of shell artifacts were found on the surface. One interesting thing noticed while examining the cut face was the occurrence of pockets containing large numbers of the bleeding tooth shell (*Nerita versicolor*). These were all broken in the same place for the extraction of the mollusk for use as food.

On the north end of Lower Matecumbe Key, behind the Matheson Dock and west of the highway, are several sandy ridges. These are covered to an unknown depth with midden material composed of shells and black soil. This whole is covered with a very dense growth of small *Yucca* plants, making surface collecting almost impossible. Some shards were found, all of which were undecorated *Glades Gritty* ware. These ridges may have been used for burial purposes. Considering the attention this key drew in Spanish days, it is surprising that there is not a larger site here. However, the Labor Day hurricane of 1935, which killed so many people in this area, destroyed large parts of this key. It would therefore not be surprising if earlier storms had destroyed a large part of any site.

In May 1944, through the courtesy of Mr. Hugh Matheson, it was possible to visit Lignumvitae Key and examine the reported site there. This was found to be a coral sand burial mound about 50 feet in diameter and $3\frac{1}{2}$ feet high. It is little damaged, although it was badly washed over in the 1935 hurricane. The presence of small fragments of human bones on the surface would indicate its use as a burial mound. No shards or other artifacts were seen.

It has been reported that a shell mound has been found on Indian Key but it was not visited. It was also impossible to visit the site on Teatable Key, although specimens from there were examined in the United States National Museum. These were a fragmentary shell pick, a shell celt and three *Glades Gritty* ware shards.\(^\text{22}\)

**MATERIAL CULTURE**

Pottery, represented by shards, ranks first in whole numbers of artifacts found. Following this come articles of shell and bone, with occasional artifacts of stone. Wooden objects are rarely recovered from muck deposits, none were found in this summer’s work.

The most common ware encountered on the Upper Keys is *Glades*
Gritty ware,\textsuperscript{23} with some Biscayne Chalky ware\textsuperscript{24} and a few shards of unidentified wares. No stratigraphic excavations were made but collections made at sites which had exposed faces, due to cuts and pits, showed no stratigraphy.

\begin{table}
\caption{Numerical Occurrences of Pottery Wares Collected}
\begin{tabular}{|c|c|c|c|c|}
\hline
& \textbf{Glatdes Gritty} & & \textbf{Biscayne Chalky} & \\
& \textbf{Ware} & \textbf{Pl.} & \textbf{Inc.} & \textbf{Pl.} & \textbf{Stamped} & \textbf{Misc.} & \textbf{Total} \\
\hline
Key Largo—Site No. 1 & & 480 & 44 & 24 & 6 & 4 & 558 \\
Key Largo—Site No. 2 & & 313 & 27 & 1 & 0 & 2 & 343 \\
Plantation Key—Site No. 3 & & 22 & 3 & 6 & 0 & 0 & 31 \\
Plantation Key—Site No. 4 & & 85 & 3 & 4 & 3 & 2 & 97 \\
Upper Matecumbe Key & & & & & & & \\
Site No. 1 & & 112 & 10 & 2 & 4 & 2 & 130 \\
Lower Matecumbe Key & & & & & & & \\
Site No. 1 & & 28 & 0 & 0 & 0 & 0 & 28 \\
\hline
\end{tabular}
\end{table}

However, certain \textit{Glatdes Gritty} ware designs show a variation in distribution. The commonest design motif is two incised lines below the rim, varied on occasions to either one or three lines. These motifs occurred at all sites where incised shards were collected, with the exception of Key Largo Site No. 2. Here a new motif appears, consisting of pendant loops around the vessels under the rim\textsuperscript{25} (Fig. 1, a-f). Associated with this "pendant loop" design are "diagonal parallel lines" and cross hatched motifs (Fig. 1, g-i). These last mentioned motifs are represented by only a few examples.

At the time of the first draft of this paper, the only other occurrence of this design was one shard from the Little River Midden. However, recent work (1943) has disclosed a new site—Sour Orange Midden—just west of Miami, where the "pendant loop" design is predominant. Along with this are "diagonal parallel lines" shards. Also, new test pits in the Mulberry Midden (west of Opa Locka) have disclosed "pendant loop" shards. These had not been found previously. Neither of the above sites produced any of the "line below the rim" design which is so dominant in the Tekesta sub-area.

Plantation Key Site No. 4 produced a large number of shards which

\textsuperscript{23} Goggin (1939), 37.
\textsuperscript{24} Goggin (1940b), 30.
\textsuperscript{25} Shard collections of Karl Squires and Gaines and Peyton L. Wilson of Miami were also examined. However, these are not included in this table.
\textsuperscript{26} Goggin (1939), 39.
Fig. 1. SHARDS FROM KEY LARGO NO. 2

a-f, examples of Pendant Loop Designs; g, i, Parallel Line Designs; h, Cross Hatch Design.
Five shards showing evidences of lugs were collected; four from Key Largo Site No. 1 and the other from Upper Matecumbe Key. These are quite unusual and are not recorded from elsewhere in the area (Fig. 2, a, c). The lugs appear to be roughly triangular and attached at more or less of a right angle to the rim. On all shards the outside incisions below the rim continue onto the lug and, in addition, two or four lines are incised on the upper surface of the projection.

Biscayne Chalky ware occurs at most sites, but nowhere in any great quantity. The majority of the shards found are typical soft ware, but a few are of the harder type which rings when struck. One difference from the Miami district is that the shards are cream to buff, instead of white to grey. The stamped shards are typical in all respects. One plain fragment with Biscayne Chalky ware paste had a dark red interior slip similar to North Central Florida wares.

A few shards of miscellaneous plain wares occur at some sites. These are usually shell tempered, plain ware, occasionally with an inside red slip. One shard tempered fragment of pottery was collected at Key Largo Site No. 1. Shard tempered wares are rare in any part of Florida. One interesting decorated shard, which apparently is a trade ware from the West Florida Coast, was found at Key Largo Site No. 1 (Fig. 2, g). The decoration is a combination of incising and deep triangular punctations on a cream colored paste similar to Biscayne Chalky. Another shard, apparently the bottom of a vessel, with a paste similar to Glades Gritty, had a heavy red interior slip. The outside was marked with large crude punctations. This was found at Plantation Key Site No. 4. (Fig. 2, h). Another unusual shard from Upper Matecumbe bears a crudely worked conical boss.

MINOR ARTIFACTS

Shell Picks: Picks, or more likely adzes, made from the sinistral Busycon pervera, are the most numerous artifacts, other than pottery, found in Southern Florida. They are present in sites along the entire coastline of the state, and to some extent in the interior. Various workers have described them, particularly Moore, who has figured various

27. A collection made in May, 1944, at Upper Matecumbe Key revealed one shard of the “pendant loop” design. This is the first site where it has been found associated with the incised lines below the rim.
Fig. 2. SHARDS FROM KEY LARGO NO. 1
a, c, Rim lug specimens (interior aspect); b, d, e,f, miscellaneous variant incised examples; g, probable trade shard from West Central Florida Coast; h, unusual punctate shard.
types from the Florida West Coast. In this paper, the shell picks found will be analyzed with an effort to ascertain certain techniques of their manufacture, and their use. Comparisons, as well, will be made with specimens from other parts of the Glades area. Fifty-eight picks were collected. Of these 50 came from Key Largo Site No. 1. Although the others are typical in all respects, it has been thought best to consider those from the one site for study as a group. All, however, cannot be analyzed for every characteristic, as some have a broken blade, others a broken spire or whorl.

The shell was utilized by cutting a notch in the lip a short distance below the shoulder. On the other side of the shell, opposite this notch, a hole was made by pecking. The haft was fitted into the notch, forced past the columella and into the opposite hole.

The average size (39 specimens) is 5½ inches. Twenty-two of the specimens range from 5 to 6¼ inches, while the total range is 4½ to 8½ inches.

Although the haft is set at a right angle to the blade on most picks, a few have blades that slope in towards the wielder. These must have been used like an adze. The tools as a whole seem to be well adapted for the cultivation of the soil, digging roots, and breaking open shells. As weapons they would be excellent. Specimens that have been hafted experimentally have a fine balance.

Variation in the type of supplementary lashing used to secure the haft on these tools appears to be original. This is indicated by the presence or absence of holes in the whorls on the top of the shell. A series of 43 picks showed 33 with one hole, 4 with 2 holes and 6 with a solid top. The presence of lashing holes in the top probably indicates some influence from the Ten Thousand Islands section, where such a practice is common, rather than from the North, where it is not usually found.

As would be expected in a primitive group as poor as this, very few tools were discarded until they were absolutely useless. Almost all of

28. See Moore (1900), (1905a), (1907a), (1921), Harrington (1924).
29. The average of a series of 17 picks from Surfside is 4.6 inches. The range being 3½ to 6 inches, 4 specimens under 4 inches and 12 specimens between 4 to 5 inches. This is the smallest series of picks seen. Contemporary shell collectors report that specimens of Busycon from this area average smaller than those from the West Coast and the Keys.
30. In contrast, out of 14 Surfside specimens, 13 had a solid top and 1 had two holes in the top.
the specimens found show evidences of breakage and reworking to form another suitable implement. The most usual breakage was the blade. This was remedied by grinding the columella and channel to a new edge. As a result of this reworking the used tools have a wider blade, while the newer ones have a narrow and pointed one. The next most common point of breakage was probably the lip, where pressure of the haft split off the bottom of the notch. Frequently the hole on the back of the pick, into which the end of the haft is inserted, is also broken. The remedy for both of these types of breakage was a new hole an inch or so to the right of the first one, and the lip trimmed back and a new notch cut opposite the new hole. Another method used when the lip was broken, but the hole intact, was to make another hole in the body of the shell to the right of the lip so that the shaft was passed through two holes to the right of the columella.

One result of the reworking was the turning of the cutting edge of the blade so that it was no longer at a right angle to the stroke or swing of the implement.

Rarely, other shells are pierced for hafting as crude picks, but they never have a sharp blade like the *Busycon*. A specimen made of a *Fasciolaria gigantes* shell, from Key Largo Site No. 1, was hafted by means of two holes made through the whorls next to the columella. A *Strombus gigas* pick from Plantation Key Site No. 3 was hafted exactly like those made of *Busycon* shells, with the notched lip. The haft was on the opposite side of the columella, of course, as the *Strombus* shells are dextral.

**Shell Dippers**: These are *Busycon perversa* shells whose columella are removed, leaving the basin-like outer whorl with the channel as a handle. Fourteen dippers were collected,31 which are in every way typical of those found throughout the Southeast. None of them, however, were engraved. It does not appear that much care was taken in their manufacture, as none of the edges were ground or smoothed. In size they ranged from $5\frac{1}{2}$ to $12\frac{1}{2}$ inches, with 11 falling between $6\frac{3}{4}$ to $8\frac{1}{2}$ inches. The capacity of an $8\frac{3}{4}$ inch specimen is 18 fluid ounces, that of a 6 inch specimen is only $5\frac{1}{2}$ fluid ounces.

**Shell Dishes**: These, too, are made from the shell of the *Busycon perversa* in a manner similar to the shell dippers, but the channel is also removed and the sides trimmed down to make a shallow basin. Only

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31. 8 from Key Largo 1, 5 from Upper Matecumbe Key and 1 from Plantation Key 4.
four specimens were collected. Two from Key Largo Site No. 1 were 6¼ by 6¼ inches and 5¼ by 4½ inches. Two from Upper Matecumbe Key were 5½ by 5 inches and 3 by 3½ inches, respectively.

Shell Celts: These were not plentiful, as only 18 broken and whole specimens were collected from Key Largo Site No. 1, Upper Matecumbe Key, and Plantation Key Site No. 4. In size they ranged from 3½ to 6½ inches. With one exception they were all of the roughly parallel sided form. The exception was a 6¼ inch specimen from Plantation Key, Site No. 4, which had a rounded blade and a roughly triangular shape. Most of the parallel sided specimens have rounded blades. Although these implements have been called celts in the literature for many years, it is more likely that they were used as adzes.

The blades of all specimens have been ground on one side only, as is the common case with adzes. Unfortunately, the tools show no indication of the angle at which they were hafted.

The distribution of the various shapes of celts is not well known, although they are many times more abundant on the East Coast than on the West. Material from Surfside shows a proportion of 11 parallel-sided celts to 3 roughly triangular-sided specimens. Large numbers of celts taken from the Ralph M. Munroe site at Coconut Grove, on Biscayne Bay, were all of the roughly triangular shape.

Net Weights: Two different types of sinkers or net weights were collected at Key Largo. Neither type are plummets, which are considered to be ornaments and are described under that category.

The more sophisticated type of weight that was used on nets or lines is an oblong limestone tablet with a perforation near the top. Two specimens found are 3½ by 3 inches and 4 by 3½ inches, with a thickness that varies from ¼ to 1 inch. The holes are drilled from both sides, ½ inch in diameter, and show wear. They were shaped by pecking and grinding. A similar specimen of fossil coral, 3 by 3¼ inches, came from Upper Matecumbe Key. It had a ½ inch central perforation.

Only two specimens of the other type of net weight were brought in from the field. These are single valves of a clam, Lucina tigrina. They are very thin and light, although 2½ inches across, which would in-

32. This somewhat approximated the petaloid shape of the West Indian stone celts.
33. Gaines Wilson has collected a weight of this type from Key Largo 1. It is circular, 4½ inches in diameter and ½ inch thick, and is pierced in the center by a hole ½ inch in diameter.
dicate their use in clusters. *Arca ponderosa* shells are most commonly used for weights in other sites, but none were seen here.\(^{34}\)

**Bone Artifacts:** Bone artifacts as a whole are rare in surface collections but common from excavations in Southern Florida, so the material which comes from pits in Key Largo Site No. 1 is perhaps not truly representative. Nothing was found at the other sites.

An unusual object from Key Largo Site No. 1 appears to be a bone foreshaft for a composite arrow or dart. (Fig. 3, e). It is made of a dense bone (probably deer), is 3½ inches long and ¼ inch wide. One end tapers to what was once a sharp point, while the other has been cut to fit into a socket. It shows evidences of a high polish and was probably straight, although now it is quite warped. Only a few other references to this type of artifact can be found. There is a specimen reported by Wyman from St. John's River,\(^{35}\) and three fragmentary specimens in the Squires collection. One of these is from Surfside and the others from Belle Glade. Two shanked bone points were found at the Vero site.\(^{36}\)

The Key Largo specimen appears more like a foreshaft than any of the others. They appear to be too slim. Also an incised bone pin in the Squires collection from Belle Glade has a shank. Moore found, on the Upper St. John's River, shanked pins which showed traces of bitumin.\(^{37}\) Those found by him appear to have been ornamental hairpins. Larger ornamental objects carved in wood were undoubtedly affixed to the shank of the bone pins. So it is more than likely that all of the specimens found in Southern Florida were composite ornamental pins, yet there is a possibility that composite arrow points may have been present.

The tip of a sting ray spine, 1¾ inches long, may have been a projectile point, although it shows no evidence of working. Similar points showing notches made for hafting were found at Surfside. They are also reported from the Florida West Coast at Crystal River.\(^{38}\) This culture item is one of the few traits that finds counterparts in Central and South America. They are found in Maya Area at Piedras Negras,\(^{40}\) and

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34. Goggin (1939), 40.
35. Wyman (1875), 40.
36. Sellards (1916), Pl. 23.
37. It is almost identical with wooden specimens from the Southwestern Caves.
40. Lothrop (1937), 423.
at Holmul,41 where they are described as awls. In Panama they are abundant at Coclé,42 and Mason found them in the Santa Marta district of Colombia.43 He also notes their use as arrow points among the present day Goajiro Indians. It is quite likely that this distribution is merely a coincidence due to the availability of identical resources in a similar tropical environment.

One small perforated shark's tooth, \( \frac{3}{4} \) inch long, was collected. (Fig. 3, d). It is uncertain whether this was worked for an ornament or to be set in a club, as Cushing found a club studded with shark's teeth at Key Marco.44 Other specimens of single perforated teeth have been found at Surfside and with a burial at Pine Island, on the West Coast.45

The ever present bone pin is represented by two small fragments. One section of a point is \( 1\frac{3}{4} \) inches long and \( \frac{1}{4} \) inch wide. This still retains a high degree of polish. The point is neatly shaped and polished, but is not sharp enough for an awl. This fragment appears to be a section of one of the long pins (7 to 9 inches), which were probably worn in the hair. The other is \( 2\frac{3}{4} \) inches long, and though it is badly eroded, there is little doubt as to its former identity.

Ornaments: The only ornaments collected were two whole and one broken pendants from Key Largo Site No. 1. These pendants, often called plummets or plumb bobs, are very characteristic of Florida archaeology. Various uses, other than ornamentation, have been postulated, such as net weights and sinkers, but whenever specimens are found with burials their positions are such as to indicate that they were used for adornment. All found here were with midden material.

The finest example is a pear-shaped specimen made from pumice.46 It is 2 inches long, 1 inch in diameter, with a net incision around the small end. It is naturally very light and has a very rough surface. (Fig. 3, b).

41. Merwin and Vaillant (1932), 90.
42. Lothrop (1937), 97.
43. Mason (1936), 232.
44. Cushing (1895).
45. Moore (1905), 305.
46. Pumice is found on the beaches of Southern Florida where it has drifted from the volcanic islands of the Lesser Antilles. Fragments occur in most middens which show its use as an abrasive. It might be noted that there was found at Key Largo 1, a small pebble of a green serpentine-like material.
Another pendant, a long narrow triangle, made of limestone, is 1 3/8 inches long and ½ inch wide at the bottom. The surface is poorly finished. (Fig. 3, c).

A broken specimen made from the lip of a *Strombus gigas* shell is 2 ¼ inches long and ¾ inch wide at the widest part. Instead of an encircling incision it has two opposite notches offset in such manner as to
give the impression that some effigy was attempted. The surface is fairly well finished. (Fig. 3, a).

Subsistence: The extension of this work to the Keys has shown the utilization in large quantities of shell fish not used in the near-by Florida areas. These are the *Nerita versicolor* and the *Livonia pica*. Large pockets of broken *Nerita* shells were found in the Upper Matecumbe Key midden and at Plantation Key Site No. 4. They were all cracked in a similar manner to extract the snail. At the present time the snails are not eaten in Florida, although they are great favorites of the Greek people and the Polynesians.47

Of the three large conchs found in the mounds, the *Strombus gigas* is the only one popular for food at the present time. The *Busycon perversa* and the *Fasciolaria gigantia* are considered too tough, although the latter is still occasionally ground and used.

The *Livonia pica*, which is found in such quantities at Plantation Key Sites Nos. 3 and 4, is rather rare nowadays in the Keys, but is considered to be a great delicacy in the Bahamas.

The presence of great quantities of fish bones would indicate a large utilization of such food.

**Summary and Conclusions**

The sites and material examined seem to belong to the Glades area beyond question, and in particular the Key materials falls into the Tekesta sub-area. There is no evidence of contact with the Antillean area despite the close proximity of the Keys to Cuba and the Bahamas.

Various writers have postulated Mayan connections with Southern Florida and in particular Key Largo Site No. 3. There is absolutely no concrete evidence of such relationships. The stone mound on Key Largo Site No. 3 does not resemble any Mayan structure and the pottery in the area is in no way similar to Mayan ceramics as has been claimed. It was further reported that obsidian knives were found near the stone mound.48 If such were true, trade relationships with Mexico would be established, however, none were found during the period of work described in this paper.49

There is not enough space available in this short paper to discuss all

47. Thanks are due to Henry Frampton of Miami for material on the modern utilization of marine mollusks.
49. In conversations with Dr. Gifford (Spring, 1943), he says there was some mistake about the report of the obsidian knives.
the ramifications of Antillean and Southeastern cultures. Certain isolated traits which appear to be common to both the islands and mainlands are repeatedly pointed out by careless, or romantic, writers and offered as proof of important cultural affiliations of the two areas. Complete cultural connections must be based on high percentile similarity of exhaustive cultural trait lists comprising subsistence, religion, social and linguistic, and artifactual material. So far, we have certain similarities and a few common traits of material culture and little else. As for subsistence in the Antilles, the cassava, or manioc, is the basis of the entire food complex, and in this respect shows the basic food derivation from the Amazon and Guiana regions of South America.

In the southeast, generally, the agricultural complex is basically maize, with beans and squash. In Southern Florida, the nearest area to the Antilles, all Spanish reports emphasize the fact that agriculture of any type was entirely lacking. The religious and social systems are not thoroughly known as yet in the Antilles, but at the present time there appears to be little similarity to the Southeastern United States. Language appears to have no similarity at all. The Calusa, who may have had the majority of contacts with the Antilles, speak a little known language which appears to be related to the Choctaw.\textsuperscript{50} The most important item of material culture—pottery—refutes by direct evidence the possibility of important connections.\textsuperscript{51} No example of West Indian pottery is known to have been found in south Florida, although slightly similar pieces are found in West Florida and in Georgia.

Although no stratigraphy was seen, a carefully planned excavation may reveal some chronology in pottery designs. No European material was seen, perhaps indicating that most of the sites were not occupied in Post-Columbian times, although aborigines are referred to by Spanish writers. Even though the Indians had little direct trade\textsuperscript{52} with the Spanish they must have procured large quantities of plunder from the many ships wrecked on the Florida reefs.

The absence of more burial sites is quite puzzling, especially as no evidence has been found as yet of burials in the middens. It is impossible to excavate a grave on the keys except on the beaches, because of the rock, and the beaches are constantly shifted and destroyed by the

\textsuperscript{50} Swanton (1922), 30.
\textsuperscript{51} Goggin (1940b), 27, 29.
\textsuperscript{52} They had practically nothing to offer to the Spanish.
sea. It is possible the Plantation Key Sites Nos. 1 and 2 and the sand ridges at Lower Matecumbe Site No. 1 may prove to contain burials.

Towards Cape Sable, to the west of the main chain of Keys, there are a few small keys, but they do not appear to have been occupied in aboriginal times.

The remarkable discovery by Cushing of finely carved and painted wooden objects at Key Marco\(^{53}\) is well known to archaeologists. However, little has been found on the East Coast.\(^{54}\) Considering the recent findings of Stirling\(^{55}\) at a canoe landing near mounds close to Belle Glade, there is still hope that similar finds may be produced from the Keys. Some possibilities are offered here. Considering the topography, it would appear that the best chances would be at Key Largo Sites Nos. 1 and 2 and on Upper Matecumbe. These sites abut upon the thick mangrove swamp which lines the inner side of the Key, and undoubtedly canoe trails were kept open from these sites to the Bay of Florida. It is quite possible that in the muck areas at the foot of these sites the perishable material may be found buried. The situation is somewhat like that which Stirling found at Democrat Creek, near Belle Glade.

However, any excavation endeavoring to recover this material would be quite costly, necessitating great care, as the area considered is a tidewater, mangrove swamp.

\(^{53}\) Cushing (1896).
\(^{54}\) Goggin (1942).
\(^{55}\) Stirling (1935).

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Five Plants Essential to the Indians and Early Settlers of Florida

by JOHN C. GIFFORD

The following five plants served the Indian and early settler well. Although they may have been superseded, I doubt if they have ever been excelled: Koonti, a starch; Black-drink or Florida-maté, a beverage; Seminole-pumpkin, a vegetable; Guava, a fruit; Georgia-fever-bark or Florida-quinine, a medicine. All five of these plants have held an important place in the lives of the people of the Southeastern United States. All are apparently native to Florida or the near-by West Indian Islands.

Koonti or comptie is a cycad of the genus Zamia with four species in Florida, according to Small. The common kind, in the southern end of the state is Zamia Floridana. According to Professor Charles Joseph Chamberlain of the University of Chicago in his book on “The Living Cycads,” “starch is very abundant in the underground portions of the plant, and it is often used for food. The stem is pounded to a pulp and washed in a straining-cloth to remove a poison which is found in most cycads. During the Civil War several soldiers died from eating the root before the poison had been washed out; but the meal, when properly prepared, makes a fairly palatable cake or pudding. Some species in Cuba are being used for the manufacture of starch, but Zamia does not grow fast enough to give it much commercial importance.”

Whenever an old settler needed cash he would manufacture a barrel of koonti starch. It was shipped by way of Key West and was finally converted into arrow-root biscuits. The pine trees were blazed for koonti tasks and it was common to see Negroes, Indians and Whites all busy together digging koonti. Here and there koonti mills developed in the pine woods. The red water from the washings is poisonous to domestic animals and the refuse, when it commences to decay, contaminates the air with a genuine stink. It is a very valuable fertilizer. Just as pioneers in other sections depended on palm-cabbage and alligators’ tails, the pine woods settler, while clearing his land, fed on koonti starch and
gopher turtles. The seeds resemble large grains of corn and are called “koonti-corn.” When eaten by turkeys or other animals, they are said to cause death, although some say the crow is an exception. The leaves, resembling miniature palm fronds, were shipped north for decoration on Palm Sundays. Specimens of the cones of this plant are in demand in northern institutions for study because the pollen grains develop spermatozoa which wiggle about at a lively rate.

Among the piles of koonti roots I once found what I thought were bacterioidal nodules. This may account for the richness in nitrogen of the refuse and is probably one of the reasons why the plant never grows in low or damp places. It is never seriously injured by forest fires, sprouting quickly from the root if the leaves are killed. It is bothered only by the koonti-fly which seems immune to the poison in its leaves. It is one of the left-overs of past ages, living only in small patches here and there throughout the world. As with several things in common use today, some Indians were probably poisoned before a safe process of manufacture was developed; however, this knowledge was absorbed by the early settler. When we plant any common cultivated thing we are profiting by the work of many people through many years.

Koonti starch was the basis of soffi-pot, which was usually kept constantly simmering, until superseded by grits. Corn-grits replaced koonti and corn liquor the black-drink or Florida mate, called yaupon by the Indians.

**Florida mate:** In an old book on the “Trees of America” by D. J. Browne, published in 1857, there is an interesting description of yaupon, *Ilex vomitoria*, the emetic-holly. He relates that in Italy the tree is known as “Appalachina” and to the French as “Houx apalachine.” In northeastern America it is referred to as cassene, cassena and cassioberry-bush, but among the southern Indians as yaupon or yapon.

In the “Traits of the Aborigines” is the following:

> “The firm cassene endures the wrecking storm
> And changeful season,—by tradition styl’d—
> The boon of heaven, and around Hygeia’s fane
> Wreaths a bright garland, when her priestesses,
> Clad in their meek and unpretending skill,
> It’s aid demand.”

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1. This subject was studied by Dr. H. J. Webber in Bul. No. 2, 1901, U.S., Dept. of Agriculture, entitled “Spermatogenesis and Fecundation of Zamia.”
The *Ilex vomitoria* is an elegant evergreen tree or shrub, usually growing to a height of twelve or fifteen feet in its natural habitat, and somewhat higher in a state of cultivation. The flowers which put forth in June, are whitish, and are succeeded by smooth, red berries, ripe in October, they, like most of the common-holly, remain upon the branches during the winter. The emetic-holly is found in moist shady places, from Virginia to the Floridas, and was introduced into Britain in 1770.

It is said that the yaupon was regarded by many of the southern tribes of the American Indians as a holy plant, being used by them during their religious rites and solemn councils, to clear the stomach and the head. It was an annual custom for a chief to give notice to the inhabitants of a town, in the spring, to assemble at the public house, which was previously purified by fire. After they had convened, the chief was first served with a bowl of conch-shell—never before used—of their emetic broth, and next to him were served each individual until at last the women and children. They had a belief that this beverage restored lost appetite, strengthened the stomach and gave them agility and courage in war.

Among some of the tribes it was held in such high esteem that the decoction of its toasted leaves called “black-drink” was forbidden to their women. In North Carolina the inhabitants of the seaside swamps, having no good water to drink, disguise its taste by boiling in it a little yaupon and use it constantly warm as the Chinese do their daily tea.

The U.S. Dept. of Agriculture has experimented with yaupon in both South Carolina and Florida for some time past. This tea has been used by the natives for many years and during the Civil War replaced oriental tea. I understand that Dr. Crawford C. Wilson at Auburndale, Florida, on his “Yaupon Farms” has developed a superior grade of native tea. Like the Paraguay-tea, to which it is very similar, it must be boiled and not steeped. It is more than likely that in many parts of this world without these various teas, irrespective of their exhilarating effects, many would have died of epidemics. Unboiled water is suspicious everywhere in the tropics. It is always best to rely on teas and fruit juices.

Early travellers tell how eagerly the southern Indians in Florida waited for the arrival of the tea leaves from the northern part of the state. In fact, the word “Osceola” is from “asi-yahola.” Asi, the plant, and yahola, the long drawn out cry when all were ready to drink. Osceola was the leader of these ceremonies, thence the name. They say that Osceola’s real grievance against the whites was due to the fact that
they captured his wife, claiming that she was a run away slave, though she was only part Negro, and they had three children.

Seminole-pumpkin: The seminole word, “chassa-howitska,” according to Dr. William A. Read of the University of Louisiana, means “hanging pumpkin,” chassi, pumpkins, and witski, hanging loose. This is the name of a river, Chassa-howitska, shown on the Taylor map (1839) and on the Davis map (1856). It is the old Indian name of a river in Citrus County and of a swamp in Hernando County.

The Indians raised this pumpkin by planting it at the butt of a tree which had been deadened. The vines climbed up the tree and onto the branches. It was a curious sight to see an old oak tree laden with hanging pumpkin. The Indian may have had two or three things in mind when he planted his pumpkins this way. It was a sort of vertical rather than horizontal agriculture. The fruit was out of the way of the pigs and cattle. It was a saving in ground space. Being a vine anxious to climb, the fruit would be of better quality away from the dampness of the dank earth.

From the fact that this pumpkin is very different from the ordinary pumpkin, it would seem to me that it has been cultivated for a long time in one place, away from the chance of crossing with other pumpkins. No doubt, the Indian intuitively selected the type best suited to his needs. It has, I think, never been found in the wild state or even running wild in places where it is grown. I have seen pumpkins very much like this growing in the Bahamas and I suspect that it was brought to Florida from the West Indies long ago. The method of growing them on trees is, I think, a Seminole invention.

Now this pumpkin is small, hard, greenish and in general does not look very promising, but it really has the best flavored flesh of any pumpkin I have ever tasted. It is so far superior in flavor to the common run of pumpkins that it should be cultivated and sold, or canned with profit.

About forty years ago I visited an island in the southern part of the Everglades. The Indians there at that time did not appear to be Seminoles. They were more like the descriptions I had read of the aboriginal Calusas. They might have been a remnant of the old Calusas, gradually merging with the Seminoles from the north. The center of this little island was covered with live oaks which had been girdled. The ground underneath was very fertile. Large numbers of pumpkins were hanging from the branches. They had also a kind of dasheen, cassava were
growing under the oak trees and they had a patch of bananas. This led me to believe that they had been in communication with the West Indies, since South Florida at that time was well separated from the rest of the state by miles of mud and unbridged rivers.

Unlike the majority of Seminoles, the group of Indians we visited were inclined to be unfriendly and very difficult to approach. We finally won over the women by giving them some big black cigars. They let us look around and when we were leaving gave each of us a pumpkin. I planted the seeds in my garden and raised fine pumpkins for several years and everybody who ate of these in pies or cooked in various ways, remarked about the fine flavor. This pumpkin was a very important part of the Indian diet, they cut it in strips and dried it to serve in times of dearth.

The scientific name of this Indian pumpkin is probably "Cucurbita moschata," sometimes called the cushaw squash. The word "cushaw" or "cashaw" is of interest. According to Dr. Wm. Jones, "kasha" is an old Chippewa term for "hard shell." "Ecushaw" or "escushaw" is in the Algonquin language a pumpkin without a neck. The word "squash" is Indian from "askuta-squash," meaning vine-fruit. The word pumpkin, no doubt, comes from the Greek, meaning "melon." This species (C. moschata), called the cushaw, is undoubtedly of American origin—probably tropical—and was gradually carried north by the Indians, as were corn, cotton and tobacco.

Billy Bowlegs was mad when surveyors trampled his bananas but he was fighting mad when they shot down his pumpkins. This was the favorite vegetable, always hanging from the tree limbs protected by its hard shell and height above ground. It is often necessary to cut these open with an axe and shell out the inside as we do the coconut.

The Guava: Old writers refer to the guava as the Florida-guava, with fruit comparable in flavor to strawberries. They also say that they can be easily propagated from cuttings, which has not been my experience! When Canova visited Miami in 1858 he found the guava bushes full of delicious fruit, excellent in quality and similar to the most delicious peaches, Guavas and cream, peaches and cream, seem to match in the minds of these early writers. I have wondered if the quality of the guava has actually deteriorated, or if the improvement in other fruits has left it far in the background.

Many people dislike the seeds, but they can be roasted, ground and mixed with the pulp for the manufacture of guava cheese. Guava cheese,
cassava, tortillas, bananas, and coffee is a common breakfast or lunch in Latin America.

Most people dislike the smell of the ripe guavas, but nevertheless many old crackers prefer them to peaches. I doubt if there is a finer jelly fruit in all the world. Fresh fruit will often yield over three times its weight in jelly. I know a northern man who sends to Florida for guavas, not because they are better than apples, but because they produce so much more fine jelly than any other fruit. Many years ago a Captain Simmons and his wife, a physician, came to settle in South Florida. The country was sparsely inhabited and peaceful, and there was practically no sickness. The doctor told me that transportation was so difficult that her patients were dead or well by the time she got to them. There was little doing in real estate, so about the only occupation that they could think of was the manufacture of guava jelly. For years they shipped this jelly to all parts of the world, and people came from miles around to get his guava wine.

This guava factory was located on David Fairchild’s place in Coconut Grove. At times there was a big pile of seeds and refuse by the roadside, and paths led to this factory through the woods from every direction. The jelly was shipped away, but the wine was for local use. I still have some of the jugs made in the mountains of North Carolina and shipped south to hold this guava wine. This is how many of us got our much-needed vitamins. Today guava jelly and guava paste are on sale in the stores of Miami from Hawaii, Mexico and Cuba, and the jelly factories in Florida send away to the West Indies and Mexico for fruit. I have noticed more guava trees around Lake Okeechobee than elsewhere and, although wild, they have excellent fruits for jelly production. Guavas were delivered in those days for between a cent and two cents a pound.

Cattle love guavas. Two young students in the University of Miami who were working their way through college with the help of two cows, soon discovered that they could feed their charges to best advantage on guavas. When the seeds pass through the stomachs of cattle they sprout; and here and there throughout Cuba there are bosquets, or clumps of guavas called guayavables. The pigs also rush for the fruits when they fall, but cattle have the advantage because they can reach higher. I have noticed in Cuba that a cow can hear a guava drop a long ways off.

2. Foundation of the jelly factory, destroyed by the 1926 hurricane, can still be seen on Dr. David Fairchild’s place in Coconut Grove.
Many object to the guava tree because they say it harbors bugs. In fact, some of our scientists have dug it up to protect other trees. It is bad when you have to kill the patient to cure the disease. Bugs will move to some other trees when the guavas are all killed. To protect other trees from fruit flies they have cut down many guava trees in spite of the protests of the natives. If grown in clumps in close formation so that lizards and birds and other insect-eating creatures can find a safe home they are no worse than other kinds of trees. That they have spread naturally and have become naturalized throughout Florida and the whole of the West Indies is evidence enough that they can hold their own, and more too, with half a chance. An old sugar plantation is in time abandoned to grass. Soon the guava appears and is spread by cattle. In time it becomes a thicket and finally, a forest. If, as some say, the guava can be reproduced from cuttings, it would be easy to produce improved varieties. It can, I know, be easily done from root suckers. As with the lime, the tendency seems to be to go back to the standard wild fruit. In the West Indies the tree is in such demand for charcoal that it is usually cut before it reaches maturity. It sprouts quickly from the stump, so that when cut it grows in a close, low bush-like form which protects it from the wind, and is in itself an excellent windbreak. The sprouts bear while very young.

When a guava gets badly infested with bugs I cut it down even with the ground. It quickly produces vigorous shoots and root suckers which soon yield fine fruits again. The guava is one of those fruits, semi-wild, dear to the heart of the native and, like the lime, preferring to grow in thickets rather than in orchard formation.

And now comes the latest and greatest discovery relative to the guava fruit. It is one of the richest of all fruits in vitamins, and in South Africa they gather the fruit, scrape out the seeds, dry it in the sun, then grind it into powder and use it for medicine. The lesson of all this is that we had better stick to the time-tried things. Things that are here, are here because they are fit.

*Florida-quinine.* Bitter barks have been used for many years in all parts of the tropics for the control of intermittent fevers. For this purpose the plants belonging to the madder family have long been famous. Various forms of malaria constitute our worst tropical diseases, and according to recent reports are actually on the increase. There is general agreement as to the efficiency of quinine, but we must bear in mind that manufacturers will insist that there is no substitute for it, although in
time past it was criminally adulterated by many dealers. Some doctors in self-defense used the crude powdered Peruvian bark. The first powdered quinine was introduced into this country from France about a century ago by Dr. Henry Perrine of Florida fame. In fact, it was poor quinine that had much to do with the passage of the Pure Drugs Law. Quinine has always been scarce in wartime. This same feeling existed during the Civil War in this country when importations from foreign parts were seriously curtailed. My old friend Dr. Charles Mohr, a druggist in Mobile, worked for a long time for suitable native substitutes for imported drugs during the Civil War and for quinine he used the bark of the Georgia-fever-tree. The tree long famous for this purpose was Pinckneya pubens, Georgia-bark, fever-bark, maiden’s-blushes, or Florida-quinine. The tree was named for Charles C. Pinckney, the revolutionary patriot of South Carolina. Pubens means hairy and it is sometimes referred to as the pubescent Pinckneya. It has showy flowers, white, tinted with red. It is a little tree growing in the swamps, but now very scarce. Professors Coker and Totten in their excellent book on the trees of the Southeastern United States say that “Pinckneya is a close relative of the cinchona tree of South America that furnishes the quinine of commerce and probably contains the same curative element, as its effectiveness in curing malaria has been repeatedly proved.”

Years ago at regular intervals the slaves on the plantation were lined up and required to take their dose of fever-bark soaked in rum.

The writer is certain from experience that not only quinine but several other bitter barks are excellent preventatives of malarias of various kinds. The amoebae that cause them do not flourish in the body of a person saturated with these bitter drugs. I remember in Panama when workers were given tablets of quinine, some of the pills were thrown out of the window where a turkey gobbler picked them up. In time he began to show quinine blindness and was killed and cooked, but his meat was so bitter that no one could eat it. The Dutch have perfected the cultivation of the cinchona tree in the East Indies, and although the tree is of American origin and still plentiful in South America, they have maintained a monopoly of the world’s trade in quinine, and have led all of us to believe that their product is the only efficient quinine. Somebody might discover that the Georgia-fever-bark is quite as good, perhaps even better than the South American cinchona.

There is another tree on the Florida Keys belonging to the madder family called princewood (Exostema caribæum). The bark of this tree
contains active tonic properties and has been used as a fever fighter by the natives of the Florida Keys for many years. There are several tropical plants which have the specific name “febrifuga,” which means fever-chaser. I remember reading in an old book on Africa that the natives would carry a paresis patient into the low lands to contract the fever, then cure the fever with bitter barks. Many things, especially drugs, are not new. They simply masquerade under copyrighted names.

I have seen the natives on the Florida Keys drink the water in which princewood bark has been soaked for a time. Soaked in rum, the bark would be much more efficient. It might be possible to manufacture a famous bitters from this tree. In fact, both the Georgia-fever-bark and princewood should be carefully tested and if of high class as a fever preventer the trees should be cultivated, since the time is coming when they will be exceedingly rare. They are both scarce and very local now. They will completely disappear from Florida unless carefully protected. They have already played an important role in the early history of the Southeastern United States. In fact, everywhere throughout the world there are favorite bitter barks which not only stimulate stomachic activity and pep-up the system in general but apparently produce such a bitterness to human blood that it forms poor pasturage for the low animal forms that cause malarias of various kinds. Mahogany bark tea is often used also.

The Indian has lived on the Western Hemisphere a very long time and must have learned a lot from experience, and experience and experiment come from the same root meaning to “try out.” They unquestionably “tried out” many things through the ages, the results of which they passed on either willingly, unwillingly or unknowingly to us newcomers.
Recent Economic Trends in South Florida

by REINHOLD P. WOLFF*

For the last fifty years the history of South Florida has been closely connected with the history of transportation in the United States. The region’s economic development started with the laying of the first railroad into South Florida by Henry M. Flagler in 1894. Its first phase came to a conclusion and a new phase was opened when, by the time of the first World War, popular motor transportation developed. We are now entering a third phase of our economic growth which is marked by the institution of large-scale air transportation.

During this fifty-year period, South Florida has grown from a sparsely populated area with less than two persons per square mile, into a large metropolitan district with a wide, though still thinly populated “hinterland”. While the census of 1895 registered only 3,322 inhabitants in Dade County, the census of 1940 noted a population of 267,000 in the county, and a population of over 500,000 in the 19 counties which now form South Florida. Wealth and incomes have grown correspondingly, or even in excess of the population increase. For Dade County alone, property valuations before the war were over $500,000,000; and the income produced in the metropolitan area of Miami has been conservatively estimated at $170,000,000.

The beginning of South Florida’s economic development was agricultural, with a very modest share of resort trade sprinkled in. The lifeblood of economic growth, however, was supplied by the transportation element. Henry Bradley Plant, the first of the two noted railroad builders, came to Florida in 1853 because of his wife’s illness. An executive of the Southern Express, he recognized the possibilities which the undeveloped country offered and gradually developed the West Coast system, which started in 1879 and grew into a complex of 14 railroad lines.

Henry M. Flagler had already made a fortune in the Standard Oil Company when he devoted his energies to railroad development in Florida. He obtained his first railroad in 1886, buying old properties and

*A paper read before the Historical Association of Southern Florida at its meeting of March 30, 1944.
not building his own railroad before 1892. When Flagler's line entered South Florida at West Palm Beach in 1894, and reached Miami in 1896, the northern part of the state was already criss-crossed by hundreds of miles of railroad tracks. It is interesting to note that Flagler made his large investments in Florida railroad construction, in hotel building and in ship lines with a very long-range viewpoint of economic development rather than with the intention of getting quick profits. From a broader economic viewpoint, his enterprises have proved to be even more profitable than he could have dreamed of at the time that he started his gigantic plan. If it is true that Flagler invested altogether $75,000,000 in Florida properties and enterprises, this money has paid generous dividends to the people of Florida, whose yearly income is now ten times Flagler's investment.

On the other hand, it cannot be denied that Flagler's investments in South Florida were very slow to show returns to the investor himself. In the first phase of our economic development, South Florida was a region with a pronounced agricultural pattern. Flagler's railroad work had linked Miami with northern markets and had created an outlet for the fruit and vegetable crops that were grown in the region. At the same time, the trend had been started which made Miami and Palm Beach a big attraction for winter visitors, but this development was slow, despite the grandiose hotel structures which Flagler erected all along the East Coast. Until 1920, not a single city over 50,000 had developed in South Florida. Miami at that time had 29,500 inhabitants, West Palm Beach had 1,100 residents.

The real beginning of South Florida's growth into a major resort area did not come until the time when the popular-priced automobile made motoring the most widespread and popular of all recreation activities. It can be estimated that three-quarters of all tourists entering the state of Florida before the war came here by motor car. Not only was motoring the major means of reaching the state from out of state locations, it was also the very transportation agent which made the growth of Miami possible. Miami was visited each year by hundreds of thousands of transient tourists who would otherwise have stayed at resort places further north. Even at the present time the importance of the transient motorist is not fully evaluated. On the basis of a tourist survey made some years ago, we may assume with reasonable safety that the transient motorist who stays a week or less in the community, contributes a major part of total tourist spending. Tourists collectively
account for about one-third of Dade County’s total consumer spending. Twelve million dollars annually was spent in hotels. The tourist crowd has increased our restaurant business to a point where it outranks the business done in Minneapolis, a city with twice the population of Dade County. Altogether some $60,000,000 a year may be estimated as being expended by visitors in Dade County alone, this figure based on pre-war monetary values.

The tourist business is a rather incongruous term for a series of operations which include not only hotel and residential rentals, spending in restaurants and drinking places, spending at horse tracks, and other places of amusement; but also such expenditures as gasoline, food purchased in stores, dry goods, gifts and even furniture for tourist homes and hotels. The resort trade, in other words, is not a single industry, but an agglomeration of various industries and trades.

As compared to the tourist industry, agriculture, manufacturing and other productive activities have made less progress during this second phase of our development. Farming, once a major source of South Florida’s industrial pursuits, now holds low rank in the scale of income-producing industries. It has grown to a $10,000,000 business, but it produces comparatively less income than even personal and business services, not to mention the trades. First rank among the productive industries is now claimed by the construction business, which before the war grossed about $30,000,000 annually. Manufacturing has never amounted to a major industry in South Florida and probably will not grow into a major complex in the near future. True enough, even before the war Dade County alone had a manufacturing industry with a value of $22,000,000 worth of products annually. But the major part of this industry was devoted to the production of local consumer goods such a printing, bottled beverages, ice, bread, ice cream, furniture and woodwork. Little of it had importance nationally, and few were the products exported from the state. The war has greatly increased manufacturing activity in the county and strenuous efforts are being made to preserve at least some of the gains for the future.

The initiation of long-range air transportation has opened a new phase in the history of South Florida. The development has been much too recent to allow any evaluation of what air transportation will finally mean for the destiny of South Florida. From all the evidence it may be assumed, however, that the effects of air transportation will be not less revolutionary than was the development of popular motoring. Lo-
icated at the tip of the Florida peninsula, South Florida in the past was handicapped by long distances more than by any other economic factor. This region still is one of the least developed and most sparsely populated districts of the state and is capable of harboring a population double or treble the present size. In all probability air transportation will have three major influences. For one thing, it will make Miami one of the greatest transportation cross-roads of the nation, if not the world. We hope that in the post-war period Miami will preserve some of its war gains as a point of exit to the Caribbean, to South America, Central Africa, and South Asiatic countries. This includes sea lane traffic and railroad communications which cannot be dissected from an air transportation center of growing importance. To what extent this development will immediately influence economic activities inside the area cannot be predicted now. A great deal depends on the speed and intensity of Latin American growth. Although it would be wise to plan for future expansion, it cannot be denied that past history points to slow growth rather than to a sudden upsurge of foreign trade.

The second most important influence of air transportation will be the stimulation which air travel will give the tourist trade. Undoubtedly the time element has been the major handicap for many people who wanted to visit Miami, but who were not able to bridge the long distance during a short vacation. Long-range flying has now placed Miami within six hours of the major centers of United States populations. Unless all signs fail, the tourist stream, within ten years after the end of hostilities, will be greatly intensified. Figures on traveling in California suggest that we are far from reaching the point of saturation. Although slightly over 2,000,000 tourists visited Florida annually, approximately six times as many tourists traveled to California. Post-war transportation may well make us reach California's record.

A third influence which air transportation exerts on the economic life of an area, is to be found in the shift that it produces in manufacturing and wholesaling industries. Air express and freight by air will make it possible to ship many products of the area direct to urban markets. Goods which formerly had to be placed in cold storage or refrigeration may thus be shipped directly north. It also will be possible to ship into the area advantageously raw materials and supplies for our growing industries.

It would be utopian to assume that, through air transportation, manufacturing and other heavy industries could be located in South Florida
on a large scale. We have neither the labor sources, nor the raw materials, nor the energy resources required to make the area a center of large-scale manufacturing or processing. It can be hoped, however, that many small-scale industries, many wholesaling and exporting activities, warehousing and storing, conversion and assembly plants, can be developed in the area. Through such encouragement of industries, we may hope that the air-age will produce a better balanced economy for South Florida.
The Freducci Map of 1514-1515
What it Discloses of Early Florida History
by DAVID O. TRUE

At first glance, the old map partially reproduced in this issue of Tequesta, would not excite the average reader very much. I first read of it in an article by Dr. Cisco in the Bulletin of the American Geographical Society, 1913, in his version of the Ponce de León landings and route. The fact that this map was issued at such an early date, according to Eugenio Canova, and that it was based in part on data obtained from the Ponce expedition, made me most anxious to see a copy.

Fortunately, full information is available at the Library of Congress. The original map is located in the Royal Archives at Florence, Italy, and is called the “Carta Nautica di Conte Ottomanno Freducci d’Ancona”. In 1894 a brochure was issued by this institution, describing the map and containing a reproduction of the original at about half scale. One of these brochures is owned by the Library of Congress, and they made the photostatic copy accompanying this article. A reproduction is also contained in Konrad Kretschmer’s Die Entdeckung Amerika’s in ihrer Bedeutung für die Geschichte des Weltbildes, Berlin, 1892. Dr. Cisco states that the outlines of Florida in Kretschmer’s reproduction are so conventionalized that their historical significance is destroyed. There is also a tracing in Harrisse’s Découverte et Evolution Cartographique de Terre Neuve, p. 81.

From this remarkable map, assuming that the estimated date is approximately correct, one finds four major contributions to Florida history. It is probably the first map to bear the name Florida. Here also is the earliest appearance of any city of North America on a map, the present city of Miami. It also shows that the Herrera designations of latitude readings in connection with landings at various places by Ponce de León were interpolated from much later sources. Furthermore, it helps to verify Sebastian Cabot’s statement that he rounded the Cape of Florida.
Erratum: The top two and one-half lines of page 51 should read as follows: “On the Freducci map of Florida I Florida is the top name, where Florida is designated as an island, as was done by some other cartographers also in those early days.” The only explorer fully authenticated to have cruised the Florida shores before Ponce was Sebastian, and possibly John Cabot. Their evidence seemingly is of coasting some thousand miles of continuous shoreline. Relatively few map-makers portrayed Florida as an island.—D.O.T.
On the Freducci map of Florida, I. Florida (sic) is the top name, here Florida is designated as an island, for this was the belief of the early explorers. The Rio de Canoas is identified by Dr. Cisco as Indian River. The next place, on the map, reading down, is Chantio, which is Cautio in Kretschmer, the name that Herrera said was given to Florida by the Lucayan Indians. Ponta d’Arcifes is Point of Reefs, spelled Arracifes by Herrera. Herrera mentions the Rio de la Cruz, River of the Cross, designated by its cruciform shape on the Freducci map, stated to be Jupiter Inlet by Dr. Cisco: “No other inlet on the coast has three branching streams at its head.” One could almost believe that it means Lake Okeechobee. The Cabo de Corrientes of Herrera is the Cabo de Setos, Cape of Pales, in Freducci. Abacoa was Abaida, in Herrera, an Indian town near Lake Worth Inlet, according to Dr. Cisco. He identifies the Rio Salado, Salty River, with New River Inlet. Herrera in his account mentions two keys that are not on Freducci, Santa Marta and Pola. On the Freducci map are El Nirda and Canbei. Canbei becomes Camboie in Kretschmer, and is probably Herrera’s Achecambei. One of the two Indian towns on the Keys, according to Fontaneda, was named Guaragunbe or Guaragumbe; perhaps all of these were what is now known as Matecumbe. Los Martires of both Herrera and Freducci, is a translation of the word Cuchiyaga of the Indians, as shown in Fontaneda’s Memoir; it thus alludes to Indian tribulations, not those of Spaniards, who had not yet discovered the New World when the name was first used. Ponce merely translated the name already found in use on the Keys, though Herrera said it was bestowed upon them by Ponce. Matança is in both Herrera and Freducci, it alludes to the killing of some Indians by Ponce on his first journey and contributes to the evidence that this Freducci map was compiled from Ponce de León sources to some extent. The two West Coast names, Guchi and Stababa, are not identifiable from the Herrera records.

Chequiche is spelled Chequescha by Herrera, and this is the well-known Indian town Tequesta, generally stated to have been situated on the Miami River, where it empties into the bay. Ponce may have stopped off to visit it on his way to the West Coast, as some authors report, but Herrera definitely stated that he arrived at this place on Sunday, July 2, 1513. This is the earliest mention of Miami, by its ancient Indian name. Miami thus becomes the first city on the continent of North America to have been definitely visited by Ponce, or
Portion of Freducci's Map showing Florida, the Bahamas and Cuba. Scale approximately 9/10 of original map.
DAVID O. TRUE

by any other discoverer of note, and to have been identified by a substantiating map. The name Miami came from Mayaimi, equally as old at the name Tequesta. It was the Calusa name for Lake Okeechobee, meaning "big water."

Dr. Cisco states that the Freducci map did not show "any indicated latitudes", but it can be readily seen that the line that Freducci drew, cutting through the Strait of Gibraltar, represents 35° north, while the same position on a modern map is 36°. Following this line westward, one notes that it runs about half way between Cuba and Florida. On this map the tip of Florida below Chequiche, is at 39° north and this is an error of more than 13 degrees! On a modern map 39° is off the coast of Delaware. Most of the other early maps and charts contain similar errors; rarely was one drawn which did not have the Tropic of Cancer south of Cuba, instead of north where it belongs. The Freducci map was based to some extent on Ponce's data, and if Ponce had a map or chart on which latitudes were as relatively exact as they are given in Herrera, it seems strange that no cartographer knew about it for many years afterward. If Ponce had decided to go ashore and dig a well at 28° 8' north, it would have been located on the very southernmost tip of the Island of Cuba, according to this contemporary map of Freducci.

To me there seems to be but one conclusion: Herrera interpolated all these locations very much later from what, in his day, were modern charts. As far as they are used by themselves to verify Ponce's landings, they are without value. They express Herrera's opinion written nearly a century later. Anyone interested in tracing Ponce's journey will find the writings of Charles B. Reynolds in accord with the opinions advanced by Dr. Cisco. The reasons for believing that a landfall was made in the vicinity of St. Augustine, are presented by Mr. T. Frederick Davis in the Ponce de León number of the Florida Historical Quarterly for July, 1935. Some investigators are interested in the theory that he sailed far to the north on the west coast of Florida; the Freducci map with its two additional names should interest them.

One must admit that Herrera was an indefatigable worker, for we have Muñoz' testimony that he probably took his data about the fabulous River of Youth from Fontaneda. One of his other interpolations is shown in his use of the name Carlos for the chief of the Calusas in the time of Ponce de León. The second chief to assume this name
was about 25 years of age in 1566; his father Senquene had been the first to take it, because he had been told that it was the name of the greatest King of the Christians (Charles V). Charles V did not come to the throne until after Ponce’s first voyage, and it is unlikely that Senquene heard of him until after 1545, the date of the Fontaneda wreck, when some 200 Spaniards were taken captive by the Indians.*

This question of latitude has a bearing on the testimony of Sebastian Cabot. Peter Martyr, reporting a conversation with Cabot in 1512, wrote of it in the 3rd decade of his history:

"Thus seeing such heapes of yce before him, he was enforced to turne his sailles and follow the West, so coasting still by the shore, that he was thereby brought so farre into the South, by reason of the land bending so much Southwards, that it was there almost equal in latitude, with the sea Fretum Herculeum, having the Northpole elevate in manner in the same degree. He sailed likewise in this tract so farre towards the West, that he had the Island of Cuba on his left hand, in manner in the same degree of longitude. As hee traveyled by the coastes of this great land (which he named Baccalaos) he said that hee found the like course of the waters toward the West, but the same to runne more softly and gently than the swift waters which the Spaniards found in their navigations Southward... Cabot is my friend, whom I use familiarly, and delight to have him sometimes keepe me company in mine own house.”

Three compelling reasons for believing that Sebastian Cabot reported in 1512 of having rounded the Cape of Florida, either with his father on one of his two trips, or on an expedition of his own in 1508, as advanced by Williamson in his Voyages of the Cabots, are contained in this account by Peter Martyr. If Cabot had not known of Florida, he would not have been able to state that by following the coastline he “had the Island of Cuba on his left hand.” To know of currents counter to the Gulf Stream off the South Florida shores before Ponce ever saw the country, took competent first hand information. This is a remarkable detail that too many Cabot historians overlook.

The third reason is the one to which the Freducci map makes another contribution. Cabot said that he sailed as far south as to be parallel with Fretum Herculeum (Strait of Gibraltar) and of returning from

*See Connor’s translation of de Merás’ Pedro Menéndez de Avilés.
that latitude to England. On a modern map, this would be from the coast of North Carolina. So the Cabot experts state that Cabot sailed south to Carolina and returned from there, instead of realizing that $36^\circ$ at his time was, on the charts and maps, in the Straits of Florida.

Other readers will probably find more interesting facts from the Freducci map. To me it has been thoroughly exciting, even to see the East Coast line veering so far westward as it leaves Miami and swings toward Jacksonville. Freducci knew his Florida and contributed more to our knowledge than we might expect from any such single document.
Obituaries

DR. EDMUND LEROY DOW, a director of the Historical Association of Southern Florida, a director of the Florida Historical Society and President of the Palm Beach County Historical Society, died at his home in Palm Beach, December 1, 1943, aged 73. Dr. Dow was a powerful force in vitalizing interest in the rich historical background of the state. His influence was naturally most strongly felt in his home organization, the Palm Beach Historical Society. Elected president of that body in December, 1941, he served continuously in that office until his death.

A joint meeting of the Palm Beach County Historical Society and the Florida Historical Society in January, 1940, was one of the most successful in the history of both organizations, due largely to the efforts of Dr. Dow. The meeting was held in Palm Beach, with the Palm Beach County Society as host. For weeks, Dr. Dow travelled over the state assembling material of historic interest, and the result was a carefully selected exhibit, covering Florida history from the beginning, that has probably never been surpassed.

Dr. Dow's energy and stimulus made the Historical Society a vital part of Palm Beach life. By personal contributions and solicitation, he provided the funds for the purchase of books that are the nucleus of a library for the organization. He was active in securing for the society all sorts of items of historical interest. Through his influence the library and the collections were housed, and a meeting place arranged, in the building of the Society of the Four Arts.

Dr. Dow's significance to the society did not end with his death. His generous bequest will be the foundation for a considerable enlargement of the buildings and facilities of the Society of the Four Arts in Palm Beach. The plans call for permanent exclusive quarters for the Palm Beach County Historical Society, its library and collections.

Dr. Edmund LeRoy Dow was born January 22, 1870, in Baldwinsville, N. Y. He held the degrees of B.S. and M.S. from Syracuse University, and M.O. from the College of Physicians and Surgeons of Columbia University. He held several teaching positions in the College of Physicians and Surgeons and was connected with the staffs of Minturn Hospital, the Vanderbilt Clinic, Bellevue Hospital and others. He was interested in many civic activities besides the historical organizations, notably Bethesda-by-the-Sea, the Society of the Four Arts, the Palm Beach Garden Club and the Good Samaritan Hospital. His summers were spent in New York City and at Watch Hill, R. I.

MRS. ROBERT MORRIS SEYMOUR, a director of the Historical Association of Southern Florida, and a well known figure in Miami, passed away on February 19, 1944.

She had been educated in St. Paul, Minnesota, and in California. She studied art at Columbia and later in Edinburgh, Scotland. This aesthetic training combined with a love of nature and a great appreciation of the beautiful made her the ideal person to draw the Florida Plan for landscape art and landscape gardening. Garden clubs in other states later adopted this Plan in its entirety. She did this work in 1932 while holding the position of Chairman of the State Beautification Committee. Among other official positions held by Mrs. Seymour were that of Research Member of the Civic Planning board of St. Paul; of President of the South Florida Garden Club and membership in other important garden clubs of Miami.
Mrs. Seymour’s energies were directed toward the job of educating Miamians to a better knowledge of the names and uses of native plant life, its romance and history. This she did through talks to clubs and articles in horticultural and garden clubs’ publications. She always looked upon landscape design as a part of the American cultural tradition and jealously guarded Miami’s city parks from commercial encroachments.

With the death of Claude C. Matlack the Association has lost, not only an able and interested Director, but also a witness to the phenomenal growth of Greater Miami; a witness who, unlike many others, was not satisfied merely to watch this growth but who did something about keeping a record of what was happening in front of him. We are referring to Matlack’s collection of photographs covering the development of Miami, Miami Beach and Coral Gables. Some of his pictures played a truly important role in the classification of Fort Jefferson, on Dry Tortugas, as a National Monument, and in promoting the proposed Everglades National Park.

Claude C. Matlack came to Miami from Louisville, Kentucky in 1916. He was by profession an electrical engineer, and was commissioned to lay out the water and electrical plants for the first hangars built by Pan American at Dinner Key. While doing this job he took snapshots for his own amusement, and became more and more engrossed in his hobby. He eventually abandoned engineering and became a professional photographer.

In 1918 three partners, F. A. Robinson, C. C. Matlack and Manly Brower opened a photographic Studio in the Southwest corner of the Halcyon Hotel on Flagler Street. A few months later Brower, for reasons of health, sold his interests to his two partners. Robinson in turn sold his to Matlack who remained sole owner of the studio. Due to the raise in rents, which eventually led to the “Boom,” Matlack moved his finishing plant to Miami Beach to make room for sub-tenants; one of these was George Merrick who opened there his first real estate office. In 1923 the rents on Flagler Street having become prohibitive, Matlack moved his entire business to Miami Beach. He served with a committee of the Chamber of Commerce handling all of Miami Beach publicity and advertisement, and many of his pictures were used for this purpose. During his stay on Miami Beach Matlack was also instrumental in the founding and early organization of the Committee of One Hundred, in collaboration with Carl Fisher, James Allison and Charles W. Chase. Matlack later returned to Miami proper to live and died there on January 11, 1944.
Contributors

Marjory Stoneman Douglas, Coconut Grove, Florida, needs no introduction to the Historical Association of South Florida, of which she is a Founding Member. Her deep love of Florida and boundless enthusiasm are evident to anyone who has ever read any of the short stories she contributed to The Saturday Evening Post, or to anyone who has ever had the good luck of talking to her for any length of time. She is currently doing a vast amount of research in preparation for a book on the Everglades, to be published in the Rivers of America Series. She also holds the job of book reviewer and literary critic on the staff of the Miami Herald.

John M. Goggin of Miami discovered the fascination of archaeology while still in High School. At that time he used to collect snakes and sell them to Ross Allen, the profits thereof to be spent in gasoline for the “Glades’ buggy” and on expeditions to Seminole inhabited hammocks. He attended the University of Florida, going from there to the University of New Mexico, where he did graduate work in anthropology on the Southwestern and Mexican Indians. He has had articles accepted by the following journals: American Antiquity, New Mexico Anthropologist, American Anthropologist, El Palacio, and The Florida Historical Quarterly. He holds an Assistantship in Research in the Department of Anthropology at the Peabody Museum of Natural Sciences at Yale, and also received a Field Grant for this past summer. This summer’s work included a survey of Indian sites from Lake Okeechobee southward and also work on a site at Upper Matecumbe Key, where abundant and interesting material was found permitting the establishment of a chronology for pottery wares.

John C. Gifford, Professor of Tropical Forestry and Conservation of Natural Resources at the University of Miami, is so well known to the public of Miami and South Florida, that the Editor feels almost embarrassed and decidedly presumptuous in trying to write of him in this issue of Tequesta. Born in New Jersey and having studied Forestry at the University of Munich, Dr. Gifford came to Miami in the early days. He has contributed to scientific journals and publications, as well as to newspapers throughout the country. His latest articles on the
“Trees of South Florida” were published in the *Scientific Monthly* for July and August, 1944. He was President of the Historical Association of Southern Florida in 1943.

REINHOLD P. WOLFF, Assistant Professor of Economics, is another member of the faculty of the University of Miami to contribute to this issue of the Journal. A specialist of industrial economics, Dr. Wolff came from Germany with his family in the early 1930's. He taught first at New York University, then came to Miami where, in addition to his academic duties, he has served as consultant with the OPA, and on several post-war planning organizations.

DAVID O. TRUE, past president of the University Club of Miami and of the Miami Stamp Club . . . His interest, at first confined mainly to pirate lore and treasure trove has been extended to include the history of early Florida, on which subject he has done extensive research. He is editing the reprint of Fontaneda’s *Memoir*. 
CORRECTION: In the 1943 issue of *Tequesta*, pp. 49 and following, for Mary Barr Monroe, read Mary Barr Munroe.

In the same issue, same article, the name Coconut Grove is spelled Coconut Grove and Cocoanut Grove. In 1909, time at which Mrs. Munroe wrote the article for the *Miami Metropolis*, Cocoanut Grove was the accepted spelling; it was later changed to Coconut Grove.

The editorial board has agreed that starting with this year’s publication we shall drop the designation of volume for our journal and simply number the issues consecutively. This year’s issue will therefore be designated as NUMBER FOUR.

The editor wants here and now to repeat a plea, expressed many times before, but with no great results. There is a great deal of interesting local and historical material in South Florida; letters, diaries, reminiscences of early settlers, etc. If you own any such documents, or know of someone who owns them, drop us a note, or, better still, call up the University of Miami, 4-0801, and ask for the Librarian. We would like in the next issue to begin a department of Documents, in which we would print interesting material called to our attention. Due credit would, of course, be given to the owner of such contributions. Photostatic copies could be made of all documents submitted.

On November 23rd, *The Nassau Guardian* will celebrate its one hundredth anniversary of publication. The Editor thinks it fitting for our Association through *Tequesta* to congratulate *The Nassau Guardian*, its owner, editors, and staff on this most propitious occasion. Published daily in Nassau, New Providence, Bahamas, the *Guardian* is the oldest newspaper with a continuous publication in our immediate geographical neighborhood. The present owner and editor in chief, Miss Mary Moseley, daughter of the *Guardian*’s founder, is well known to many of our members; those of us who have had occasion to do research in the Bahamas have always found her ready to put at our disposal her valuable time, her wide knowledge of the history and traditions of the islands, and any documents needed for our work. Miss Moseley will publish shortly a book with numerous illustrations depicting the growth of Nassau from its early beginnings to today. It promises to be a fascinating and valuable item for anyone interested in the history of the Caribbean.
Announcing

A REPRINT OF

Fontaneda’s Memoir

ISSUED UNDER THE DIRECTION OF

THE UNIVERSITY OF MIAMI

and the HISTORICAL ASSOCIATION

OF SOUTHERN FLORIDA

One of the most important sources on early Florida, it contains much information not to be found elsewhere. Fontaneda was wrecked on the Florida Keys in 1545, lived with the Indians for 17 years, is said to have been rescued by the first French expedition under Ribaut in 1562, made his way to Spain and returned with the Spanish expeditionary forces under Menéndez in 1565.

He wrote about geography, plants, animals, Indians, and wrecks. During much of the time he was a captive of the Calusas, and for two years he lived with the Abalachis. The historian Muñoz gave him the name “Hernando” by mistake. Menéndez cheated him out of his pay. In 1854 Buckingham Smith translated his account into English, translation that has been criticized ever since. The Memoir has been subjected to considerable criticism because of its many errors. This new reprint has extensive revisions and corrections. As a study, the Memoir is thoroughly interesting, a credit to our Association.

A book that should be in all Florida collections. Contains in addition to the translation, extensive notes by Buckingham Smith, John R. Swanton and the editors. Also a map of Florida at that time. Buckingham Smith’s edition of 100 copies is both rare and expensive. This edition is of only 500 copies. Copies are expected to be ready before the holidays, making it valuable as a gift. The advance price for board binding will be $1.00. A more expensive binding will be available, on order.

Subscriptions or payments should be sent to Miss Cornelia Leffler, 618 Biscayne Blvd., in Miami.
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