

Florida Historical Quarterly

Volume 13
Number 1 *Florida Historical Quarterly, Vol 13,*
Issue 1

Article 4

1934

A Topographical Memoir on East and West Florida with Itineraries

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Recommended Citation

Young, Hugh (1934) "A Topographical Memoir on East and West Florida with Itineraries," *Florida Historical Quarterly*: Vol. 13: No. 1, Article 4.

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A TOPOGRAPHICAL MEMOIR ON EAST
AND WEST FLORIDA WITH ITIN-
ERARIES OF GENERAL JACK-
SON'S ARMY, 1818

*By Captain Hugh Young, Corps of Topographical
Engineers U. S. A. With an introduction and anno-
tations by Mark F. Boyd and Gerald M. Ponton.*

INTRODUCTION

In a communication from General Jackson addressed to the Hon. John C. Calhoun, Secretary of War, from Fort Gadsden, May 5, 1818, there occurs the following statement: "For a detailed account of my movements from that period to this day, you are respectfully referred to the report prepared by my adjutant general, accompanied with Captain Hugh Young's topographical sketch of the route and distance performed". This evidently refers to the memoir and itineraries here presented.

This report is entitled "A Topographical Memoir on East and West Florida with Itineraries". The original is not available, but what undoubtedly is a faithful copy is preserved in the archives of the office of the Chief of Engineers, U. S. A. in a volume entitled Records of Reports, July 3, 1812-October 4, 1823, in which it occupies pp. 292-336. We are indebted to the Chief of Engineers, Major General Lytle Brown, for a photostatic copy of the manuscript, with permission for its reproduction. In transcribing the copy it has not been abridged except for the omission of the table of contents, while the arrangement, spelling and punctuation have been

Note—This paper was read in part before the Tallahassee Historical Society on March 8, 1934.

retained. The report is of great interest and historical value.

Available biographical data pertaining to Captain Hugh Young are meager. Heitman's register gives the following: "Hugh Young, Tennessee, Assistant Topographical Engineer, rank Captain, February 19, 1817; served with General Jackson in the Florida Campaign, died January 3, 1822.

Prior to this campaign, middle Florida was a region of which but the vaguest knowledge was possessed by the people of the United States. This sketch of the route followed by the army represents the first careful examination of the region lying between the Suwannee river and Pensacola by an American. Although promptly submitted to the authorities it does not appear to have ever been offered to the public, as the works of Forbes, Williams, Darby and Vignoles, which appeared in the decade following the transfer to the United States, do not appear to have profited therefrom, although James G. Forbes himself might have had an intimate knowledge of the region. The acquaintance with this territory gained by the men of the Georgia and Tennessee militia must have been an important factor in promoting rapid settlement following the change of sovereignty.

The historical annotations are chiefly based on the reports submitted by General Jackson to the Secretary of War from the field, as given in American State Papers, Class 1, Foreign Relations, Vol. IV. (Washington, 1834) and from the account of the campaign given by James Parton in his "Life of Andrew Jackson", (New York, 1860) and were prepared by M. F. B. The geographical annotations were prepared by G. M. P. from personal acquaintance with the terrain.

General Jackson was guided during his campaign by John Blount, a Tuckabatchee Indian. He was an opponent of the Red Stick party during the Creek War and consequently experienced their vengeance during the disturbance climaxed by the Florida campaign. His settlement on the Apalachicola was attacked by the Seminoles, his property destroyed and his family made captive. He alone escaped and fled to Fort Scott where he joined the American forces. To his correct knowledge of the country and his zealous attachment to the cause, Jackson attributed a great deal of the success of the campaign. Blount, accompanied by William Hambly and some Indians, was sent to Washington by Jackson at the close of the campaign, as a measure of diplomacy.

At the treaty of land cession made with the Indians at the camp on Moultrie creek, Sept. 18, 1823, John Blount was one of the Indians exempted from removal, and was, together with Tuski Hadjo assigned a reservation of about eight square miles, running along the west bank of the Apalachicola river for four miles.

The present village of Blountstown, county seat of Calhoun county, lies west of and adjacent to the line of the reservation. The reserve was ceded to the United States by a treaty made October 11, 1832, at Tallahassee, Florida, when the band agreed to move west of the Mississippi. Blount accompanied the exploring delegation of Seminoles that went to Indian territory in accordance with the treaty of Payne's Landing, late in 1832. The delegation brought back favorable reports regarding the land, but became opposed to locating in close proximity to the marauding plains Indians. The Apalachicola Indians, however, decided to move in 1834. They went down the river to the bay, where they embarked in a vessel for New Orleans. In New Orleans they

were detained by attachments for fraudulent claims, and defrauded of considerable sums. On release they went by canoe and land to a location on Trinity river in Texas where lived an uncle of Blount's who had migrated long before. Blount died soon after his arrival in Texas. (Grant Foreman, "Indian Removal", (1932) pp. 322-323.)

PART I

THE MEMOIR

Note: [by Capt. Young] The material from which the following report has been prepared, were collected under all the disadvantages attending researches made during the operations of a very active campaign in an enemy's country. The author being engaged every days march in surveying and measuring the route of the army, was unable to make many excursions, but every opportunity of examining the country was seized on and to his own observations, he was fortunately able to add much useful information obtained from a person [probably William Hambly] who has long resided in the country. It is hoped that the information derived from these sources will prove both interesting and useful-this memoir containing the only correct account which has been given of a section of country now rising rapidly into political importance.

EAST FLORIDA

1. *Boundaries and extent.* - The part of East Florida which formed the theatre of General Jackson's operations in the Seminole Campaign has Georgia on the north, the river Sahwanne, or St. Juan, on the east-the Gulph of Mexico on the south, and the river Apalachicola on the west-Its length, east and west, is 139 English miles and medium breadth 50-Area 6950 square miles or 4,448,000 acres. Mr. Ellicot found the longitude of his observatory at the confluence of Flint and Chatahouchie rivers, to be $84^{\circ} 45'$ west from Greenwich, and the latitude $30^{\circ} 42'$ north. The latitude and longitude of the source of St. Marys river were also found to be $82^{\circ} 15''$ W. and $30^{\circ} 34'$ N. respectively.-From these data, the course and length of the boundary line to be run from junction of Flint and Chatahouchie to the head of St. Marys.-were calculated-the course S. $87^{\circ} 17'$ E. and length 155 English miles.

Mr. Ellicot's calculations of longitude differ widely from those of the British surveyors of the Gulph of Mexico, in the middle of the last century. The

course of the Apalachicola, from the mouth of Flint, is but little west of south, and the latitude of its mouth is $29^{\circ} 46'$ N.-Yet on the British chart the longitude from Greenwich, is $85^{\circ} 44'$ -nearly a degree further west than it would be by Mr. Ellicot's observations at the junction of Flint and Chatahouchie.

From the means which Mr. Ellicot had of making astronomic observations with the greatest nicety-added to his well known skill-his calculations may be certainly depended on, and as regards the longitude of the observatory on Flint, the little difference between the longitude ascertained by the measurement on the 31st degree from the Mississippi, and as obtained from astronomic observations increases our confidence in his accuracy. The same exertions were made to obtain (296) accurate results at the head of St. Marys-and at this point, the test of ad-measurement was also applied.-We may therefore, consider the course and distance of that part of the Florida line not yet marked, as ascertained with sufficient certainty for geographic purposes and it has consequently been adopted as the base of the accompanying map. [This map has not been found] The accuracy of Mr. Ellicot's calculations being admitted, there must be an error in the British survey of this part of the coast of nearly one degree in the longitude: the mouth of Apalachicola, on the admiralty chart being put that much too far to the west. The St. Juan, or Sahwanne must be placed $40'$ too far west for, from the course of Sahwanne, some distance above its mouth, if the longitude of its delta be retained, as on the British chart, its northern waters would scarcely have room to get round the head of St. Mary's, when it is well known that its western branch runs entirely on the west of the Eokafanoke Swamp heading in Georgia, some distance above

the boundary. From these considerations, the difference of longitude would seem to be too great by nearly $1/3$ of a degree on the English chart, between the estuaries of Sahwanne and Apalachicola and the traverse of the coast has therefore been contracted to diminish the difference of longitude between these points, $191/2'$.

With this alteration, the British survey of this part of the Florida coast is undoubtedly the most correct that has yet been made, and from the great pains taken by the gentleman employed on it is entitled to confidence. Every year however, makes perceptible revolutions in the gulph. The indentations of the coast, both from abrasions and deposits are continuously fluctuating in soundings and figure, -and these changes are already so perceptible in Apalache Bay, that the soundings in that part of the chart can scarcely be depended on.

2. *Face of the country.* -The surface of this part of Florida presents much diversity and the alterations are so strongly marked as to be easily susceptible of distinct classification. The change of elevation, from the boundary to the coast may be observed by the eye, and the different stages of variation from the high sand-hills, near the confluence of Flint and Chattahouchie to the sedge marshes of the coast, have their successive limits defined with singular distinctness. The different districts may be divided into : 1. The hilly. 2. The flat. 3. The swampy. 4. The Marshy.

1. The hilly part of the country has, both in elevation and soil, a much greater variety of feature than any of the other districts. Properly it may be divided into 1. the sand-hills, with a growth of pine and scrubby oak -and 2, those where the oak and hickory predominate, in a soil fitted for cultivation, having a small mixture of sand with a reddish colour-

ed clay. The sand-hills are uniformly barren presenting on the surface of the highest, the bare sand-rock mineralized with iron, and on others, a fine white sand, with a small admixture of quartz pebbles and sandstone gravel, variously mineralized. A physical section of these hills would present immense masses of reddish coloured sand-stone, resting upon a base of secondary limestone-and where the rains have washed the steeper parts of their declivities they exhibit masses of the most singular appearance. The limestone, which is nearly on a level with the water of the river, is porous (297) and has a large silaceous admixture. Where the silaceous character disappears it is semi-indurated. Upon this basis, the sand-stone rests in masses of from fifty to one hundred feet in height and is itself, a silaceous concrete, hardened and coloured by ferruginous impregnation.

The range of high hills commences seven or eight miles above the junction of Flint and Chattahouchie, and extends eastwardly, ten or twelve miles to the waters of Okalokina. To the southward it continues, down the Apalachicola for sixteen miles, and then suddenly subsides into a high and extensive pine flat, which divides the waters of Okalokina from those of Apalachicola. On the western waters of Okalokina the hills become less broken, and a gently rolling country intervenes between them and the oak hills, further east. These commence on Little river of Okalokina, and continue eastwardly with partial interruptions, as far as Mikasukey. Some of their spurs, with broad gentle slopes extend down the Okalokina for several miles, and a wide branch of them stretches up the Tallahassa creek, eight or ten miles S. E. of the village of the same name. In the intervals of those hills, there are generally small branches of excellent water, which from the shortness of their

courses, probably run all summer. Many of these little brooks are sheltered by narrow close reed-brakes, but commonly they have narrow bottoms of very rich soil, with a growth of bay, holly, beech and other swamp trees, intertwined with a thick undergrowth of laurel, sweet-bay, spice and myrtle, grape vines, muscadine etc.-The banks and bottoms of these branches are mostly sandy ; but those that run through fertile bottoms, are often miry-and in wet seasons, present serious obstructions. The distinguishing features of the two kinds of hills are the oak and hickory, with a thick undergrowth of the one-and the predominance of pine, without undergrowth on the other. The pine hills are well timbered, and perfectly open, except in places where there are spots overgrown with low, scrubby oak bushes. But the fertile hills, called high-hammock-land, have a very mixed growth of forest trees, and are generally covered with a various growth of vines, shrubs and bushes. The thickets in this part prevent the luxuriant growth of grass, and on the score of pasturage, the pine woods have greatly the advantage, being always covered with a dense herbage, which by frequent burning affords the most nutritious food for cattle.

The highest hills in Florida are those first mentioned, near the mouth of Flint. They divide the branches of Musquite creek from each other, and the river-and run in various directions-giving rise to many handsome springs, running over bottoms of sand and gravel.-Their declivities are generally steep, affording occasionally, prospects of great extent over the surrounding country. They are highest near the river and gradually subside into flats, as they approach the interior. In the oak and hickory country, the hills are neither so high nor so steep as the sand-hills. They more frequently have a

gently rolling appearance, and seldom possess a picturesque character at the expense of facility, either of traveling or culture. The transitions from both the sandy and fertile hills are sometimes suddenly into the flats-but oftener, by a gradual diminution of inequality, into open pine woods, with a waving surface, affording extensive views of woodland relieved by the frequent intervention of ponds and glades. Those undulating districts which may be considered the media between the hilly and the flat country are not. always transitions from the former. In many parts, the rolling country is an isolated tract, entirely surrounded by the perfectly flat land, as is the case north of Fort St. Mark. In those cases, the limestone rock is always found at, or near the surface and obviously contributes, by its own superficial irregularity the rolling appearance (298) to the soil which covers it. The waving country, forming the first stage of descent from the hills, has none or very little of this limestone, being too high for the rock to appear at the surface; but that it also rests on limestone is apparent, from the frequent discovery of that substance in the bottoms of many of the smaller branches among the highest hills. In the rolling tract north of St. Mark's a singular feature is the number of sinks in the rock, filled with a clear water, which when shaded by thickets, is always cool and pleasant. In the sinks of the higher parts, the rock is not visible, and they have then a conical, funnel-like appearance, with small pools at the bottom. But in the lower places, where the limestone is at the surface, these natural wells are found of considerable depth, in the clefts of the rock, affording fine water, except in dry seasons, when in some of them, it has a slightly brackish taste.

Another district of this kind, but without the sinks, is found between Toloche creek and Okalokina, on

the route from Fort Gadsden to Mikasukey. It probably forms the transition from the high hills at the head of Toloche, and is not isolated. A third is crossed between Okalokina and Tallehassa, but this tract is nearly high enough to be ranked with the hills. A fourth stretches west from the Sahwanne Towns, for eight miles, along the route from St. Marks and is entirely isolated. The appearance of the branches through these partially elevated tracts, is very various. In that north of St. Marks, there is no water but what is found in the thickets and the sinks already described. Between Toloche and Okalokina, there are several small branches, which run through very close and miry thickets, but they are all dry in summer. Between Okalokina, and the good land Tallehassa, there are several beautiful branches of delightful water, running over bottoms of sand and gravel, between steep banks, and sheltered by reeds or the swamp growth of narrow bottoms; similar to the branches among the hills of Musquito Creek-of the flat-land in Florida, there are four stages. 1. The high pine flats. 2. The low flats with palmetto - 3. The Savannas, and 4. The marshes of the sea shore. The first kind is sometimes a transition from the broken country without much change of elevation-as is seen sixteen miles from Fort Scott on the route to Fort Gadsden. There the pine flat stretches from the heads of some small branches of Apalachicola, to the heads of Toloche creek on the east, where it subsides into immense bay-galls, encircling the sources of the latter stream-it has a more sterile appearance than any other part of East Florida I have seen-the white sand being scarcely covered with a scanty herbage, whilst the low stunted pines and a few scrubby oak contribute an almost painful appearance of desolation-but the dreariness of this prospect is at intervals relieved

by the intervention of very deep and sudden breaks in the surface filled with the greatest variety of ever-green among which the large bay and magnolia are conspicuous, and sheltering springs of delightful water. Some of those singular hollows are one hundred feet in depth and of such steep declivity as to be almost inaccessible. They are the springheads of several creeks which enter the Apalachicola below the Ochese Bluff. From these singular springs, the pine-barren has a perceptible fall to the east and south-east in the first of which directions, it soon (299) terminates in bay-galls, as already mentioned and in a S. E. direction, extends from twelve to fifteen miles, with some interruptions, and thence slopes into Palmetto flats. These form the second stage of the flat district, and cover the greater part of the country. The Palmetto is first seen in the pine woods at the southern termination of the pine-barren just described, thirty-seven miles from Fort Scott-and is more abundant as the flats approach the sea. The sand in this district is of greater consistence, is generally nearer the rock and except in the glades, has a smaller admixture of clay than in the higher parts. It consists of large isolated tracts perfectly level and surrounded by either glades or cypress and bay-galls, which are a little lower than the other and receiving nearly all the falling water leave the palmetto part commonly firm and dry. The branches in these flats are with few exceptions, thickety-miry at the banks with sandy bottoms and originate by a gradual accumulation of water from immense bay-galls which sometimes supply streams running in opposite directions.--On the route to Sawwanne from St. Marks, the whole country from the termination of the good land s.e. of Mikasukey to the commencement of the rolling country, west of the negro towns-a distance of seventy miles is a

succession of these dreary flats only diversified by the intervention of wet glades, bay and cypress galls and thickety branches.-The growth on the dry parts is long-leaved pine, some scrubby oak, wire-grass, gall bushes and saw-palmetto.-Towards the eastern extremity of this tract, the ground is extremely low and the glades more numerous-in some places they are of greater extent than the palmetto flats and become a leading topographical feature.-

The glades or Savannas are tracts a little lower than the palmetto land, and in winter are covered with water from a few inches to several feet in depth. They extend, with great variation of length and breadth through the whole country, sometimes forming long and narrow vistas through the pineland covered with luxuriant and nutritious herbage and in places, spreading into ponds or lakes many miles in extent only dry in the warmest seasons. The soil in the Savannas is a thin black mould, on a bed of firm white sand with a large mixture of white clay. The only timber is a few stunted pines and dwarf cypresses. In the wetter parts there are small islets of evergreen thickets which give a highly picturesque character to the scenery.

The Savannas are interspersed through the high and fertile as well as the flat pine districts, and in some parts of the former make prairies and lakes of considerable size-The one round which the Mikasukey villages were situated is twelve or fourteen miles long and two and a half wide-and except, in the dry season presents a handsome expanse of water enclosed by high fertile banks. The water generally remains on this Savanna to the depth of five or six feet until the middle of summer by which time it is generally all evaporated except in the deeper parts where a sufficiency remains for the use of the cattle roaming through the savanna for pastur-

age.-The grass in this pond. grows to the height of six feet and is commonly above the surface of the water. About the heads of Histenhatche there is another Savanna formed by the union of several others, which is said to be much larger than that at Mikasukey. This is marked in some maps as a lake-but improperly-as like the former it is nearly dry during half the year.

The Glades commence thirty-eight miles south of Fort Scott and continue at intervals between New river and Apalachicola to the coast. Eastwardly, they extend as has been said, to Sahwanne, along nearly the whole extent of coast, they terminate in immense Bay-galls, Cypress and Live-oak swamps. (300) Those several kinds of swamps differ essentially from each other both in appearance and soil.. The Bay-Galls are miry thickets encircling the heads. and sheltering the currents of almost all the streams of Florida.-They are called Bay-Galls from the predominant growth of different kinds of Bay and Gall bushes which cover them forming a swampy, tangled thicket sometimes impenetrable. All the branches of New river and many of the Okalokina waters rise in these thickets, which contribute by innumerable little drains with scarcely perceptible currents, a scanty supply of water and needing the accidental supplies of rain to swell the head branches into running streams.-In the summer, they send off scarcely any running water-and at that season, are either perfectly dry, or present unwholesome ponds of great extent the resort. of alligators and the source of pestilential exhalations. The soil of the Bay-galls is a mixture of white clay and sand, covered with a spongy mass of mould and vegetable fibre-sometimes so deep and unstable that horses plunging into it are nearly buried before they reach the sand and clay at the bottom. The thickets of bay and other

evergreens are closely intersected with a great variety of thorns and vines-and occasionally their intricacy is increased by a mixture of small cane and reed.-The large Bay is only found near the banks of the streams. That in the Bay-Galls, at the heads of the water courses is of a dwarfish growth.

The appearance of some of these Bay-Galls stretching into the pine flats and Savannas is very picturesque and greatly relieves the monotony of their barren aspect. In the middle of more extensive glades, they resemble islands of delightful verdure. The traveler, after wading for miles through those inundated tracts, would believe that he was approaching a region of great beauty and secure duration. But a nearer approach destroys the illusion and he finds the change from the open glades to the tangled and equally inundated Bay-Galls of little benefit. The standing water in those spots is generally bad, receiving a slightly bitter and sometimes acid taste of either vegetable or mineral substances. It is also in the drier seasons, filled with innumerable insects which by their numbers and activity almost destroy the feeling of thirst in a traveler accustomed to the purer water of more northern regions. -

The cypress swamps differ from the Bay-Galls in the absence of that soft spongy soil which renders the latter so dangerous and in its growth which is principally cypress with a mixture of evergreens and a less tangled and impenetrable undergrowth-The soil is however nearly the same, with perhaps a greater proportion of white clay. They have about as great an elevation and consequently about as much water as the other swamps, and are generally dry in summer.-In some of the swamps of this kind the cypress is found of considerable size-but generally it is low and crooked and unfit for any useful purpose.-In the cypress swamps between Assilla

and Sahwanne there is abundance of cabbage palmetto. This handsome and singular tree gives a character to the scenery appropriate to the climate. It grows near the mouths of all the rivers east of Apalachicola and on the higher parts of the sedge swamps along the coast-west of Apalachicola, it is seldom found. It rises with a single stem to the height of forty feet and supports at the top a large mass resembling an immense pineapple, from which project a number of three-sided stems three or four feet long with leaves like the low palmetto (301) but much larger and without prickles. The vegetable substance from which the stems and leaves are supported has in its center a white brittle mucilaginous mass composed of the centre folds of the leaves forming it, which may be eaten raw and when boiled has a taste somewhat like parsnips.-In times of scarcity the Indians live on it, and it is said to be wholesome and nutritious. The trunk is perfectly straight except when a little bent by the weight of the cabbage, and is of a light porous fibre unfit for any purposes in the arts. It is, however, said to be very durable under water and to answer well for causeways, wharves or bridge piers. It has already been mentioned that the fertile upland is called hammock land, what the name is taken from could not be ascertained, but it is always appropriated to two kinds of soil-the one high with growth of oak, hickory and thicket-the other, low, but dry, with a growth of bay, oak, large magnolia, beech, laurel etc., with a variety of vines and other undergrowth. The high hammock is almost always fertile. The low has often too much sand as is seen at Sahwanne.

Next in number and size to the cypress-galls are those with a growth of live oak. The live oak swamps are found nearer the coast than any of the others and with partial interruptions from the Bay-galls

form almost a belt between the glades of the interior and the sedge marshes of the shore, near the Sawanne river, they project higher into the country than at any other point-and are covered with a large and valuable growth of the oak which from its proximity to navigation can easily be transported to depots for naval purposes.-Besides the bay-galls, cypress and live-oak swamps, there are interspersed through the pine-land, a vast number of small isolated ponds, with a low growth of myrtle, laurel and a species of hawthorn. They have a clay and sand soil-a little miry and many of them contain water during the driest months. In the spring, these islets speckling the barrens with numerous spots of rich verdure and surrounded by wreaths of various beautiful flowers have a singularly handsome appearance.

The cane and reed-brakes are the last kinds of swamps noticed.-Large cane is only found on the Apalachicola low down on the other streams eastward of that river. The cane-brakes of the former cover its bottoms from the mouth of Flint to the commencement of its delta. On this part the cane is smaller than above and mixed with reed and swamp palmetto-low down on New river and Okalokina there are extensive cane-brakes-but eastward of the latter streams, they are rare. The reed is sometimes found joined with the cane in the larger swamps-but more commonly in the intervals of the hills in the higher parts of the country. It affords better pasturage than the cane-the young growth after burning, being extremely abundant and nutritious.

The soil of the reed-brakes is very similar to that of the Bay-galls-a loose spongy mass of vegetable mould on a foundation of sand and clay, they differ however essentially from the other kinds of swamp in having the best water of the country-which is

found in the center of the reed-brakes, in narrow, deep little channels with clear currents and sandy bottoms.-

The sedge marshes will probably be considered in a view of the coast.

3. Rivers and Creeks.

1. Apalachicola. The Apalachicola is formed by the union of Chattahouchie and Flint and is navigable to that point by any vessel that can get over the bar. The Chattahouchie rises among the most southern spurs of the Allegheny chain and pursues a south-west course for two-hundred and fifty miles when it becomes the western boundary of Georgia, and at its junction with Flint it is one hundred and seventy yards wide. (302) The Flint is a smaller river than the Chattahouchie, rising eighty miles south of the heads of the former and interlocking with some of its waters and those of Oakmulgee on the east. At the junction it is one hundred and twenty yards wide. The course of the Apalachicola from the Flint to St. George's sound is but little west of south and the distance by water 130 miles. The current is gentle and no obstructions except a few harmless sawyers, impede the safety or facility of its navigation. The banks, with the exception of the Bluffs are low and subject to inundation-but their fertility counterbalances this inconvenience and at a future day, they will no doubt exhibit all the luxuriance and wealth of sugar and cotton plantations.

Some of the bluffs are high and broken-projecting from the steep sand-hills below the Flint-but where the high grounds approach the river below the termination of the hills, the soil is generally fertile and adapted to all the southern products.-On some of the small creeks entering the river on the east side there are narrow strips of good land-and

on the west side, the Chapulle which joins the Appalachicola nine miles above Fort Gadsden runs through the finest body of land in the southern country.

The Ochese Bluff commences on the west side of the river fifteen miles below Fort Scott, and extends several miles down the river, affording a body of second rate land with spots of first rate soil. At its southern extremity, a Bluff comes in on the east side -a barren spur from the sand-hills. The next bluff-called Provision Bluff from the circumstance of the army there meeting supplies, is twenty-six miles by land from Fort Scott and about double that distance by water. It extends two miles and a half along the east bank and has a soil of great fertility. Its growth is carte on the lower parts and on the higher, beech, oak, large bay, holly, laurel, etc., and a thick hammock growth of bushes, vines and briars. At the upper end is a small clearing and the remains of some deserted Indian cabins of the Tamatle tribe-There is another Bluff not far below this on the west side, where Wm. Hambly has his trading house, the soil is excellent. The next high ground is sixteen miles below Hambly's but the land is poor pine barren. There are some other high spots on the river but none of any extent before Prospect Bluff the site of the former negro fort, at present of Fort Gadsden. This extends about a mile and a half along the east bank, and has second rate soil fit for the culture of cotton and tobacco but not sufficiently rich and strong for sugar or indigo. Below this point there are several places dignified with the name of bluffs, but they all are partially inundated at high water except. Old Woman's Bluff-five miles from the mouth of the river and on the west side of the main pass into the Sound.-

This is a point of pine land moderately high which probably extends from the interior and unites with the cackle-bluffs on the west side of the delta affording fine situations for commercial settlements and a tolerably productive soil.-The streams that enter the Apalachicola are all inconsiderable except the Chapulle which shall be noticed in the itineraries through West Florida. Those on the east side are all small-Musquito creek the largest-which has a course of ten or twelve miles through the hills at the Spanish line. The next creek below is smaller and runs through some second-rate land-the others are quite inconsiderable and have no (303) good land except as they approach the river where their bottoms are sometimes wide and fertile but subject to inundation. Below Hambly's Bluff the branches of the river head at short distances among the glades and Bay-galls and are generally dry in summer.

The delta of the Apalachicola proper commences one mile and a half above Fort Gadsden where a very large bayou leaves the river on the west side and by the accession of several others in its course, becomes, at the point of their reunion, larger than the main stream. It reenters twelve miles below Fort Gadsden and at that point often deceives those ignorant of the rivers by its course and superior size. Its navigation is obstructed by logs and great variations of width and depth.-The current is gentler than that of the river, one mile and a half above where this bayou comes in, another, but not so large leaves the river on the east side and is connected by several small channels with a wide but short stream entering the sound eight miles east of the mouth of Apalachicola. This is navigable for canoes at high water. Three miles and a half below this outlet the river divides into two branches of which the one on the west is the largest and most accessible. That on

the east enters the sound two miles from the first and has a devious and obstructed channel in places, not more than seventy yards in width at others widening to one hundred and eighty. The west pass after leaving the other pursues a southwest course for six miles with a width of two hundred yards. It then unites with a large stream coming in on the right and alters its course to south-east which it keeps for eight miles to the sound increasing its width to four hundred yards.

The large stream on the west issues from a lake situated about half way between the river and St. Joseph's Bay and is swelled by the addition of a great number of Bayous from the swamps and sedge marshes. It is thought that there is a navigable communication between this lake and St. Joseph's bay. If so the produce of the Apalachicola at a future day will all be carried by that channel-the Bay of St. Joseph being a much deeper and safer harbour than St. Georges Sound. In the winter and spring the banks of Apalachicola below Fort Gadsden are covered with water except in a few places, called, though improperly, bluffs where the Indians and negroes had small clearings and farms. These partially elevated spots seldom extend more than a few hundred yards and have generally a thick growth of timber peculiar to southern rivers with live-oak, white-oak, maple, white pine, cypress, bay and cabbage palmetto. After proceeding four miles through the east pass, the timber almost entirely disappears, and the current runs between low banks covered at high tides and without any other growth than sedge and rushes-on the west side of the Main pass the timbered country extends to the mouth and affords both at the old Woman's Bluff and as low as the cockle banks on the sound much second-rate land. Between the two passes there is an impassable sedge marsh with some

scattered dwarf cypress and other stunted trees, and interspersed with numerous little crooked bayous scarcely large enough to float a canoe.

New River.

This stream rises opposite to and interlocks with the head branches of Big-log creek of Apalachicola. Its source is among very large and intricate bay-galls covering for a great extent a low flat pondy country, with no growth on the higher parts but pine and palmetto. Some of the eastern branches, which are all small, head northeastwardly towards the western branches of Okalokina and below the path to Mikusukey their waters interlock. The head branches before their junction run east of south, and the course of the main stream thence, is nearly south until its entrance into the sound. There is no good land on any of the waters of this creek. (304) In the forks of some of the branches there is high pine barren and good cattle range, but the greater part of the country through which New river runs is low and wet, covered with numerous thickety ponds and swamps of evergreens. Below the path to Mikusukey the bay-galls increase in number and size rendering the country nearly impenetrable even by the hunter and this character continues to the mouth of the stream.

3.^D Okalokina.

The Okalokina rises above the Florida boundary and nearly East of the Chehaw towns on Flint river. It has several large branches.-

Little River is the largest of these and is about half the size of the main stream where they unite. It heads about north-east from Fort Scott and rises in a fertile tract of land which continues down the creek particularly on the east side as low as the fork. This valuable district is a continuation with partial interruptions of a belt of fertile land extending per-

haps from the Escambia but certainly from Kanards west of Flint river to the waters of Assilla creek. On Little River this tract extends to the Okalokina and differs from other parts of the district alluded to in being well watered. The growth on this land is precisely similar to that of the good land north of Fort Scott and that near Tallehassa and Mikasukey and there is nearly the same inequality of surface presenting a country picturesque in its aspect and from climate and soil perfectly adapted to the culture of all the southern products. In the lower parts of the district, the secondary limestone is visible at the surface and in almost all the small branches the banks and bottoms present it in abundance. The quantity of reed in the lesser streams affords a permanent range for stock, and the herbage of the higher parts although not so durable is much more grateful and nutritious than the more luxuriant but coarse pasturage of the pine land.-The good land of Little River extends in strips along its western branches as far as the hilly second-rate land about the heads of Musquito creek.

Little River enters Okalokina fifteen miles above the lower path and is crossed by the upper routes to Mikasukey from Fort Scott and the neighboring country. The main fork of Okalokina before the junction [with] Little river also runs through an extensive body of good land exactly similar to the other fertile districts and reaching from near the head, to Mikasukey and the ponds south of that place and Tallahassa. The branches running through this tract on the east side of Okalokina are few and small -the country of course badly watered but in other respects it presents the same advantages as the land on Little River. On the bank of Okalokina the good land ends eight miles above the mouth of Little River, continuing at some distance from the stream

in a southern direction towards the gulf. Below, there are at intervals narrow strips of second-rate land but no considerable body.

Toloche. Is next in size to little river among the tributaries of Okalokina. Its head waters interlock with Musquito creek and are only separated from them by narrow crooked ridges of high pine land with sand, rock and gravel. Its course to its junction with the main stream is S. S. E. and it unites five miles below the lower path to Mikasukey after receiving a sufficient number of smaller branches to swell it into a large creek. (305) There is a body of fine land on Toloche, but from two or three miles above the junction to its head there are many small intervals of tolerable soil breaking the monotony of the sand and pine and affording room for a scattered population. The country good and bad is well watered and the surface is varied by the alternations of good and poor land, the latter being invariably low and wet, the former a little rolling. This creek is noted for the size of its swamp which is one mile and a quarter wide where the path crosses it and continues occasional intervals [sic] of low pine bluffs to the head. The soil of this swamp is everywhere first rate, and if protected from inundations which occasionally cover it would afford valuable sites for plantations. It is doubtful how far the waters of Okalokina extend to the eastward, in the low country between Toloche and the gulf there are many small streams, heading in Bay-Galls and feeding large shallow ponds. Near Tallahassee there are some large branches running N. E. to which together with the small stream at the village are Okalokina waters.-The eastern branches extend probably as far as the ponds in which the Assilla rises and their course thence is but little south of west. The banks of Okalokina are generally high above Toloche where

the Mikasukey path crosses there is a high bluff on the east side with a soft clay rock, resembling the semi-indurated argillaceous rock of the upper parts of the Tombigby and its western waters. Below there are several low pine bluffs and at the mouth in the sound there is more high bank than is usual at the outlets of the other Florida rivers, the length of Okalokina is about one hundred and eighty miles and below Toloche it widens to one hundred and twenty yards. Five miles above, it has a width of fifty-six yards and a depth of eight or ten feet in common water. The banks and bottom are generally sandy. Small boats may ascend above the mouth of little river into the heart of the good land on that and the main stream-there being no obstructions but what may be easily removed. The Okalokina Sound communicates with the Gulf nine miles N. E. from the east end of St. George's Island and forty miles in the same course, from the mouths of Apalachicola.-

4. *Wakally R.*

This is the west branch of Apalache or St. Mark's river and heads nine miles N. N. W. from the junction. Its source is in a large rocky spring sixty feet in diameter and one hundred and twenty feet deep, with water so transparent that the smallest object is visible at the bottom. The rock is secondary limestone but little indurated and the same that is called rotten limestone in the Alabama Territory. The land about this curious basin is second-rate: the growth hickory and oak with some cane-the surface agreeably uneven and having charming spots for settlements. The low lands of the river are generally good but somewhat swampy-hemmed in by extensive pine flats and occasionally relieved by strips of excellent soil. The river has three feet water to the spring-but for one half the distance is chocked

with high sedge grass. This obstruction however can be easily removed. The good land about the head of Wakally spreads south-west and north for several miles. Eastwardly it is soon lost in the piney wastes north of Fort St. Mark. The spring is most probably fed by the waters of the extensive ponds south of Tallahassee by subterranean communications. In the extensive hammock which [lies] north-eastwardly from its head there are hundreds of sinks with the purest water at their bottoms-and this hammock with its sinks extends to the glady ponds just mentioned. The water would be excellent, were it not for its impregnation with the rotten limestone, whether this mixture is unwholesome or the contrary is hardly yet decided. At St. Stephens on the Tombigby there exists a difference of opinion respecting its qualities. Most people think them hurtful from the unpleasant taste of the (306) water and their opinion seems to be well founded-for nature appears to have made the taste an infallible criterion of the goodness of water. Being so necessary a material of human nutriment it is truly providential that its mere sapidity should compell at once a persuasion of either its wholesome or noxious properties. There are no streams of any note entering Wakally. Several branches heading a short distance in the pine woods swell into broad shallow streams in entering the sedgy margin just above and below the Fort: but they have neither current nor depth and resemble small inlets more than running streams.

5. *St. Mark' R.*

The St. Mark heads fifteen miles N. N. E. from the Fort in a large grassy pond surrounded by low poor pine and palmetto land. The branches south of Mikasukey running in a southern direction probably unite with this pond by subterranean communica-

tions in the same way as was conjectured respecting the head of Wakally. From the source to the fork, there is at wide intervals, a variation of soil and timber by a mixture of oak and hickory-but the appearance of the land is nowhere very prepossessing and is everywhere low and flat. In wet seasons, there is abundance of stagnant water. Two and a half miles from the fork there is a natural bridge over the river nearly three miles in extent covered with thickets and heavy swamp timber. The break from under the bridge on the south side is abrupt, and the current at low tide very perceptible. The raft or bridge is swampy and almost impervious. Below this point the river is navigable for any vessel that can get over the bar. One mile from the fort, the timbered land both on the Wakally and St. Mark, recedes from the banks diverging towards the gulf and leaves a gradually widening interval of sedgy marsh intersected by small bayous and impassable at any season. From the junction of the two streams the length of the *Apalache* is nine miles nearly south to the bay; and at the mouth there is a sandbar and serious obstructions from oyster banks. The *Apalache* is navigable for vessels drawing six feet water, but the channel is crooked and difficult being narrowed by the frequent projection of oyster banks from the points. The *Apalache* enters the gulf at the head of *Apalache* bay and twenty miles from *Okalokina* point.

6. *Assilla* Creek.

Of the head of this creek nothing certain is known. The path from *Mikasukey* to *Sahwanne* which crosses it at or near the source, strikes it twenty miles from the first place in a course of about north 48 east. At this point, the creek either rises in or has swelled to a large grassy pond four hundred yards wide and with a strong current in the middle. Its course

thence, to the crossing of the lower route is nearly south and thence to the mouth extent about eighty miles. On the upper part of the creek there is a body of good land similar to that on Okalokina both in soil and growth and probably a continuation of the fine land lying westwardly. The tract on Assilla extends seven or eight miles down the creek a little below the centre path to Sahwanne. It is tolerably watered and has advantages equal to the Okalokina land. Below the lower path the country is similar to that on New river and is a rapid alternation of swamp and bay-gall to the mouth where the swamp becomes very extensive and impervious. The banks are low and thickety with occasionally pine bluffs of little elevation, but the whole country is (307) is flat with the predominant monotonous growth of pine and palmetto, a quarter of a mile below the lower path there is a natural bridge over this creek covered with timber and similar to that over the St. Mark except in being more open and not swampy. It is not easy to account for those singular causeways which are found on all the Florida creeks. They cannot be made by the accumulation of soil and rafts of timber, stopped by obstructions in the current. For those streams are neither large or long enough to furnish an adequate quantity of drift-nor is there that abundant abrasion of their banks and consequent undermining of timber that accumulates such quantities of wood at the island and estuary's of other streams. From the nature of the soil also there is never such a quantity of sediment as would cover a large raft with deep alluvion in a manner similar to those singular obstructions in Red river, Atchafalaya and some other streams of *Louisiana*. The only probable explanation of the fact is that the stream is engulfed in one of the many cavities peculiar to countries of secondary floetz formation,

and that immediately after it finds vent through other openings and continues its course in a channel made by its own current.-One of those bridges on the creek east of Assilla seems from its conformation to strengthen this conjecture. The creek which is called natural bridge is thirty feet wide and five feet deep. A short distance above the lower path there is a stratum of limestone rock twenty-five feet wide, entirely across the channel and excepting at times of very high water affording a dry and secure bridge. When the army crossed the under part of the arch was not above water-and from the rapid boiling of the current in its descent and ascent, the cavity appeared to have considerable depth. From the sandy bank on either side of the Creek there is a short descent to the rock and from the appearance of the banks and the surface of the bridge, the water evidently runs over it in the rainy seasons. This rock was no doubt formerly covered with soil similar to that over the bridges of St. Mark and Assilla, but from the strength of the current, and the narrowness of the obstructions, it has been gradually washed off during successive inundations. On a stream further east, there is another equally strong confirmation of the supposition. The creek is thirty-five feet wide at the crossing place-and, after a steep descent from the bank which on both sides is high and open the ford which is shallow is based on a rough limestone rock similar to the other rock of the country and extending across the channel. Sixty feet below, there is a considerable fall and immediately above, an abrupt change of depth from two to nine feet with ebullition of the water like that under the former bridge. The gradation is so regular from this singular ford progressing to the bridge on the creek of the same name, thence to the Assilla causeway and lastly to that of the St. Mark, that the cause forma-

tions and changes of these singular features appear to be plainly indicated. The Assilla enters Apalache Bay eighteen miles east of the mouth of Apalache River.-

7. 8 *Natural Bridge and Slippery Log Crs.-*

Nothing is known of the heads of these streams from their size at the crossing places of the lower path which aremiles distant from the coast, they must head above or near the line-and probably rise in the immense grassy ponds which cover the whole country in that quarter. They have clear and rapid currents with sandy banks-and bottoms of sand and rock alternately at their mouths, the swamps are of prodigious extent. These two streams enter the gulf near to each other and only a few miles east of Assilla.-

(308) *Histen-Hatche Cr.*

This creek rises above the line and interlocks with some western branches of Sahwanne. It is supplied in its course by drains from extensive ponds lying mostly on its eastern side. There is said to be a good land on some parts of its banks but from the general character of the country it must be of secondary quality. Histen-hatche empties into *Dead-mans Bay* fifty-five miles south-east from Apalache. None of those small streams are of any consequence in navigation. The coast where they disembogue is so very shoal that even were they navigable, but little use could be made of them. At present they only afford an occasional shelter for the canoes of the Indians.-
Sahwanne or St. Juan R.

From all the information that could be collected respecting the source and branches of this river, it would appear to have two main branches, one rising in the Eokafanoke swamp, the other rising in Georgia and heading north of east from Fort Early on Flint. This latter prong encircles with its head

waters the sources of Satillo on the east and Eokalokina on the west, and issues by numerous springs from the marshy eastern slope of the ridge between the Oakmulgee and Flint. It is said to run through good land above the line, lying in an eastern direction from Fort Scott and probably a spur of good land near the head of Okalokina-but the information respecting this part of the river is too uncertain to be much depended on.-The branch of Sahwanne issuing from the great swamp is a little better known and is described as navigable in the swamp with a width of one hundred yards and a very gentle current, but somewhat obstructed by logs.-On its union with the western prong it becomes a stream as large as Apalachicola and very similar to that river in general character. The course of the western branch of Sahwanne is south-east until its union with the east prong when the river turns south and S. S. W. which course it preserves to its mouth. The whole length of the river must be near two hundred miles of which one hundred are easily navigable for common river craft.-From the swamp to the towns, a distance of about sixty miles the banks are generally high with a hammock growth and second rate soil. Below the towns, the general course of the Sahwanne is considerably west of south and in the scenery of its banks width and current is similar to the Apalachicola. The land when above inundation is generally flat low hammock with an almost impervious growth of swamp timber and thicket-and at intervals there are low pine bluffs with sandy soil and some shells. Near the bay the river separates into three mouths of which the west on the right-hand is the most accessible although the narrowest, being deeper and shorter than any of the others. Canoes go through the east pass for the Bay of Tampia. The delta of Sahwanne has but little timber and is gen-

erally swampy and overflowed. There is much cypress on this part with some live and swamp oak and but few cabbage trees. The sedge marsh continues eight or ten miles with some scattered dwarf timber. The number of oyster banks at the mouth is prodigious and completely obstruct the entrance of the river there being no channel through them deeper than four and a half feet even at high tide. The banks of Sahwanne in the great swamp are described as in some places sufficiently high to admit of (309) cultivation and several Indian exiles did inhabit one of these small elevations for several years. They perished however leaving no trace of their existence, and an exploring party sent to succour them, searched many days for their cabins without success. The soil of this morass is similar to that in the larger Bay-Galls-consisting of a deep mass of loose mould and vegetable fibre matter and strengthened by the intertwined roots of large timber and resting on a base of sand and clay. The growth, both of timber and thicket is uncommonly impervious and it would be difficult to conceive a prospect of greater gloom and horror than it contributes in the interior of the swamp. The observer is nearly shut out from the light of day and finds the unstable soil shake under every movement of his feet. Another step may plunge him into unseen abysses, whilst the roar of alligators and thousands of beasts of prey annoy him day and night. Throughout the swamp however there are small isolated spots of firm good soil but they are so little elevated above the wetter parts that a heavy rain involves them in the general inundation.

4. Coasts.

The general configuration of the coast from cape Blaise /20 miles west of Apalachicola, to the mouth of Sawwanne is that of a crescent, the northern seg-

ment of which forms the bay of Apalache. The shore is everywhere low and flat and only variegated by the alternation of sand-beach, cockle-bank and sedge-marsh. The peculiar features of the coast are the cockle-banks, or bluffs-the sedge islands-the keys and the oyster banks.

1. The cockle banks are elevated spots along the gulf shore, consisting of a mass of sand and shells heaped up by the sea at a very remote period and rendered escarped as at present by subsequent revolutions of tempest and current. Their great age is apparent from the depth of mould and vegetable detritus which they always exhibit and their original formation is plain from the irregular manner in which the sand and shells are heaped up together. Their growth is principally cedar and cabbage tree with great quantities of the cassino bush the leaves of which are dried by the Indians and used in making their black drink.

2. The keys are only different from the shell banks in being detached from the coast their formation appearance and growth are precisely the same.

3. The sedge-marsh is found at the mouth of all the Florida rivers in all the indentations of the coast-and at almost all the points. It is formed by a gradual deposit of sand and mud on a stratum of calcareous rock, and is the first stage in the physical formation of the country. Its only growth is high coarse grass and rushes with occasionally cabbage trees and some stunted cypress. Some of those morasses are covered at high tide-others are above ordinary freshes and only inundated by southern gales. The latter with some labour might no doubt be made productive. The marsh at the delta of Apalachicola is lower than that at Sahwanne. The former is inundated every tide and is too soft to bear the weight of a man. That at Sahwanne a few miles

above the mouth, is above high water mark and tolerably firm.

4. The oyster banks are the most serious obstructions to navigation along this part of the coast. They chock up the mouth of all the rivers and by their irregular courses and annual changes, perplex the oldest pilots.-They consist of a yearly increasing mass of oysters on an irregular stratum of calcereous rock forming the southern slope of the same rock seen at the surface in the flat land of the interior. The navigation of the coast from cape Blaise to Sawanne is extremely difficult (310) for any vessels drawing more than ten feet water and it is always tedious from the variety of courses which the singular arrangement of the oyster and sand banks make necessary. St. George's Sound is formed by Deer Island on the west, St. George's Island in the center and Fox Island on the east.-Deer island lies half-way between Cape Blaise and Apalachicola and between it and the coast there is a very narrow pass only navigable for canoes. It is about fourteen miles in circumference and of a triangular shape. St. George's island extends from the south end of Deer island twenty-five miles in a direction parallel to the coast. It is narrow at its eastern extremity but near the western end is three or four miles in breadth. Fox island is nearly a continuation of St. George's island five miles further east. The sound at the western extremity is eight miles in width-at the mouth of the Apalachicola not more than six-and it gets much narrower to the eastward. The main pass in between Deer and St. George's Islands. Thence the channel is a little north of east, and close under the shore of St. George's to a point bearing nearly S. E. from the western mouth of Apalachicola. From that point it is staked into the river.

The eastern pass of the sound has ten feet water close under the east end of Fox island, and thence after bearing five miles S. E. to clear a sand bank that projects from the coast west of Okalokina point-there are four, three and two fathoms. water to Apalache-when soundings change gradually to eight and a half, seven, six and five feet. At high water vessels drawing eight feet can get over the bar. From Apalache to Sahwanne the coast is shoaly-but from the mouth of the former keeping a course of S. 53. E. a vessel drawing eight feet water will have little difficulty. The mouth of Sahwanne as has already been stated is entirely obstructed by oyster banks.

(The remainder of the Memoir, containing a detailed description of the Indians of the Floridas, will appear in the next issue of the Quarterly, and the Itineraries will follow.)