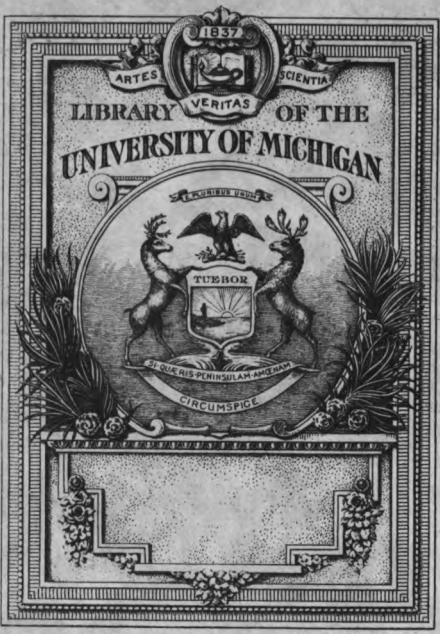
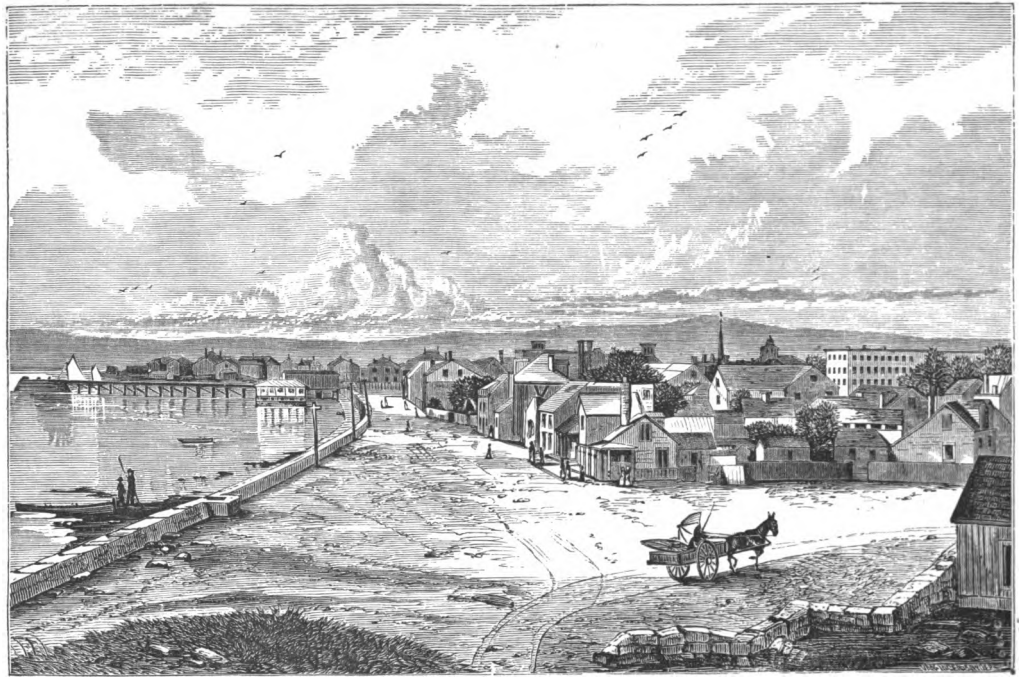
Florida

Sidney Lanier





Frontispiece.] ST. AUGUSTINE.—SEA-WALL; LOOKING FROM FORT MARION.

FLORIDA:

ITS

SCENERY, CLIMATE, AND HISTORY.

WITH

AN ACCOUNT OF CHARLESTON, SAVANNAH, AUGUSTA, AND AIKEN; A CHAPTER FOR CONSUMPTIVES; VARIOUS PAPERS ON FRUIT-CULTURE;

AND

A COMPLETE HAND-BOOK AND GUIDE.

PHILADELPHIA:
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FLORIDA.

CHAPTER I.

INTRODUCTORY.

If just before crystallization the particles of a substance should become a little uncertain as to the precise forms in which to arrange themselves, they would accurately represent a certain moment of lull which occurs in the formation of popular judgments a little while after the shock of the beginning, and which lasts until some authentic *résumé* of the facts spreads itself about and organizes a definite average opinion.

Such a moment—what one might call the moment of molecular indecisions—would seem to have now arrived in the course of formation of an intelligent opinion upon that singular Florida which by its very peninsular curve whimsically terminates the United States in an interrogation-point. Among the fifteen to twenty thousand persons who visited the State during this last winter of '74–5 there are probably fifteen to twenty thousand more or less vague—and therefore more or less differing—impressions of it.

How, indeed, could it be otherwise? Florida is the name as well of a climate as of a country; and—all com-

monplace weather-discussions to the contrary notwithstanding—no subject of investigation requires more positive study, more patient examination of observed facts, more rigorous elimination of what the astronomers call the personal equation, than a climate.

It is not in a month, in a year, in ten years, that a climate reveals itself. To know it, one must collate accurate readings, for long periods, of the thermometer, of the rain-gauge, of the instruments that record the air's moisture, of the weathercock, of the clouds; one must consider its relations to the lands, to the waters, to the tracks of general storms, to the breeding-places of local storms, to a hundred circumstances of environment, soil, tree-growth, and the like; and, finally, one must religiously disbelieve every word of what ordinary healthy people tell one about it. The ignorance of intelligent men and women about the atmospheric conditions amid which they live is as amazing to one who first comes bump against it as it is droll to one who has grown familiar with its solid enormity. But a little time ago a former resident of San Francisco, in reply to my question about its climate, declared it was noble, it was glorious, it was fit for the gods; and another, answering the same interrogatory, informed me it was perfectly beastly. Which is, in truth, as it should be. What business have healthy people with climates? Thomas Carlyle long ago remarked that in our political economies, as in our physical ones, we only become conscious of things when they commence to go wrong. Indeed, this truth was not wholly outside of the experience of Carlyle himself: for he—whom, with all his faults, one cannot call otherwise than the magnificent old earnest man—once related to an American visitor how in the course of a long and bitter religious struggle of his early manhood, which

lasted for weeks, and during which his dietary was left to shift for itself, he became mournfully aware that he, too, was personally the owner of what he called in his sturdy Scotch a stammock, and had never since been at all able to forget this dyspeptic addition to his stock of learning.

When one's lungs or one's nerves get sick, one acquires the sense of lungs or of nerves: and then also one becomes for the first time aware of climate. But not by any means truthfully aware of it; for if, as has been said, a man ought religiously to disbelieve all that healthy people tell him about climates, he should absolutely take to his heels and flee afar off when an invalid begins to discourse on this topic, unless that invalid talks strictly by the thermometer.

There was poor Slimlegs, for instance (this present writer used to be a "consumptive," and out of the very fervor of his desire to do something towards lessening the wretchedness of those who are now being or to be "consumed," he draws the right to speak of them as he likes, even to a little tender abuse),—there, I say, was Slimlegs: we all saw him here in Florida last winter, on Bay Street in Jacksonville, or on the Plaza at St. Augustine, or somewhere else; and we all know how, after he had arrived and had his breakfast and taken his poor little shambling stroll around the square, he would go to his room and write back home to Dr. Physic what he thought of the Florida climate. Now, it is not in the least extravagant to assert that, in nine cases out of ten, Slimlegs's opinion of the climate was based upon one solitary observation of one solitary gastronomic circumstance, to wit, the actual rareness of the steak at breakfast as compared with the ideal rareness which suits Slimlegs's individual taste,—or some other the like phenomenon. Of

course, it cannot be denied that these two are enormous factors in daily human life: nor that, if they are equal to each other—which is to say, if the actual steak coincides with one's idiosyncratic ideal steak—the weather is apt to be pleasant; and to this extent beef and gridirons are meteorological elements.

But, my honest Slimlegs, Reclus does not mention them, nor does Blasius, nor Doggett, nor any other of the recognized authorities in these matters. Here is what Reclus defines a climate to be: "All the facts of physical geography, the relief of continents and of islands, the height and direction of the systems of mountains, the extent of forests, savannas, and cultivated lands, the width of valleys, the abundance of rivers, the outline of the coasts, the marine currents and winds, and all the meteoric phenomena of the atmosphere, vapors, fogs, clouds, rains, lightnings, and thunders, magnetic currents, or as Hippocrates said more briefly, 'the places, the waters, and the airs.'"

These invalids' letters are not, it is true, the only things that have been written about Florida. The newspapers have abounded with communications from clever correspondents who have done the State in a week or two; the magazinists have chatted very pleasantly of St. Augustine and the Indian River country; and there are half a dozen guide-books giving more or less details of the routes, hotels, and principal stopping-points.

But it is not in clever newspaper paragraphs, it is not in chatty magazine papers, it is not in guide-books written while the cars are running, that the enormous phenomenon of Florida is to be disposed of. There are at least claims here which reach into some of the deepest needs of modern life.

The question of Florida is a question of an indefinite en-

largement of many people's pleasures and of many people's existences as against that universal killing ague of modern life—the fever of the unrest of trade throbbing through the long chill of a seven-months' winter.

For there are some who declare that here is a country which, while presenting in its Jacksonville, its St. Augustine, its Green Cove Springs, and the like, the gayest blossoms of metropolitan midwinter life, at the same time spreads immediately around these a vast green leafage of rests and balms and salutary influences.

Wandering here, one comes to think it more than a fancy that the land itself has caught the grave and stately courtesies of the antique Spaniards, and reproduced them in the profound reserves of its forests, in the smooth and glittering suavities of its lakes, in the large curves and gracious inclinations of its rivers and sea-shores. Here one has an instinct that it is one's duty to repose broad-faced upward, like fields in the fall, and to lie fallow under suns and airs that shed unspeakable fertilizations upon body and spirit. Here there develops itself a just proportion between quietude and activity: one becomes aware of a possible tranquillity that is larger than unrest and contains it as the greater the less.

Here, walking under trees which are as powerful as they are still, amidst vines which forever aspire but never bustle, by large waters that bear their burdens without flippant noise, one finds innumerable strange and instructive contrasts exhaling from one's contemplations; one glides insensibly out of the notion that these multiform beauties are familiar appearances of vegetable growths and of water expanses; no, it is Silence, which, denied access to man's ear, has caught these forms and set forth in them a new passionate appeal to man's eye; it is Music in a siesta; it is Conflict, dead, and reappearing as

Beauty; it is amiable Mystery, grown communicative; it is Nature with her finger on her lip,—gesture of double significance, implying that one may kiss her if one will be still and say nothing about it; it is Tranquillity, suavely waving aside men's excuses for chafferings and for wars; it is true Trade done into leafage—a multitudinous leaf-typification of the ideal *quid pro quo*, shown forth in the lavish good measure of that interchange by which the leaves use man's breath and return him the same in better condition than when they borrowed it, so paying profitable usuries for what the lender could not help loaning; it is a Reply, in all languages, yet in no words, to those manifold interrogations of heaven which go up daily from divers people—from business-men who, with little time for thinking of anything outside of their rigorous routines, do nevertheless occasionally come to a point in life where they desire some little concise revelation of the enormous Besides and Overplus which they keenly suspect to lie beyond all trade; from families stricken into terror by those sudden gulfs which in our tempting hot modern civilization so often crack open and devour sons and daughters, and fathers and husbands; from students, who dimly behold a world of the inexplicably sweet beyond the field of conquerable knowledge; from the sick man, querulously wondering if he can anywhere find companions who will not shudder when he coughs, and friends who will not coddle him with pitiful absurdities nor sicken him with medicines administered not because they are known to cure but on the dismal principle of *lege artis;* from pleasure-seekers, who never quite succeed in ignoring a certain little secret wish that there might be Something Else after the hop is over at the hotel.

* * * * * * * * * *

When one finds one's commission reading simply, *where*

there are trees and water, to persuade men to go to them, two methods of discharging it present themselves. These are the poetical or descriptive and the practical or guide-book methods. It would seem that one need not hesitate to adopt both: they have the singular advantage that if successful they merge into each other; for if the poetical method draw men to nature, then it becomes practical, and if the practical method draw them there, it becomes, at least in its results, poetical.

In view of many absurdly hysterical utterances which have been made touching the tropical ravishments and paradisaical glories of Florida, it is proper to say at this point that the State is not remarkable for beauty of landscape, and that persons—particularly those from hill-countries—who should go to Florida for this sole end would certainly be disappointed.

There *are* places where ecstasies are legitimate, as one may hope will fully appear hereinafter; but, with the exception of the beautiful Tallahassee region, the land is either level or only very gently rolling, and as seen from the railways or the country-roads it always shows even the most unpicturesque aspect of its levelness, owing to the fact that the roads run usually through the open pine barrens, instead of the much more interesting hammocks which are pierced by the road-makers with difficulty in consequence of the very magnificence of growth that renders them beautiful.

Nor is the whole earth in Florida simply one tangle of tuberoses and japonicas, as the guide-books fable. It seems even ruthless to break up the popular superstition that Florida was named so because of its floweriness. But truth is, after all, the most beautiful thing under heaven; and there does not seem to be the least doubt that Ponce de Leon named this country Florida because the day on

which he made the land was the day called in his calendar *Pascua Florida*, or Palm-Sunday.

But so much being said in abundant protection of strict truth, one can now go on to detail (without the haunting fear of being classed among the designing hysterical ones) the thousand charms of air, water, tree, and flower which are to be found in Florida, and which remain there practicable all the winter days.

With these views, the next eleven chapters contain some account of the Ocklawaha River in May, St. Augustine in April, Jacksonville in January, the Gulf Coast, the Tallahassee country or Piedmont Florida, the St. Johns and Indian Rivers, the Gainesville country, West Florida, Lake Okeechobee and the Everglades, and the Key West country; these being disposed in separate and unconnected chapters, and in an order for which there is no particular reason why there should be any reason. Chapter twelve discusses those physical conditions existing in the nature and environment of Florida which go to make up its very remarkable climate, and presents tables of temperatures, frosts, winds, cloudy days, and the like, for various portions of the State. Chapter thirteen is devoted to a historical sketch. Chapter fourteen concerns itself particularly with invalids, and chapter fifteen with accounts of the other winter-resorts which lie on the route —Charleston, Savannah, Augusta, and Aiken. To these is added an Appendix which contains papers from various authoritative hands on the culture of Florida tobaccos, oranges, strawberries, figs, bananas, and sugar-cane; such portions of the last report of Hon. Dennis Eagan, Commissioner of Lands and Emigration, as are of interest to intending purchasers or settlers; an Itinerary, showing the routes to and in Florida; and an alphabetically arranged Gazetteer which embodies various items of infor-

mation as to the towns, rivers, and counties of the State together with references to the chapters generally describing the regions in which they are located, and which will thus be found to serve, in addition to its direct purpose, for an Index more minute than the chapter-headings hereto prefixed as a Table of Contents.

CHAPTER II.

THE OCKLAWAHA RIVER.

For a perfect journey God gave us a perfect day. The little Ocklawaha steamboat Marion—a steamboat which is like nothing in the world so much as a Pensacola gopher with a preposterously exaggerated back—had started from Pilatka some hours before daylight, having taken on her passengers the night previous; and by seven o'clock of such a May morning as no words could describe unless words were themselves May mornings we had made the twenty-five miles up the St. Johns, to where the Ocklawaha flows into that stream nearly opposite Welaka, one hundred miles above Jacksonville.

Just before entering the mouth of the river our little gopher-boat scrambled alongside a long raft of pine-logs which had been brought in separate sections down the Ocklawaha and took off the lumbermen, to carry them back for another descent while this raft was being towed by a tug to Jacksonville.

Observe that man who is now stepping from the wet logs to the bow of the Marion—how can he ever cut down a tree? He is a slim native, and there is not bone enough in his whole body to make the left leg of a good English coal-heaver: moreover, he does not seem to have the least idea that a man needs grooming. He is disheveled and wry-trussed to the last degree; his poor weasel jaws nearly touch their inner sides as they suck at the acrid

ashes in his dreadful pipe; and there is no single filament of either his hair or his beard that does not look sourly, and

ON THE RIVER-BANK, JUST ABOVE PILATKA.

at wild angles, upon its neighbor filament. His eyes are viscidly unquiet; his nose is merely dreariness come to a point; the corners of his mouth are pendulous with that sort of suffering which does not involve any heroism, such as being out of tobacco, waiting for the corn-bread to get cooked, and the like; his—— But, poor devil! I with-

draw all these remarks. He has a right to look disheveled, or any other way he likes. For listen: "Waal, sir," he says, with a dilute smile, as he wearily leans his arm against the low deck where I am sitting, "ef we did'n' have ther *sentermentillest* rain right thar last night, I'll be dad-busted!"

He had been in it all night.

Presently we rounded the raft, abandoned the broad and garish highway of the St. Johns, and turned off to the right into the narrow lane of the Ocklawaha, the sweetest water-lane in the world, a lane which runs for more than a hundred and fifty miles of pure delight betwixt hedgerows of oaks and cypresses and palms and bays and magnolias and mosses and manifold vine-growths, a lane clean to travel along for there is never a speck of dust in it save the blue dust and gold dust which the wind blows out of the flags and lilies, a lane which is as if a typical woods-stroll had taken shape and as if God had turned into water and trees the recollection of some meditative ramble through the lonely seclusions of His own soul.

As we advanced up the stream our wee craft even seemed to emit her steam in more leisurely whiffs, as one puffs one's cigar in a contemplative walk through the forest. Dick, the pole-man—a man of marvelous fine functions when we shall presently come to the short, narrow curves—lay asleep on the guards, in great peril of rolling into the river over the three inches between his length and the edge; the people of the boat moved not, and spoke not; the white crane, the curlew, the limpkin, the heron, the water-turkey, were scarcely disturbed in their quiet avocations as we passed, and quickly succeeded in persuading themselves after each momentary excitement of our gliding by that we were really after all no monster,

but only some day-dream of a monster. The stream, which in its broader stretches reflected the sky so perfectly that it seemed a riband of heaven bound in lovely doublings along the breast of the land, now began to narrow: the blue of heaven disappeared, and the green of the overleaning trees assumed its place. The lucent current lost all semblance of water. It was simply a distillation of many-shaded foliages, smoothly sweeping along beneath us. It was green trees, fluent. One felt that a subtle amalgamation and mutual give-and-take had been effected between the natures of water and leaves. A certain sense of pellucidness seemed to breathe coolly out of the woods on either side of us; and the glassy dream of a forest over which we sailed appeared to send up exhalations of balms and odors and stimulant pungencies.

"Look at that snake in the water!" said a gentleman, as we sat on deck with the engineer, just come up from his watch. The engineer smiled. "Sir, it is a water-turkey," he said, gently.

The water-turkey is the most preposterous bird within the range of ornithology. He is not a bird, he is a neck, with such subordinate rights, members, appurtenances and hereditaments thereunto appertaining as seem necessary to that end. He has just enough stomach to arrange nourishment for his neck, just enough wings to fly painfully along with his neck, and just big enough legs to keep his neck from dragging on the ground; and his neck is light-colored, while the rest of him is black. When he saw us he jumped up on a limb and stared. Then suddenly he dropped into the water, sank like a leaden ball out of sight, and made us think he was drowned,—when presently the tip of his beak appeared, then the length of his neck lay along the surface of the water, and in

this position, with his body submerged, he shot out his neck, drew it back, wriggled it, twisted it, twiddled it, and spirally poked it into the east, the west, the north, and the south, with a violence of involution and a contortionary energy that made one think in the same breath of corkscrews and of lightnings. But what nonsense! All that labor and perilous asphyxiation—for a beggarly sprat or a couple of inches of water-snake!

But I make no doubt he would have thought us as absurd as we him if he could have seen us taking *our* breakfast a few minutes later: for as we sat there, some half-dozen men at table, all that sombre melancholy which comes over the American at his meals descended upon us; no man talked, each of us could hear the other crunch his bread *in faucibus*, and the noise thereof seemed in the ghostly stillness like the noise of earthquakes and of crashing worlds; even the furtive glances towards each other's plates were presently awed down to a sullen gazing of each into his own: the silence increased, the noises became intolerable, a cold sweat broke out over at least one of us, he felt himself growing insane, and rushed out to the deck with a sigh as of one saved from a dreadful death by social suffocation.

There is a certain position a man can assume on board the steamer Marion which constitutes an attitude of perfect rest, and leaves one's body in such blessed ease that one's soul receives the heavenly influences of the Ocklawaha sail absolutely without physical impediment.

Know, therefore, tired friend that shall hereafter ride up the Ocklawaha on the Marion—whose name I would fain call Legion—that if you will place a chair just in the narrow passage-way which runs alongside the cabin, at the point where this passage-way descends by a step to the open space in front of the pilot-house, on the left-

hand side facing to the bow, you will perceive a certain slope in the railing where it descends by an angle of some thirty degrees to accommodate itself to the step aforesaid; and this slope should be in such a position as that your left leg unconsciously stretches itself along the same by the pure insinuating solicitations of the fitness of things, and straightway dreams itself off into an Elysian tranquillity. You should then tip your chair in a slightly diagonal position back to the side of the cabin, so that your head will rest thereagainst, your right arm will hang over the chair-back, and your left arm will repose on the railing. I give no specific instruction for your right leg, because I am disposed to be liberal in this matter and to leave some gracious scope for personal idiosyncrasies as well as a margin of allowance for the accidents of time and place; dispose your right leg, therefore, as your heart may suggest, or as all the precedent forces of time and the universe may have combined to require you.

Having secured this attitude, open wide the eyes of your body and of your soul; repulse with a heavenly suavity the conversational advances of the drummer who fancies he might possibly sell you a bill of white goods and notions, as well as the polite inquiries of the real-estate person who has his little private theory that you are in search of an orange-grove to purchase; then sail, sail, sail, through the cypresses, through the vines, through the May day, through the floating suggestions of the unutterable that come up, that sink down, that waver and sway hither and thither; and so shall you have revelations of rest, and so shall your heart forever afterwards interpret Ocklawaha to mean repose.

Some twenty miles from the mouth of the Ocklawaha, at the right-hand edge of the stream, is the handsomest residence in America. It belongs to a certain alligator

of my acquaintance, a very honest and worthy saurian, of good repute. A little cove of water, dark green under the overhanging leaves, placid, pellucid, curves round at the river-edge into the flags and lilies, with a curve just heart-breaking for the pure beauty of the flexure of it. This house of my saurian is divided into apartments—little subsidiary bays which are scalloped out by the lily-pads according to the sinuous fantasies of their growth. My saurian, when he desires to sleep, has but to lie down anywhere: he will find marvelous mosses for his mattress beneath him; his sheets will be white lily-petals; and the green disks of the lily-pads will straightway embroider themselves together above him for his coverlet. He never quarrels with his cook, he is not the slave of a kitchen, and his one house-maid—the stream—forever sweeps his chambers clean. His conservatories there under the glass of that water are ever and without labor filled with the enchantments of strange under-water growths; his parks and his pleasure-grounds are bigger than any king's. Upon my saurian's house the winds have no power, the rains are only a new delight to him, and the snows he will never see. Regarding fire, as he does not employ its slavery, so he does not fear its tyranny. Thus, all the elements are the friends of my saurian's house. While he sleeps he is being bathed. What glory to awake sweetened and freshened by the sole careless act of sleep!

Lastly, my saurian has unnumbered mansions, and can change his dwelling as no human householder may; it is but a fillip of his tail, and lo! he is established in another place as good as the last, ready furnished to his liking.

For many miles together the Ocklawaha is a river without banks, though not less clearly defined as a stream for that reason. The swift, deep current meanders between

MY SAURIAN'S HOUSE.

tall lines of trees; beyond these, on each side, there is water also,—a thousand shallow rivulets lapsing past the

CYPRESS SWAMP.

bases of multitudes of trees. Along the immediate edges of the stream every tree-trunk, sapling, stump, or other projecting coign of vantage is wrapped about with a close-growing vine. At first, like an unending procession of nuns disposed along the aisle of a church these vine-figures stand. But presently, as one journeys, this nun-imagery fades out of one's mind, and a thousand other fancies float with ever-new vine-shapes into one's eyes. One sees repeated all the forms one has ever known, in grotesque juxtaposition. Look! here is a great troop of girls, with arms wreathed over their heads, dancing down into the water; here are high velvet arm-chairs and lovely green fauteuils of divers pattern and of softest

cushionment; there the vines hang in loops, in pavilions, in columns, in arches, in caves, in pyramids, in women's tresses, in harps and lyres, in globular mountain-ranges, in pagodas, domes, minarets, machicolated towers, dogs, belfries, draperies, fish, dragons. Yonder is a bizarre congress—Una on her lion, Angelo's Moses, two elephants with howdahs, the Laocoön group, Arthur and Lancelot with great brands extended aloft in combat, Adam bent with love and grief leading Eve out of Paradise, Cæsar shrouded in his mantle receiving his stabs, Greek chariots, locomotives, brazen shields and cuirasses, columbiads, the twelve Apostles, the stock exchange. It is a green dance of all things and times.

The edges of the stream are further defined by flowers and water-leaves. The tall, blue flags; the ineffable lilies sitting on their round lily-pads like white queens on green thrones; the tiny stars and long ribbons of the water-grasses; the pretty phalanxes of a species of "bonnet" which from a long stem that swings off down-stream along the surface sends up a hundred little graceful stemlets, each bearing a shield-like disk and holding it aloft as the antique soldiers held their bucklers to form the *testudo*, or tortoise, in attacking. All these border the river in infinite varieties of purfling and chasement.

The river itself has an errant fantasy, and takes many shapes. Presently we come to where it seems to fork into four separate curves above and below.

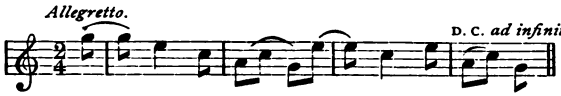
"Them's the Windin'-blades," said my raftsman. To look down these lovely vistas is like looking down the dreams of some pure young girl's soul; and the gray moss-bearded trees gravely lean over them in contemplative attitudes, as if they were studying—in the way strong men should study—the mysteries and sacrednesses and tender depths of some visible reverie of maidenhood.

—And then, after this day of glory, came a night of glory. Down in these deep-shaded lanes it was dark indeed as the night drew on. The stream which had been all day a baldrick of beauty, sometimes blue and sometimes green, now became a black band of mystery. But presently a brilliant flame flares out overhead: they have lighted the pine-knots on top of the pilot-house. The fire advances up these dark sinuosities like a brilliant god that for his mere whimsical pleasure calls the black impenetrable chaos ahead into instantaneous definite forms as he floats along the river-curves. The white columns of the cypress-trunks, the silver-embroidered crowns of the maples, the green-and-white of the lilies along the edges of the stream,—these all come in a continuous apparition out of the bosom of the darkness and retire again: it is endless creation succeeded by endless oblivion. Startled birds suddenly flutter into the light, and after an instant of illuminated flight melt into the darkness. From the perfect silence of these short flights one derives a certain sense of awe. Mystery appears to be about to utter herself in these suddenly-illuminated forms, and then to change her mind and die back into mystery.

Now there is a mighty crack and crash: limbs and leaves scrape and scrub along the deck; a little bell tinkles; we stop. In turning a short curve, or rather doubling, the boat has run her nose smack into the right bank, and a projecting stump has thrust itself sheer through the starboard side. Out, Dick! out, Henry! Dick and Henry shuffle forward to the bow, thrust forth their long white pole against a tree-trunk, strain and push and bend to the deck as if they were salaaming the god of night and adversity, our bow slowly rounds into the stream, the wheel turns, and we puff quietly along.

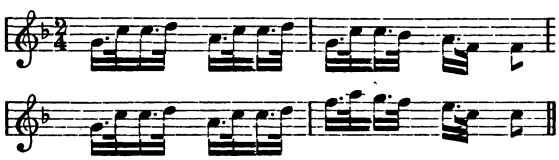
Somewhere back yonder in the stern Dick is whistling.

You should hear him! With the great aperture of his mouth, and the rounding vibratory-surfaces of his thick lips, he gets out a mellow breadth of tone that almost entitles him to rank as an orchestral instrument. Here is his tune:



It is a genuine plagal cadence. Observe the syncopations marked in this air: they are characteristic of negro music. I have heard negroes change a well-known melody by adroitly syncopating it in this way, so as to give it a *bizarre* effect scarcely imaginable; and nothing illustrates the negro's natural gifts in the way of keeping a difficult *tempo* more clearly than his perfect execution of airs thus transformed from simple to complex accentuations.

Dick has changed his tune: *allegro!*



Da capo, of course, and *da capo* indefinitely; for it ends on the dominant. The dominant is a chord of progress: no such thing as stopping. It is like dividing ten by nine, and carrying out the decimal remainders: there is always one over.

Thus the negro shows that he does not like the ordinary accentuations nor the ordinary cadences of tunes: his ear is primitive. If you will follow the course of Dick's musical reverie—which he now thinks is solely a matter betwixt himself and the night, as he sits back yonder in the stern alone—presently you will hear him sing a whole

minor tune without once using a semitone: the semitone is weak, it is a dilution, it is not vigorous like the whole tone; and I have seen a whole congregation of negroes at night, as they were worshiping in their church with some wild song or other and swaying to and fro with the ecstasy and the glory of it, abandon as by one consent the semitone that *should* come according to the civilized *modus*, and sing in its place a big lusty whole tone that would shake any man's soul. It is strange to observe that some of the most magnificent effects in advanced modern music are produced by this same method, notably in the works of Asger Hamerik of Baltimore, and of Edward Grieg of Copenhagen. Any one who has heard Thomas's orchestra lately will have no difficulty in remembering his delight at the beautiful *Nordische Suite* by the former writer and the piano *concerto* by the latter.

—And then it was bed-time. Let me tell you how to sleep on an Ocklawaha steamer in May. With a small bribe persuade Jim, the steward, to take the mattress out of your berth and lay it slanting just along the railing that incloses the lower part of the deck, in front, and to the left, of the pilot-house. Lie flat-backed down on the same, draw your blanket over you, put your cap on your head in consideration of the night air, fold your arms, say some little prayer or other, and fall asleep with a star looking right down your eye.

When you awake in the morning, your night will not seem any longer, any blacker, any less pure than this perfect white blank in the page; and you will feel as new as Adam.

—At sunrise, I woke, and found that we were lying with the boat's nose run up against a sandy bank which quickly rose into a considerable hill. A sandy-whiskered native

came down from the pine cabin on the knoll. "How air ye?" he sung out to the skipper, with an evident expectation in his voice. "Got any freight fur me?"

The skipper handed him a heavy parcel, in brown paper. He examined it keenly with all his eyes, felt it over carefully with all his fingers; his countenance fell, and the shadow of a great despair came over it.

"Look-a-here," he said, "*haint* you brought me no terbacker?"

"Not unless it's in that bundle," said the skipper.

"Hell!" he said, "*hit's* nuthin' but shot;" and he turned off into the forest, as we shoved away, with a face like the face of the Apostate Julian when the devils were dragging him down the pit.

I would have let my heart go out in sympathy to this man—for his agonizing after terbacker, ere the next week bring the Marion again, is not a thing to be laughed at—had I not believed that he was one of the vanilla-gatherers. You must know that in the low grounds of the Ocklawaha grows what is called the vanilla-plant—a plant with a leaf much like that of tobacco when dried. This leaf is now extensively used to adulterate cheap chewing-tobacco, and the natives along the Ocklawaha drive a considerable trade in gathering it. The process of this commerce is exceedingly simple: and the bills drawn against the consignments are primitive. The officer in charge of the Marion showed me several of the communications received at various landings during our journey, which accompanied small shipments of the spurious weed. They were generally about as follows:

"DEER SIR

"i send you one bag Verneller, pleeze fetch one par of shus numb 8 and ef enny over fetch twelve yards hoamspin.

"Yrs trly

"&c."

A LANDING ON THE OCKLAWAHA.

The captain of the steamer takes the bags to Pilatka, barters the vanilla for the articles specified, and distributes these on the next trip to their respective owners.

In a short time we came to the junction of the river formed by the irruption of Silver Spring ("Silver Spring Run") with the Ocklawaha proper. Here new astonishments befell. The water of the Ocklawaha, which had before seemed clear enough, now showed but like a muddy stream as it flowed side by side, unmixing for some distance, with the Silver Spring water.

The Marion now left the Ocklawaha and turned into the Run. How shall one speak quietly of this journey over transparency? The Run is very deep: the white bottom seems hollowed out in a continual succession of large spherical holes, whose entire contents of darting fish, of under-mosses, of flowers, of submerged trees, of lily-stems, and of grass-ribbons revealed themselves to us through the lucent fluid as we sailed along thereover. The long series of convex bodies of water filling these white concavities impressed one like a chain of globular worlds composed of a transparent lymph. Great numbers of keen-snouted, blade-bodied gar-fish shot to and fro in unceasing motion beneath us: it seemed as if the underworlds were filled with a multitude of crossing sword-blades wielded in tireless thrust and parry by invisible arms.

The shores, too, had changed. They now opened out into clear savannas, overgrown with a broad-leafed grass to a perfect level two or three feet above the water, and stretching back to boundaries of cypress and oaks; and occasionally, as we passed one of these expanses curving into the forest, with a diameter of a half-mile, a single palmetto might be seen in or near the centre,—perfect type of that lonesome solitude which the German names *Einsamkeit*—onesomeness. Then again, the cypress and

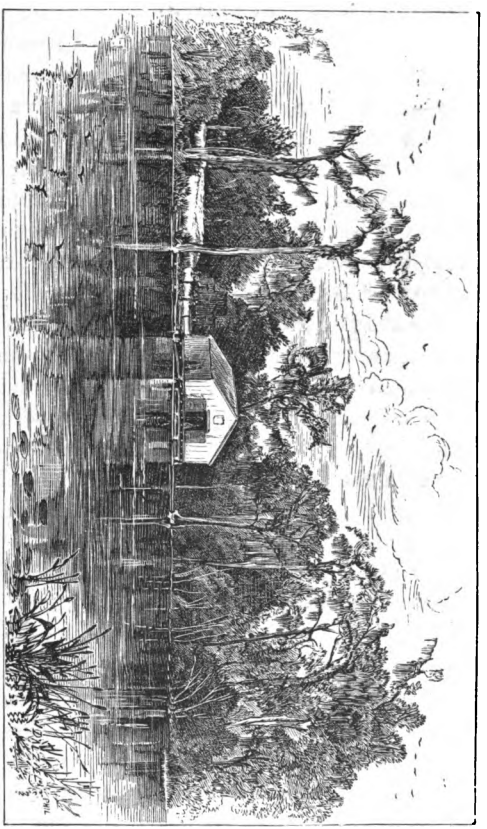
palmettos would swarm to the stream and line its banks. Thus for nine miles, counting our gigantic rosary of water-wonders and lovelinesses, we fared on.

PALMETTO, WITH PARASITES.

Then we rounded to, in the very bosom of the Silver Spring itself, and came to wharf. Here there were warehouses, a turpentine distillery, men running about with boxes of freight and crates of Florida cucumbers for the Northern market, country stores with wondrous assortments of goods—fiddles, clothes, physic, groceries, school-books, what not — and a little farther up the shore, a tavern. I learned, in a hasty way, that Ocala was five miles distant, that one could get a very good conveyance from the tavern to that place, and that on the next day—Sunday—a stage would leave Ocala for Gainesville, some forty miles distant, being the third relay of the long stage-line which runs three times a week between Tampa and Gainesville, *via* Brooksville and Ocala.

Then the claims of scientific fact and of guide-book information could hold me no longer. I ceased to acquire knowledge, and got me back to the wonderful spring,

drifting over it, face downwards, as over a new world of delight.



SILVER SPRING.

It is sixty feet deep a few feet off shore, and covers an irregular space of several acres before contracting into its outlet—the Run. But this sixty feet does not at all represent the actual impression of depth which one receives, as one looks through the superincumbent water down to the

clearly-revealed bottom. The distinct sensation is, that although the bottom there *is* clearly seen, and although all the objects in it are of their natural size, undiminished by any narrowing of the visual angle, yet it and they are seen from a great distance. It is as if depth itself—that subtle abstraction—had been compressed into a crystal lymph, one inch of which would represent miles of ordinary depth.

As one rises from gazing into these quaint profundities and glances across the broad surface of the spring, one's eye is met by a charming mosaic of brilliant hues. The water-plain varies in color, according to what it lies upon. Over the pure white limestone and shells of the bottom it is perfect malachite green; over the water-grass it is a much darker green; over the sombre moss it is that rich brown-and-green which Bodmer's forest-engravings so vividly suggest; over neutral bottoms it reflects the sky's or the clouds' colors. All these views are further varied by mixture with the manifold shades of foliage-reflections cast from overhanging boscage near the shore, and still further by the angle of the observer's eye.

One would think these elements of color-variation were numerous enough; but they were not nearly all. Presently the splash of an oar in a distant part of the spring sent a succession of ripples circling over the pool. Instantly it broke into a thousand-fold prism. Every ripple was a long curve of variegated sheen. The fundamental hues of the pool when at rest were distributed into innumerable kaleidoscopic flashes and brilliancies, the multitudes of fish became multitudes of animated gems, and the prismatic lights seemed actually to waver and play through their translucent bodies, until the whole spring, in a great blaze of sunlight, shone like an enormous fluid jewel that without decreasing forever lapsed away upward in successive exhalations of dissolving sheens and glittering colors.

CHAPTER III.

ST. AUGUSTINE IN APRIL.

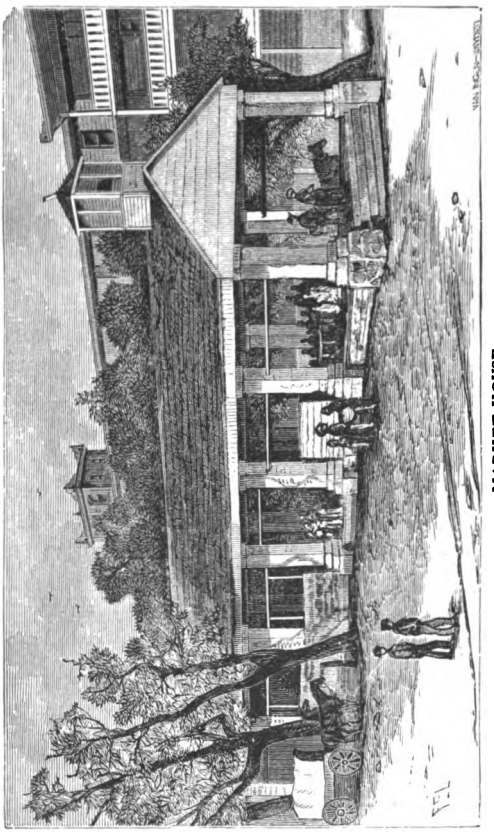
A SAILOR has just yawned.

It is seven o'clock, of an April morning such as does not come anywhere in the world except at St. Augustine or on the Gulf Coast of Florida,—a morning woven out of some miraculous tissue, which shows two shimmering aspects, the one stillness, the other glory,—a morning which mingles infinite repose with infinite glittering, as if God should smile in his sleep.

On such a morning there is but one thing to do in St. Augustine: it is to lie thus on the sea-wall, with your legs dangling down over the green sea-water, lazaretto-fashion; your arms over your head, caryatid-fashion; and your eyes gazing straight up into heaven, lover-fashion.

The sailor's yawn is going to be immortal: it is reappearing like the Hindoo god in ten thousand avatars of echoes. The sea-wall is now refashioning it into a sea-wall yawn; the green island over across the water there yawns; now the brick pillars of the market-house are yawning; in turn something in the air over beyond the island yawns; now it is this side's time again. Listen! in the long pier yonder, which runs out into the water as if it were a continuation of the hotel-piazza, every separate pile is giving his own various interpretation of the yawn: it runs down them like a forefinger down piano-keys, even to the farthest one, whose idea of this yawn seems to be that it was a mere whisper.

The silence here in the last of April does not have many sounds, one observes, and therefore makes the most of any such airy flotsam and jetsam as come its way.



MARKET-HOUSE.

For the visitors—those of them who make a noise with dancing of nights and with trooping of mornings along the Plaza de la Constitucion—are gone; the brood of

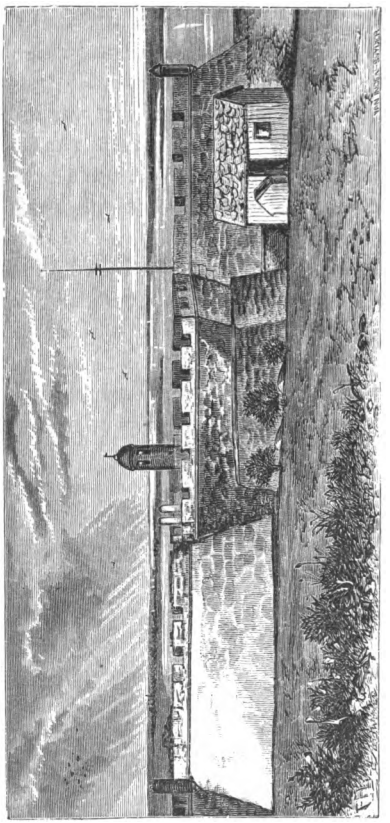
pleasure-boats are all asleep in "the Basin"; practically the town belongs for twenty-three hours of each day to the sixteenth century. The twenty-fourth hour, during which the nineteenth claims its own, is when the little locomotive whistles out at the depot three-quarters of a mile off, the omnibus rolls into town with the mail—there are no passengers—the people gather at the post-office, and everybody falls to reading the Northern papers.

Two months earlier it was not so. Then the actual present took every hour that every day had. The St. Augustine, the Florida, the Magnolia, three pleasant hotels, with a shoal of smaller public and private boarding-houses, were filled with people thoroughly alive; the lovely sailing-grounds around the harbor were all in a white zigzag with races of the yacht-club and with more leisurely mazes of the pleasure-boat fleet; one could not have lain on the sea-wall on one's back without galling disturbance at every moment; and as for a yawn, people do not yawn in St. Augustine in February.

There are many persons who have found occasion to carp at this sea-wall, and to revile the United States Government for having gone to the great expense involved in its construction, with no other result than that of furnishing a promenade for lovers. But these are ill-advised persons: it is easily demonstrable that this last is one of the most legitimate functions of government. Was not the encouragement of marriage a direct object of many noted Roman laws? And why should not the Government of the United States "protect" true love as well as pig-iron? Viewed purely from the stand-point of political economy, is not the former full as necessary to the existence of the State as the latter?

Whatever may have been the motives of the federal authorities in building it, its final cause, *causa causans*,

is certainly love; and there is not a feature of its construction which does not seem to have been calculated solely with reference to some phase of that passion. It is just wide enough for two to walk side by side with the least trifle of pressure together; it is as smooth as the course of true love is *not*, and yet there are certain re-entering angles in it (where the stairways come up) at which one is as apt to break one's neck as one is to be flirted with, and in which, therefore, every man ought to perceive a reminder in stone of either catastrophe; it has on one side the sea, exhaling suggestions of foam-born Venus and fickleness, and on the other the land, with the Bay Street residences wholesomely whispering of settlements and housekeeping bills; it runs at its very beginning in front of the United States barracks, and so at once flouts War in the face, and



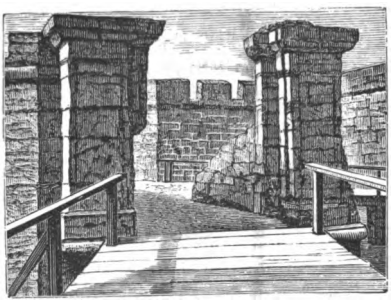
FORT MARION: REAR VIEW.

pursues its course,—happy omen!—towards old Fort Marion, where strife long ago gave way to quiet warmths of sunlight, and where the wheels of the cannon have become trellises for peaceful vines; and finally it ends—— How shall a man describe this spot where it ends? With but a step the promenader passes the drawbridge, the moat, the portcullis, edges along the left wall, ascends a few steps, and emerges into the old Barbican. What, then, is in the Barbican? Nothing: it is an oddly-angled inclosure of gray stone, walling round a high knoll where some grass and a blue flower or two appear. Yet it is Love's own trysting-place. It speaks of love, love only: the volubility of its quietude on this topic is as great as Chaucer has described his own:

> For he hath told of lovers up and down,
> Moo than Ovid made of mencioun
> In his Epistelles that ben so olde.
> What schuld I tellen hem, syn they be tolde?
> In youthe he made of Coys and Alcioun,
> And siththe hath he spoke of everychon,
> These noble wyfes, and these lovers eeke.
> Whoso wole his large volume seeke
> Cleped the seints legendes of Cupide,
> Ther may he see the large woundes wyde
> Of Lucresse, and of Babiloun Tysbee;
> The sorwe of Dido for the fals Enee;
> The dree of Philles for hir Demephon;
> The pleynt of Diane and of Ermyon,
> Of Adrian, and of Ysyphilee;
> The barren yle stondyng in the see;
> The dreynt Leandere for his fayre Erro:
> The teeres of Eleyn, and eek the woe
> Of Bryxseyde, and of Ledomia;
> The cruelté of the queen Medea,
> The litel children hanging by the hals
> For thilke Jason, that was of love so fals.

O Ypermestre, Penollope, and Alceste,
Youre wyfhood he comendeth with the beste.
But certaynly no worde writeth he
Of thilke wikked ensample of Canace,
That loved her owen brother synfully!
On whiche corsed stories I seye fy!

Thus the Barbican discourses of true love to him who can hear. I am persuaded that Dante and Beatrice, Abelard and Heloise, Petrarch and Laura, Leander and Hero, keep their tender appointments here. The Barbican is love-making already made. It is complete *Yes*, done in stone and grass.



ENTRANCE, FORT SAN MARCO.

The things which one does in St. Augustine in February become in April the things which one placidly hears that one *ought* to do, and lies still on one's back on the sea-wall and dangles one's legs.

There is the pleasant avenue, for instance, by which the omnibus coming from the dépôt enters the town after crossing the bridge over the San Sebastian River. It runs between the grounds of Senator Gilbert on the right (entering town), and the lovely orange-groves, avenues, cedar-hedges, and mulberry-trees which cluster far back from the road about the residences of Dr. Anderson and of Mr. Ball. The latter gentleman is of the well-known firm of Ball, Black & Co., of New York, and has built one of the handsomest residences in Florida here on the old "Buckingham Smith Place."

Or there are the quaint courts inclosed with jealous high coquina-walls, and giving into cool rich gardens where lemons, oranges, bananas, Japan plums, figs, date-palms, and all manner of tropic flowers and greeneries hide from the northeast winds and sanctify the old Spanish-built homes. One has to be in St. Augustine some time before one realizes, as one passes by these commonplace exteriors of whitish houses and whitish walls, the unsuspected beauties stretching back within.

DATE-PALM.

Then there are the narrow old streets to be explored — Bay Street, next the water, Charlotte, St. George and Tolomato Streets running parallel thereto; or the old rookery of a convent, where the Sisters make lace, looking ten times older for the new convent that is going up not far off; or the old cathedral on the Plaza to peep into, one of whose bells is said to have once hung on the chapel beyond the city gates where the savages murdered the priests; or the Plaza itself —*Plaza de la Constitucion* — where certain good and loyal persons burned the effigies of Hancock and Adams some hundred years ago; or the Confederate monument on St. George Street, near Bridge,

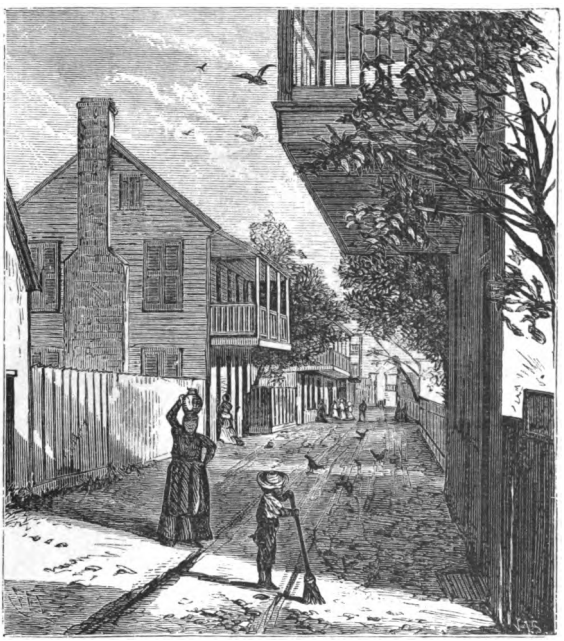
where one may muse with profit in a Centennial year; or the City Gate, looking now more like an invitation to enter

THE OLD CATHEDRAL.

than a hostile defense as it stands peacefully wide open on the grassy banks of the canal which formerly let the San Sebastian waters into the moat around Fort Marion; or a trip to the hat-braiders', to see if there is any new fantasy in palmetto-plaits and grasses; or an hour's turning over of the photographic views to fill out one's Florida collection; or a search after a leopard-skin sea-bean.

Or there is a sail over to the North Beach, or to the South Beach, or to the high sand-dunes from which

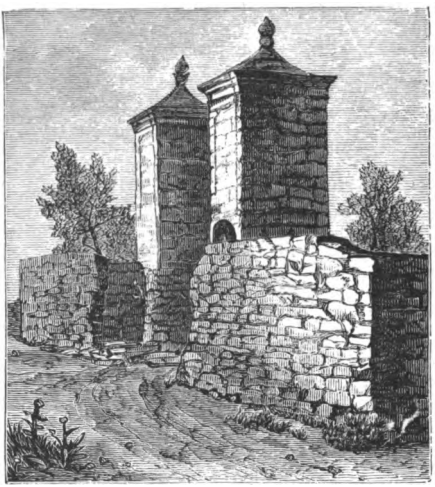
General Oglethorpe once attempted to bombard the Spanish governor Monteano out of the fort; or to the



VIEW IN ST. GEORGE STREET.

coquina-quarries and the light-houses on Anastasia Island, the larger of which latter is notable as being one of the few first-class light-houses in the country. Or there is an expedition to Matanzas Inlet, where one can disembark with a few friends, and have three or four days of camp-life plentifully garnished with fresh fish of one's own catching and game of one's own shooting. Or, if one is of a scientific turn, one may sail down to the Sulphur Spring which boils up in the ocean some two and a half

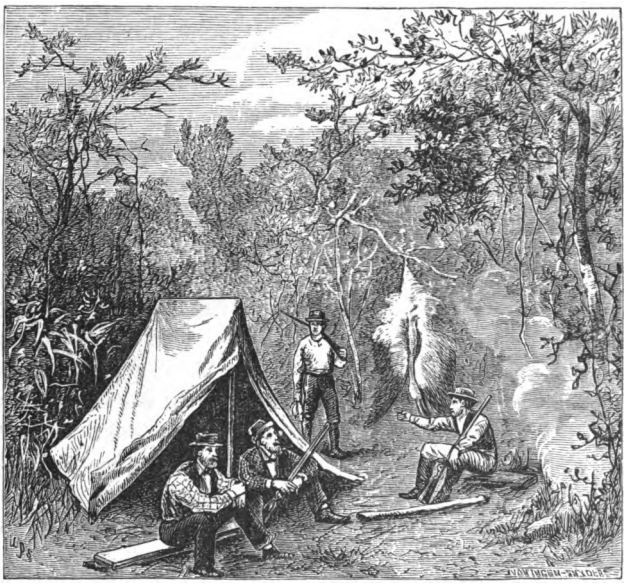
miles off Matanzas. This spring rises in water one hundred and thirty-two feet deep, though that around the fountain is only about fifty feet, and its current is so strong that the steamer of the Coast Survey was floated off



OLD CITY GATE.

from over the "boil" of it. It is intermittent, sometimes ceasing to flow, then commencing another ebullition by sending up a cloud of dark-blue sediment, which can be seen advancing to the surface. It has been recently explored by a Coast Survey party. Such a spring is mentioned by Maury in a report made many years ago to the Navy Department. I am informed that a similar one exists in the Upper St. Johns; and a gentleman told me at Cedar Keys that having applied some years ago to a sponging-vessel out in the Gulf for water, one of the crew took him in a small boat to a spot where he dipped

up several buckets full of fresh water in the midst of the brine.



A CAMP AT MATANZAS.

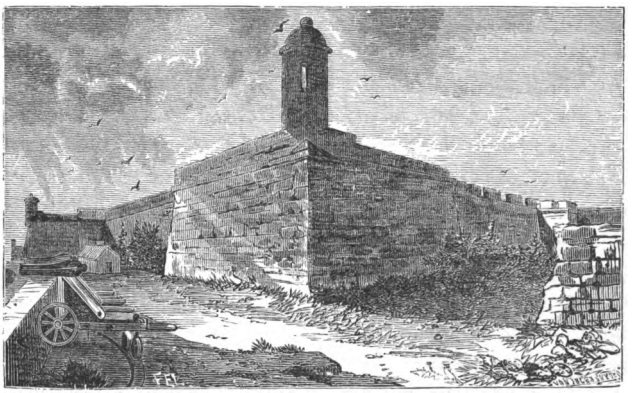
Or late in the afternoon one may drive out St. George Street through the Gate, and passing the Protestant burying-ground ride down a clean road which presently debouches on the beach of the San Sebastian, and affords a charming drive of several miles. Soon after getting on this beach, one can observe running diagonally from the river in a double row the remains of an old outer line of palisades which connected Fort Moosa with a stockade at the San Sebastian. This row runs up and enters the grounds of the residence formerly occupied by George R. Fairbanks, author of an excellent history of Florida.

Or one may visit Fort Marion—that lovely old transformation of the seventeenth century into coquina, known in the ancient Spanish days as Fort San Juan and as Fort San Marco—and peep into the gloomy casemates, the antique chapel, the tower, the Barbican; and mayhap the fine old sergeant from between his side-whiskers will tell of Coacoochee, of Osceola, and of the skeletons that were found chained to the walls of the very dungeon in whose cold blackness one is then and there shivering. The old sergeant might add to his stories that of a white prisoner who once dragged out a weary five years in these dungeons, and who was a man remarkable for having probably tasted the sweets of revenge in as full measure as ever fell to human lot. I mean Daniel McGirth. He was a famous partisan scout in the early part of the American Revolution, but having been whipped for disrespect to a superior officer, escaped, joined the enemy, and thereafter rained a series of bloody revenges upon his injurers. He was afterwards caught by the Spanish — it is thought because he had joined William Augustus Bowles in his dreadful instigation of the Indians against the Floridian Spaniards—and incarcerated in this old fort for five years.

—If, indeed, the fine old sergeant of Fort Marion be still there: it may be that he has ceased to be *genius loci* since the Indians arrived.

For, alas! and alas! the old lonesome fort, the sweet old fort, whose pyramids of cannon-balls were only like pleasant reminders of the beauty of peace, whose manifold angles were but warm and sunny nooks for lizards and men to lounge in and dream in, whose ample and ancient moat had converted itself with grasses and with tiny flowers into a sacred refuge from trade and care, known to many a weary soul,—the dear old fort is practically no more: its glories of calm and of solitude have

departed utterly away. The Cheyennes, the Kiowas, the Comanches, the Caddoes, and the Arapahoes, with their



IN THE MOAT: FORT MARION.

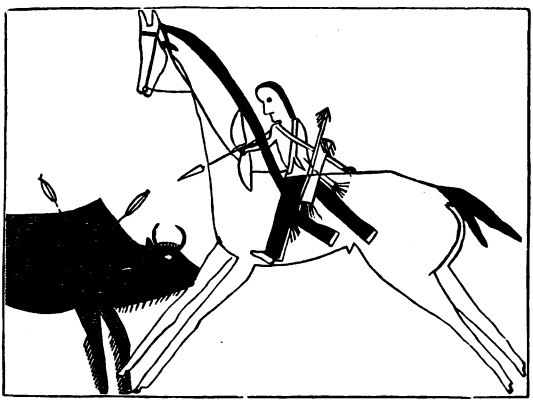
shuffling chains and strange tongues and barbaric gestures, have frightened the timid swallow of romance out of the sweetest nest that he ever built in America.

It appears that some time about the middle of 1874 the United States Government announced to the Indians in Northwest Texas that they must come in and give a definite account of themselves, whereupon a large number declared themselves hostile. Against these four columns of troops were sent out from as many different posts, which were managed so vigorously that in no long time the great majority of the unfriendly Indians either surrendered or were captured. Some of these were known to have been guilty of atrocious crimes; others were men of consequence in their tribes; and it was resolved to make a selection of the principal individuals of these two classes, and to confine them in old Fort Marion, at St. Augustine.

And so here they are—"Medicine Water," a ring-leader, along with "White Man," "Rising Bull," "Hail-stone," "Sharp Bully," and others, in the terrible murder of the Germain family, and in the more terrible fate of the two Germain girls who were recently recaptured from the Cheyennes; "Come See Him," who was in the mur-der of the Short surveying-party; "Soaring Eagle," supposed to have killed the hunter Brown, near Fort Wallace; "Big Moccasin" and "Making Medicine," horse-thieves and raiders; "Packer," the murderer of Williams; "Mochi," the squaw identified by the Ger-main girls as having chopped the head of their murdered mother with an axe. Besides these, who constitute most of the criminals, are a lot against whom there is no par-ticular charge, but who are confined on the principle that prevention is better than cure. "Gray Beard," one of this latter class of chiefs, leaped from a car-window at Baldwin, Florida, while being conveyed to St. Augustine, and was shot, after a short pursuit, by one of his guards. "Lean Bear," another, stabbed himself and two of his guards, apparently in a crazy fit, when near Nashville, Tennessee, *en route*, but has since recovered and been sent to join those in the fort. One of the Kiowas died of pneumonia shortly after arriving at St. Augustine, leaving seventy-three, including two squaws and a little girl, now in confinement. Their quarters are in the case-mates within the fort, which have been fitted up for their use. During the day they are allowed to move about the interior of the fort, and are sometimes taken out in squads to bathe; at night they are locked up.

They seem excessively fond of trying their skill in drawing, and are delighted with a gift of pencil and paper. Already, however, the atmosphere of trade has reached into their souls: I am told they now begin to sell

what they were ready enough to give away when I saw them a few weeks ago; and one fancies it will not be long



INDIAN ART. (DRAWN BY ONE OF THE INDIANS AT ST. AUGUSTINE.)

before they are transformed from real Indians into those vile things, watering-place Indians.

Criminals as they are, stirrers-up of trouble as they are, rapidly degenerating as they are, no man can see one of these stalwart-chested fellows rise and wrap his blanket about him with that big, majestic sweep of arm which does not come to any strait-jacketed civilized being, without a certain melancholy in the bottom of his heart as he wonders what might have become of these people if so be that gentle contact with their white neighbors might have been substituted in place of the unspeakable maddening wrongs which have finally left them but a little corner of their continent. Nor can one repress a little moralizing as one reflects upon the singularity of that fate which has finally placed these red-men on the very spot where red-men's wrongs began three centuries and a half ago; for it was here that Ponce de Leon landed in 1512, and from the

very start there was enmity betwixt the Spaniard and the Indian.

Nor, finally, can one restrain a little smile at the thought that not a hundred years ago nearly this same number of the most illustrious men in South Carolina were sent down to this same St. Augustine to be imprisoned for the same reason for which most of these Indians have been—to wit, that they were men of influence and stirrers-up of trouble in their tribes. After the capture of Charleston by the British, during the American Revolution, between fifty and sixty of the most distinguished South Carolinians were rudely seized by order of the English commander and transferred to St. Augustine for safe-keeping, where they were held for several months; one of their number, Gadsden, being imprisoned for nearly a year in this very old fort, refusing to accept the conditions upon which the rest were allowed the range of the city streets. The names of these prisoners are of such honorable antiquity, and are so easily recognizable as being names still fairly borne and familiarly known in South Carolina, that it is worth while to reproduce them here out of the dry pages of history. They are—John Budd, Edward Blake, Joseph Bee, Richard Beresford, John Berwick, D. Bordeaux, Robert Cochrane, Benjamin Cudworth, H. V. Crouch, J. S. Cripps, Edward Darrell, Daniel Dessaussure, John Edwards, George Flagg, Thomas Ferguson, General A. C. Gadsden, Wm. Hazel Gibbs, Thomas Grinball, William Hall, Thomas Hall, George A. Hall, Isaac Holmes, Thomas Heyward, Jr., Richard Hutson, Noble Wimberley Jones, William Johnstone, William Lee, Richard Lushington, William Logan, Rev. John Lewis, William Massey, Alexander Moultrie, Arthur Middleton, Edward McCready, John Mouatt, Edward North, John Neufville, Joseph Parker, Christopher Peters, Benjamin Postell, Samuel

Prioleau, John Ernest Poyas, Edward Rutledge, Hugh Rutledge, John Sansom, Thomas Savage, Josiah Smith, Thomas Singleton, James Hampden Thompson, John Todd, Peter Timothy, Anthony Toomer, Edward Weyman, Benjamin Waller, Morton Wilkinson, and James Wakefield.

As you stand on the fort, looking seaward, the estuary penetrating into the mainland up to the left is the North River, which René de Laudonnière in 1564 called the "River of Dolphins"; across it is the North Beach; in front you see the breakers rolling in at the harbor-entrance. The stream stretching down to the right is Matanzas River, communicating with open water at Matanzas Inlet, about eighteen miles below. Another estuary, the San Sebastian, runs behind the town, and back into the country for a few miles. The bar there is said to be not an easy one to cross; and once in, sometimes a nor'-easter springs up and keeps you in a week or so. In the old times of sailing vessels these northeast winds used to be called orange-winds—on a principle somewhat akin to *lucus a non*—because the outside world could not *get* any oranges, the sailboats laden with that fruit being often kept in port by these gales until their cargoes were spoiled. In rummaging over old books of Florida literature, I came across the record of "A Winter in the West Indies and Florida, by An Invalid," published by Wiley & Putnam, in 1839, whose account of one of these nor'-easters at St. Augustine so irresistibly illustrates the unreliableness of sick men's accounts of climates that I cannot help extracting a portion of it:

"A packet-schooner runs regularly from here to Charleston, at ten dollars passage, but owing to northeast winds it is sometimes impossible to get out of the harbor for a month at a time. I was detained in that manner for ten days, during which period I wrote this de-

scription, in a room without fire, with a cloak on, and feet cold in spite of thick boots, suffering from asthma, fearing worse farther North, still burning with impatience on account of the delay."

Such a proem is enough to make a St. Augustine person shiver at the "description" which is to follow it; and well he might, for my "Invalid," after giving some account of the climate from a thermometric record of one year, and drawing therefrom the conclusion that invalids had better go to St. Augustine in the summer than in the winter, proceeds:

"But the marshes in the vicinity harbor too many musquitoes in summer, . . . which rather surprised me, as it seemed from the state of the weather in April *that musquitoes would freeze in summer.* These marshes, too, in warm weather must produce a bad effect upon the atmosphere."*

"At the time of writing the above," he proceeds, "I supposed the wind was coming about, so as to take me along to some place—if no better, at least free from pretensions to a fine climate. Nothing can be worse than to find oneself imprisoned in this little village, kept a whole week or more with a cold, piercing wind drifting the sand along the streets and into his eyes, with sometimes a chance at a fire morning and evening, and sometimes a chance to wrap up in a cloak and shiver without any, and many times too cold to keep warm by walking in the sunshine: with numbers of miserable patients hovering about the fire telling stories of distress, while others are busily engaged in extolling the climate. It is altogether unendurable to hear it. Why, a man that would not feel too cold here would stand a six years' residence in Greenland or send an invalid to the Great Dismal Swamp for health. The truth is, a man in health"—and I am sure nothing more naïve than this is to be found in literature—"can judge no better of the fitness of a climate for invalids than a blind man of colors: he has no sense by which to judge of it. His is the feeling of the well man, but not of the sick. I have been

* Showing our invalid to be an unmitigated landlubber. The only marsh about St. Augustine is salt-water marsh, which is perfectly healthy. It is only fresh-water marsh that breeds miasma.

healthy, and now I am sick, and know the above remark is correct. No getting away. Blow, blow, blow! Northeast winds are sovereigns here, forcibly restraining the free-will of everybody, and keeping everything at a stand-still except the tavern-bill, which runs against all winds and weather. Here are forty passengers, besides a vessel, detained for ten days by the persevering obstinacy of the tyrant wind, while its music roars along the shore to regale us by night as well as by day, and keep us in constant recollection of the cause of detention.

"Oh for a steamboat, that happiest invention of man, that goes in spite of wind and tide! Talk of danger! Why, rather than be detained in this manner, I would take passage on board a balloon or a thunder-cloud. Anything to get along."

The city of St. Augustine is built on the site of the old Indian town of Seloy or Selooe. It was probably a little north of this that Ponce de Leon made his first landing in Florida in 1512. The tragic mutations of the town's early fortunes are so numerous that their recital in this limited space would be little more than a mere list of dates. Instead of so dry a skeleton of history, the reader will be at once more entertained and more instructed in all that is the essence of history by this story —thoroughly representative of the times—of the brief wars between Menendez, the then Spanish governor, or "adelantado," of Florida, on the one side, and Jean Ribaut and René de Laudonnière, French Huguenots, on the other. Already, in 1562, Ribaut has touched the shore of the St. Johns, and then sailed northward and planted a short-lived colony. In 1564, Laudonnière has come over and built Fort Caroline, not far above the mouth of the St. Johns. He had previously landed at the present site of St. Augustine, and had amicable entertainment from a "paracoussi," or chief, and his attending party of Indians. These Frenchmen appear to have had much more winning ways with them than the Spaniards. Laudonnière declares that the savages "were sorry for

nothing but that the night approached and made us retire into our ship," and that "they endeavored by all means to make us tarry with them," desiring "to present us with some rare things."

But presently queer doings begin in Fort Caroline, which it is probable was situated at St. Johns Bluff, on the south side of the St. Johns River. A soldier who professes magic stirs up disaffection against their leader. Laudonnière manages to send seven or eight of the suspected men to France, but while he is sick certain others confine him, seize a couple of vessels and go off on a piratical cruise. Most of them perish after indifferent success as freebooters: one party returns, thinking that Laudonnière will treat the thing as a frolic, and even get drunk as they approach the fort, and try each other, personating their own judges and aping Laudonnière himself. But Laudonnière turns the laugh: he takes the four ringleaders, shoots them first (granting so much grace to their soldierships) and hangs them afterward.

So, Death has his first course in Fort Caroline, and it is not long before he is in midst of a brave feast. The garrison gets into great straits for lack of food. One cannot control one's astonishment that these people, Spaniards as well as Frenchmen, should so persistently have fallen into a starving condition in a land where a man could almost make a living by sitting down and wishing for it. Perhaps it was not wholly national prejudice which prompted the naïve remark of the chronicler of the party of Sir John Hawkins, who, with an English fleet, paid Fort Caroline a visit at this time, and gave the distressed Frenchmen a generous allowance of provisions:

"The ground," says the chronicler, "doth yield victuals sufficient if they would have taken pains to get the same; but they" (the

Frenchmen), "being soldiers, desired to live by the sweat of other men's brows."

This chronicler's ideas of hunger, however, are not wholly reliable. Hear him discourse of the effect of tobacco upon it:

"The Floridians, when they travel, have a kind of herbe dried, who, with a cane, and earthern cup in the end, with fire and the dried herbes put together, doe suck throu a cane the smoke thereof, which smoke satisfieth their hunger, and therewith they live four or five days without meat or drinke; and this all the Frenchmen used for this purpose; yet doe they hold withal that it causeth them to reject from their stomachs, and spit out water and phlegm."

The fate of Fort Caroline rapidly approaches. In 1565, Captain Jean Ribaut comes back again from France, with workmen and five hundred soldiers, to relieve and strengthen the colony on the St. Johns. Meantime, news gets from France to Spain that he is coming, and one Menendez is deputed by the Spanish Government to checkmate him. With much delay and loss by storms, Menendez ardently pushes on, and makes land near St. Augustine harbor within twenty-four hours of the arrival of Jean Ribaut in the St. Johns, fifty miles above. They quickly become aware of each other. Menendez tries to catch Ribaut's ship, but fails, and sails back to St. Augustine; to which, by the way, he has just given that name, in honor of the saint's day on which he landed. Ribaut in turn resolves to attack, and, sailing down with his whole force for that purpose, is driven southward by a great storm. Meantime, Menendez sets out, under the discouragements of a tremendous rain and of great difficulty in keeping his people up to the work, to attack Fort Caroline by land. No difficult matter to take it if they only knew it, for Menendez has five hundred men, and there are in Fort Caroline but two hundred and forty souls (Ribaut

being away with all the available force), of whom many are people still seasick, workmen, women and children, and one is "a player on the virginals." Laudonnière himself, who has been left in charge, is sick, though trying his best to stimulate his people.

After three days Menendez arrives at dawn. It is but a shout, a rush, a wild cry of surprise from the French, a vigorous whacking and thrusting of the Spanish, and all is over. A few, Laudonnière among them, escape. Many, including women and children, were killed. It was at this time that Menendez caused certain prisoners to be hung, with the celebrated inscription over them, "*No por Franceses, sino por Luteranos.*"

Meantime, poor Jean Ribaut has met with nothing but disaster. His vessels are wrecked a little below Matanzas Inlet, but his men get ashore, some two hundred in one party, and the balance, three hundred and fifty, in another. Menendez hears of the first party through some Indians, goes down to the main shore, and discovers them across the inlet. After some conference this Delphic Menendez informs them that if they will come over he will "do to them what the grace of God shall direct."

Not dreaming that the grace of God is going to direct that they be all incontinently butchered, the poor Frenchmen, half dead with terror and hunger, first send over their arms, then come over themselves, ten at a time, as Menendez directs. And this is the way that the grace of Menendez's God directs him to treat them, as related by his own brother-in-law, De Solis:

"The adelantado then withdrew from the shore about two bowshots, behind a hillock of sand, within a copse of bushes, where the persons who came in the boat which brought over the French could not see; and then said to the French captain and the other eight Frenchmen who were there with him, 'Gentlemen, I have but few men

with me, and they are not very effective, and you are numerous, and going unrestrained it would be an easy thing to take satisfaction upon our men for those whom we destroyed when we took the fort; and thus it is necessary that you should march with hands tied behind a distance of four leagues from here, where I have my camp.'" Very well, say the Frenchmen, and so each ten is tied, without any other ten seeing it; "for it was so arranged in order that the French who had not passed the river should not understand what was being done, and might not be offended, and thus were tied two hundred and eight Frenchmen. Of whom the adelantado asked that if any among them were Catholics they should declare it." Eight are Catholics, and are sent off to St. Augustine, "and all the rest replied that they were of the new religion, and held themselves to be very good Christians. . . . The adelantado then gave the order to march with them; . . . and he directed one of his captains who marched with his vanguard that at a certain distance from there he would observe a mark made by a lance, . . . which would be in a sandy place that they would be obliged to pass in going on their way toward the fort at St. Augustine, and that there the prisoners should all be destroyed; and he gave the one in command of the rearguard the same order, *and it was done accordingly; when, leaving there all of the dead, they returned the same night before dawn to the fort at St. Augustine, although it was already sundown when the men were killed.*"

The next day, in much the same way and at the same spot, Menendez causes a hundred and fifty more Frenchmen to be butchered. Among them was their commander, Jean Ribaut, who dies like a hero, without fear, triumphant. Some say Menendez cut off Ribaut's beard and sent it to Spain.

There are still two hundred men of Ribaut's, who get down the coast to a place they name Canavaral, and set to work to build a boat; but Menendez soon captures the party, and thus puts an end for the time to the Huguenot colonization in Florida, for Laudonnière's party have gone off across the ocean back to France.

But after many months—during which Menendez has been very busy building up the Indian town of Selooe or

Seloy into the city of St. Augustine, planting garrisons and establishing priests in various parts of the country, and finally going back to Spain for succor—the French have their revenge. One Dominic de Gourgues sets out from France in 1567, and after much trial gets into the harbor of Fernandina. A favorable angel seems to have charge of the man from this time on. He is about to be resisted by a great crowd of Spaniard-hating Indians at Fernandina, when one of his men who had been with Laudonnière discovers to the Indians that they are Frenchmen. Thereupon they are hailed with joy, alliance is made with Satourioura, a chief with deadly feelings towards the Spaniards, and De Gourgues soon finds his army increased by several thousand good fighters. They straightway move down upon the Spanish forts on the St. Johns, completely surprise them, and kill or capture the inmates. With these captives De Gourgues devises that piece of vengeance which has become famous in history. He leads a lot of them to the same spot where Menendez had hung his Frenchmen, harangues them first, hangs them afterward, and then replaces Menendez's tablet with a pine board upon which letters have been seared with a hot iron, setting forth how he does this "not because they were Spaniards, not because they were castaways, but because they were traitors, thieves, and murderers."

Early in 1568, Menendez gets back to Florida, and one fancies that one would not like to have been the body-servant of that same adelantado when he learned what De Gourgues had done in his absence, and how the latter was now gone back to France, quite out of his reach. Menendez thereupon turns his attention towards converting the country to his religion, but the inhabitants do not seem to appreciate its sublimity. It is stated that in one

place four priests succeeded in baptizing seven people in one year; but three of them were dying, and the other four were children. The Indians, however, if they refuse Menendez's precepts, certainly accept his practice; for one of them, pretending to be converted, manages to get nine or ten priests on a religious errand away up into the Chesapeake country, and there does to them what the grace of his god directs—to wit, plays traitor and gets the whole party (except one who is kept captive) massacred incontinently. In truth, these friars do not seem to have ingratiated themselves with the Indians; and in the year 1578 the son of the chief of Guale organized a very bloody crusade against them especially. At Tolomato (an Indian suburb of St. Augustine), in the night, he kills Father Corpa; at Topiqui, another suburb, he finds Father Rodriguez, yields to the good father's entreaties that he may say mass before he dies, hears him say it, then kills him; at Assapo, kills Father Auñon and Father Badazoz; waylays Father Velacola, who is trying to escape from them, and kills him; carries off Father Davila into captivity (this Father Davila is twice saved from a cruel death during this captivity by Indian women); and finally gives over after being repulsed at the mission on San Pedro Island.

Meantime, in 1586, Sir Francis Drake has made a landing at St. Augustine, scared everybody away from the fort, captured a couple of thousand pounds of money in the same, and pillaged and burnt the town. Some years later the priests got on better, and by the year 1618 had established twenty missions at various points, and begun to see some fruit springing from their blood and toil. About this time they had printed a catechism in the Timuqua (Tomoka) language, a copy of which was seen by Mr. Buckingham Smith some years ago in Europe.

In 1638 the Appalachee Indians attacked St. Augustine, but were repulsed, with the loss of many captives, who were put to work on the fortifications, and kept at it, with their descendants, for sixty years together. The buccaneers, however, were more successful, and in 1665, Captain John Davis, a pirate, pillaged the town.

And then followed wars and troubles, wars and troubles, until, finally, the cession of the State of Florida to the United States in 1821 gave the people rest from that long battledoor-life during which they had been bandied about from king to king.

That portion of the town near the fort is known as the Minorcan quarter, and is inhabited by persons—mostly sailors and fishermen—who are descendants of the colonists brought over by Dr. Turnbull to New Smyrna in 1767. These colonists were originally introduced to engage in the culture of indigo, mainly near New Smyrna, on the Halifax River, some sixty miles south of St. Augustine; but after working for eight or nine years, they disagreed with their employers, caused their contracts to be rescinded by the courts, and moved up to St. Augustine, where lands were assigned them.

The town has a resident population of about two thousand, but is swelled during the winter by probably six to ten thousand visitors. These were formerly landed by the St. Johns steamboats at Picolata, and thence transferred by stage to St. Augustine; but this cumbrous method gave way to the demands of the increasing travel, and a tramway was then constructed to Tocoi, a landing on the St. Johns only fifteen miles distant, over which travelers were brought in horse-cars. In its turn the tramway has now given place to a railway, and a neat little locomotive pulls the train across the barren pine-flats that lie between St. Augustine and the river.

There are here a telegraph-office; post-office; a public library and reading-room, open to strangers, located in the rear portion of the post-office building on the Plaza; Catholic, Episcopal, Presbyterian, and Methodist churches; and a colored Baptist church.

Most consumptives, particularly those who have passed the earlier stage of the disease, are said to find the air of St. Augustine too "strong" in midwinter, but to enjoy its climate greatly in April and May. There are those, however, who have found benefit here during the winter; and it must be said that the needs of consumptives vary so much with the particular temperament and idiosyncratic condition of each patient that no certain prophecy, within the limits of climates at all suitable for consumptives, can be made beforehand.

St. Augustine is much resorted to by asthmatics: one of these has found the North Beach so pleasant that he has built a dwelling on it; and the visitor will discover many charming residences recently erected in various parts of the city by persons from the North seeking health.

The mean temperature of St. Augustine, calculated upon twenty years' readings of the thermometer, is—for spring, 68.54° Fahrenheit; for summer, 80.27°; for autumn, 71.73; and for winter, 58.08°. This would seem authoritatively to show a charming temperature; and the temperature *is* charming, except when the northeast wind blows in the winter. This is the wind that sets everybody to swearing at his coffee of a morning, to calling for his hotel-bill, and to howling in right Carlylese at humanity in general. It is not severe intrinsically: people here always want to kick a thermometer when they look at it during a nor'-easter and find it only about fifty-five or sixty, whereas they had every just ground for expecting any reasonable

thermometer to show at least ten degrees below zero. The truth is, there is a sense of imposition about this wind which poisons its edge: one feels that one has rights, that this is Florida, and that the infernal thing is the very malignity of pure aerial persecution. It blows as if it had gone out of its way to do it; and with a grin.

Let, however, but a mere twitch of the compass happen—let but the east wind blow—and straightway the world is amiable again. For here the east wind, of such maleficent reputation in the rest of the world, redeems all its brethren. It is bland as a baby's breath: it is, indeed, the Gulf Stream's baby. And if it breathed always as it does on the day of this present writing—a sweet and saintly wind that is more soothing than a calm could be —one finds no difficulty in believing that in the course of a few years the entire population of the earth and of the heavens above the earth and of the waters beneath the earth would be settled in and around this quaint, romantic, straggling, dear and dearer-growing city of St. Augustine.

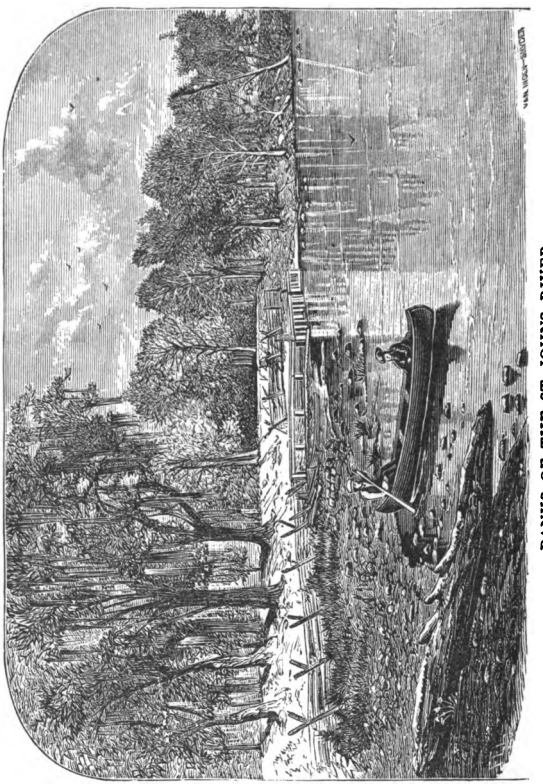
CHAPTER IV.

JACKSONVILLE IN JANUARY.

JACKSONVILLE and St. Augustine are two cities not fifty miles apart; but the difference between them is just the distance from the nineteenth century to the sixteenth. In truth, if you take them as they are herein described, the one in January and the other in April, nothing can seem more appropriate than their names; for the former strikes you with all the vim of Andrew Jackson, after whom it is called, while about the latter you cannot fail to find a flavor of saintly contemplation which seems to breathe from out the ancient name of the good old father whom Menendez selected for its patron saint.

Jacksonville not only belongs to the nineteenth century, but practically to the last ten years of that; for previous to the war between the States it was a comparatively insignificant town, and even after the war, in the year 1866, I am informed that a careful census made under the auspices of the Freedman's Bureau revealed but about seventeen hundred inhabitants in it, a majority of whom are said to have been negroes drawing their main subsistence from the charities of the nation. The resident population is now between twelve and fourteen thousand, and this number is largely increased during the winter. It bears all the signs of a city prospering upon the legitimate bases of an admirable commercial location and of an enterprising body of citizens; and in midwinter offers to the Northern visitor a pleasant surprise, which coming after

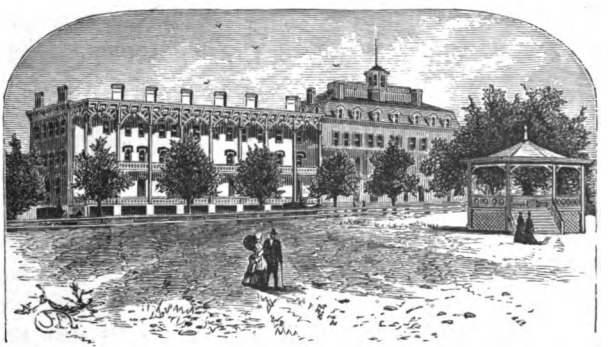
the railway journey through the pines is almost like a romantic adventure after a long stretch of quiet life. The train comes to a stop on the wharf: as one steps from the



BANKS OF THE ST. JOHNS RIVER.

car, one hears a pleasant plash among the lily-pads underneath the platform, and, lifting the eyes at this suggestion of waters, perceives the great placid expanses of the St.

Johns stretching far away to the south and east. A few yards from the railway-station, across Bay Street, the long façade of the "Grand National Hotel" elevates itself; wherefrom, if the traveler's *entrée* be at night, he is like to hear sounds of music coming, through brilliantly-lighted windows opening upon a wide balcony where many people are promenading in the pleasant evening air. Farther back in the town a few hundred yards, situated among fine oaks which border a newly-planted open square, is the St. James Hotel; where the chances are strong that as one peeps through the drawing-room windows on the way to one's room, one will find so many New York



ST. JAMES HOTEL, JACKSONVILLE.

faces and Boston faces and Chicago faces that one does not feel so very far from home after all.

The Grand National and the St. James are open only during the winter; and when we came along back this way in the late spring we found rough planks barring their hospitalities up—a clear case, in fact, of roses shutting and being buds again. Of course, one feels that this

simile needs justification; for a hotel is *primâ facie* not like a rose: but what would you have? This is Florida, and a simile will live vigorously in Florida which would perish outright in your cold carping clime.

The Metropolitan Hotel, a quarter of a mile down-town from the dépôt, between Bay Street and Forsyth, blooms all the year round.

These hotels are really well appointed in all particulars. The Metropolitan has been recently enlarged; and the St. James is probably receiving additions at this writing. Besides the quarters they offer, pleasant abiding-places can be found in the smaller public houses and among private families taking boarders. These minor hostelries of various sorts are said to amount to one hundred in number. The National and St. James charge four dollars a day, the Metropolitan three; the smaller houses from one and a half to three a day, and from ten to twenty dollars a week. As one emerges from one's hotel in the morning, upon those springy plank sidewalks which constitute a sort of strolls-made-easy over a large part of the city, one is immediately struck with the splendid young-water-oaks which border the streets, sometimes completely arching them over. Their foliage is dense, and, what with the brilliance of the sun, the lights and shadows are right Rembrandt. These trees contrast greatly with the pines through which one has been traveling ever since one left Wilmington, and in the midst of great forests of which Jacksonville itself is situated. While we walk under the oaks, let us discuss the pines. Presently the best reason in the world will appear to support the propriety of the association.

Never was a tree more misunderstood, æsthetically, than the pine. As we came down through the great pine-forests which fringe the coasts of North Carolina, South Carolina,

Georgia, and Florida, I frequently heard not only Miss Pertly, but her father also, turn lazily in the car-seat, and yawn out of the window and speak maledictions upon the eternal pines.

Nay, oftentimes the very yeomanry of the pine-countries themselves utter disrespect and irreverence upon these trees: insomuch that "piney-woods" has come to be a phrase conveying a certain idea of inferiority.

But let us consider a moment. Once John Ruskin, in the noble days before his mournful modern insanity, wrote thus:

"The Pine—magnificent! nay, sometimes almost terrible. Other trees, tufting crag or hill, yield to the form and sway of the ground, clothe it with soft compliance, are partly its subjects, partly its flatterers, partly its comforters. But the pine rises in serene resistance, self-contained; nor can I ever without awe stay long under a great Alpine cliff, far from all house or work of men, looking up to its companies of pines, as they stand on the inaccessible juts and perilous ledges of the enormous wall, in quiet multitudes; each like the shadow of the one beside it—upright, fixed, spectral, as troops of ghosts standing on the walls of Hades, not knowing each other, dumb forever. You cannot reach them, cannot cry to them: those trees never heard human voice: they are far above all sound but of the winds. No foot ever stirred fallen leaf of theirs: all comfortless they stand, between the two eternities of the Vacancy and the Rock; yet with such iron will, that the rock itself looks bent and shattered beside them—fragile, weak, inconsistent, compared to their dark energy of delicate life and monotony of enchanted pride—unnumbered, unconquerable. Then note further their perfectness. The impression on most people's minds must have been received more from pictures than reality, so far as I can judge, so ragged they think the pine; whereas its chief character in health is green and full roundness. It stands compact, like one of its own cones, slightly curved on its sides, finished and quaint as a carved tree in some Elizabethan garden; and instead of being wild in expression, forms the softest of all forest scenery, for other trees show their trunks and twisting boughs; but the pine, growing either in luxuriant mass or in happy isolation, allows

no branch to be seen. Summit behind summit rise its pyramidal ranges, or down to the very grass sweep the circlets of its boughs; so that there is nothing but green cone and green carpet. Nor is it only softer, but in one sense more cheerful than any other foliage, for it casts only a pyramidal shadow. Lowland forest arches overhead, and checkers the ground with darkness; but the pine, growing in scattered groups, leaves the glades between emerald bright. Its gloom is all its own; narrowing into the sky, it lets the sunshine strike down to the dew."

And only hear the same John Ruskin commenting on this passage of his own after many years: "Almost the only pleasure I have myself in re-reading my old books, is my sense of having at least done justice to the Pine."

But—not to interfere in the least with such slender solace—this "justice" is, after all, only justice to the pines of the mountains; the pines of the plains still remain in disgrace. It is time to break another lance for them.

The pines of the plains are inexplicably oppressive to most people. Can it be for the same reason that a powerful sermon makes a sinner feel uncomfortable? For indeed these pines always preach. They are religion carven into trunks and branches and cones. All the similes they suggest are religious. You shall hear the school-boy and the poet alike picturing them as solemn priests, or as the stately pillars of a temple; and the most heedless ear finds organ-tones in the singing of the winds through their multitudinous leaves. Solemnities, mysteries, time, death, eternity, birth, life, sex, faith, the bottoms of oceans, the individualities of plants and stones, the affinities of atoms, the realities of stars; why does a thing weigh? is gravity a kind of love? may we not all be —we men of the earth—but as animalcules in a drop of water *quoad* some higher race of beings? is not the sky,

then, perhaps only the outer film of our little globule? why does a marble continue to move after your thumb has ceased to push it? cannot really two things be in the same place at the same time? in infinite space can there be any phenomena corresponding to our ideas of place and direction? will that fox-squirrel live after death? why does a familiar word sound wholly strange and unmeaning after one repeats it several times over to oneself? what is the meaning of the Tower of Babel? why do not our dead friends tell us The Secret if they are still alive? what time of day will I die? what superior chemistry to man's is this within the pine-tree that out of water and dirt manufactures rosin and leaves and complicated cones? how does the root of a pine know potash from silex? what a marvel, to think that many of these steadfast tall figures will presently be converted into ship-spars, and perhaps this very royal pine against which I am leaning will in a few months be advancing over the sea as the mainmast of a great ship, and swaying and bending from side to side in colossal arcs between the sky and the water! is not Herbert Spencer a man drunk with facts, as Spinoza was said to be intoxicated with God? is it possible that the pine-tree feels the wounds and scarifications of its trunk? if it did feel, would it not have a mouth or some organ for expression? what determined the precise beveling of the edge of this pine-needle, and that there should be here eleven in a row and there thirteen? did God actually ever walk in the cool of the day? what is the proportion of strings to reeds in the orchestras of Heaven? what does Beethoven think of his symphonies now? how will the world be reinstated in Belief? will God write another Bible? is not nature the everlasting word? do the pine-trees say anything but God, God, always God? —these things vaguely follow each other through one's

mind when one is under the pines, with no more law, or at any rate no more apparent law, than the seeming-whimsical fugue of the winds through the pine-tops.

As for the hill-pines, they stand upon the corrugations of the earth's brow. They represent pain, spasms, paroxysms, desperations. The pines of the plain have higher meanings if lower sites; theirs is the unwrinkled forehead of a tranquil globe, they signify the mystery of that repose that comes only from tested power and seasoned strength —a grandeur of tranquillity which is as much greater than the grandeur of cataclysms as Chaucer is greater than Byron, as Beethoven is greater than Berlioz, as Lee's manhood is greater than Napoleon's.

A subtle sense of multitude begins to reveal itself to him who stands among the great pine-forests. We are accustomed to speak of the multitude of the stars: the astronomers say there are only about six thousand of them visible on a clear night to the naked eye; but six thousand pines! Six thousand is only the insignificant content of a few acres: here are thousands of square miles of them. When one looks from this great trunk to that, from that to another, to another, to a thousand, as they stand, distinct units, ranged in circles, in squares, in rhomboid figures, in endless aisles, in myriad-fold ranks, almost making a continuity by mere multitude, yet individual and countable if one only had eternity to count them in —it is as if one saw infinity, and a noise goes about through the high pine-needles which seems to formulate itself into that lovely Latin song:

Infinitas! Infinitas!
Hic mundus est infinitas!
Infinitas et totus est,
(Nam mente nunquam absolveris;)
Infinitas et illius

Pars quælibet, partisque pars.
Quod tangis est infinitas;
Quod cernis est infinitas;
Quod non vides corpusculum,
Sed mente sola concipis,
Corpusculi et corpusculum,
Hujusque pars corpusculi,
Partisque pars, hujusque pars,
In hacque parte quicquid est,
Infinitatem continet.
* * * * *
Quiesce mens, et limites
In orbe cessa quærere.
Quod quæris in te reperis:
In mente sunt, in mente sunt,
Hi, quos requiris, termini;
A rebus absunt limites,
In hisce tantum infinitas,
Infinitas! Infinitas!

A singular phenomenon is taking place all along this belt of pines which now borders the Southern States like the ciliary fringes along the lip of some prodigious sea-shell. The yellow pine does not seem to reproduce itself, except under very rare conditions: when the forests of it are cut away for timber, there springs up in its place not a forest of young pines, but a forest of young oaks! This circumstance has baffled the scientific knowledge of our time, so far as I know. The traveler on the way to Florida can see many very striking instances of it. Just after he leaves Wilmington, N. C., for example, going southward, let him look from the car-window on either side. As far as the eye can reach, in many places, a thick forest of young oaks ("black-jacks") about four to five feet in height has sprung up. Whence came the acorns from which each of these young oaks sprang? There is not an old oak within miles; and before these

young oaks grew, the whole surface of the land hereabout was covered with an unbroken growth of pines, which have now been wholly cut away, either in the course of clearing land for agricultural purposes, or of the manufacture of turpentine and lumber.

Whence—one may ask again in astonishment, as one's eye ranges over miles and miles of these vigorous oak-saplings—whence came the simultaneous sowing which has resulted in this plantation of trees whose tops are as level as wheat-heads?

Whatever may be its explanation, the phenomenon is visible to the traveler at many spots along the whole route from Weldon to Jacksonville, through Wilmington, Columbia (or Charleston), Augusta, and Savannah. Its effect has been already to revolutionize the appearance, and incidentally the pursuits, of the country in which it is taking place. For the concomitants of pine-growth are very different from those of the oak. The civilization of the pines is that of the timber-cutter and the turpentine-distiller: to-day they set up their shanties and "stills," quickly they cut down or exhaust the trees, to-morrow they are gone, leaving a desolate and lonesome land. But presently the young oaks, as I have said, begin to clothe the nakedness of the earth—their thicker foliage shades it more than the pine, their leaves fertilize it more richly; then comes the farmer, who substitutes the civilization of corn and cotton for that of timber and turpentine, and erects a permanent house in lieu of the ephemeral shanties.

The road from Weldon to Wilmington presents a cheerful example of this transforming process. Within the recollection of this writer—who is not an old man—it was, during the days of the lumber-men and the "still"-men, a desolate and barren route such as one could not

remember without a dismal feeling; the pines—majestic enough when left alone—were all stumped and scarified, and there was little sign of human life; but it is now dotted with comparatively thriving towns, at which much more traffic is carried on than one unused to the "ways" of these people would ever imagine, and I am told that something like seventy-five thousand bales of cotton were produced last season in this single section.

Of course this process goes on more rapidly in the immediate neighborhood of the lines of railway than elsewhere; and it will not be long, one fancies, before Miss Pertly will travel from Portsmouth, Virginia, to Jacksonville through a level park of oaks.

As a final clincher, in the discussion of pines, one may ask Miss Pertly if she did not go into raptures over those violin-variations of Brahm's (*e.g.*), which Theodore Thomas's orchestra played so divinely last winter; and—for of course she did—what would these variations—or indeed anything else the orchestra played—have been without the rosin on those broad fiddle bows?

There is no escape for the young lady,—except by declaring she was not aware that rosin came from pine-trees. Of course she could not be expected to know that besides rosin these pines contain celluline, lignin, starch, turpentine, tar, zylol, phosphoric acid, phosphate of lime, phosphate of magnesia, silicic acid, silicate of potash, carbonate of potash, sulphate of potash, chloride of sodium, sulphate of soda, carbonate of lime, and carbonate of magnesia.

—At this hour of the morning in Jacksonville everybody is eating his ante-breakfast oranges, with as much vigor as if he saw himself growing suddenly wrinkled and flaccid, like the gods and goddesses in Wagner's *Rheingold* when they had in their agitation forgotten to eat their daily allow-

ance of the golden fruit which grew in Freya's garden and which was the necessary condition of their immortal youth. In truth, to eat one's oranges with some such thought as this would not be wholly absurd. These old metaphors which by a curious intersection of events and of lines of thought converge to a point here in Florida—the metaphors of Freya's youth-conferring fruit, of De Leon's youth-conferring Spring: are they not evolved out of a certain vague sense in the bottom of our hearts that trees and waters—Nature—are full of healing, and that the man will never die who wisely and lovingly reaches forth his hand and plucks nature as a fruit, and eats it and digests it and incorporates it with himself?

But the sight of your dripping fingers reminds one that while there are few pleasanter things than the eating of an orange, yet it is also in the order of nature that difficulty and delight—which are essentially birds of a feather—should fly together, and there are therefore few harder things than the eating of an orange dry-fingered. The stickiness of orange-juice seems somehow at once one of the most unavoidable and most disagreeable of the earthly bads that hang by the goods; and one can never help regretting that neither Mr. George Lewes in his Problems of Life and Mind, nor Mr. Greg in his Rocks Ahead, has thought fit to treat the question How to eat an orange.

Yet it can be done with great daintiness, if the proper appliances are at hand. By Appliances I mean a lady. It is notorious that women can manage an orange with their delicately-tactile fingers to a marvel. There is a tradition in Jacksonville of one who, with kid gloves on her hands, kept the same wholly unspotted during the entire process of peeling, dividing, and eating. However that may be, it is certainly an æsthetic delight to see

ten white lady fingers deftly coaxing apart the juicy orange-sectors. That *is* apples of gold in pictures of silver.

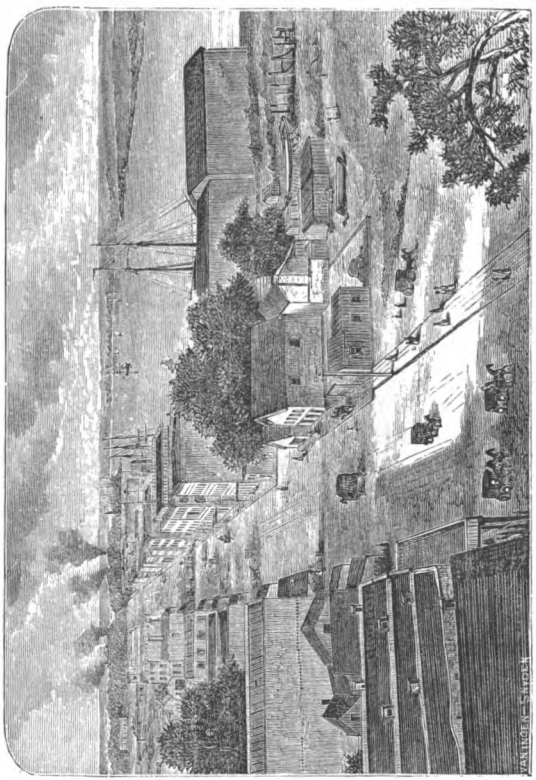
It has been suggested that the reason of this superior skill is longer experience: woman, though younger than man, commenced to handle fruit sooner. But it is a suggestion that I make a point of loudly and ostentatiously scorning; for, as has been said, the solution of the problem of How to eat an orange depends upon being on good terms with Woman.

First get your orange: and you will at least produce an implication of your connoisseurship in the mind of the dealer if, in doing so, you ask for Indian River oranges, which many persons hold to be the typic fruit. Then get your sister or any available womankind—other men's sisters beside your own might do—to peel your orange, divide it into sectors, and hand you these, each lying on its detached arc of peel as on a small salver. The rest, as the old play says, can be done without book.

Thus the question how to eat an orange without stickiness resolves itself, in the last analysis, into a question of morals and of behavior; into, in other words, the question How to be very good and amiable to your womankind before breakfast; insomuch that one may look to see the time—coincident with the bearing-time of the millions of young orange-trees which the recent activities of Florida have set growing—when the orange shall transform the bearish husbands of the whole land into knightly lovers, and when Growly's manner to Mrs. G. before breakfast shall be as suave and bland as is the juice of the fruit itself—like the dyer's hand, subdued to what it works in.

—By this time, no matter in what direction we may have started, we will have arrived in Bay Street, which runs parallel with and next to the river. It is the main business

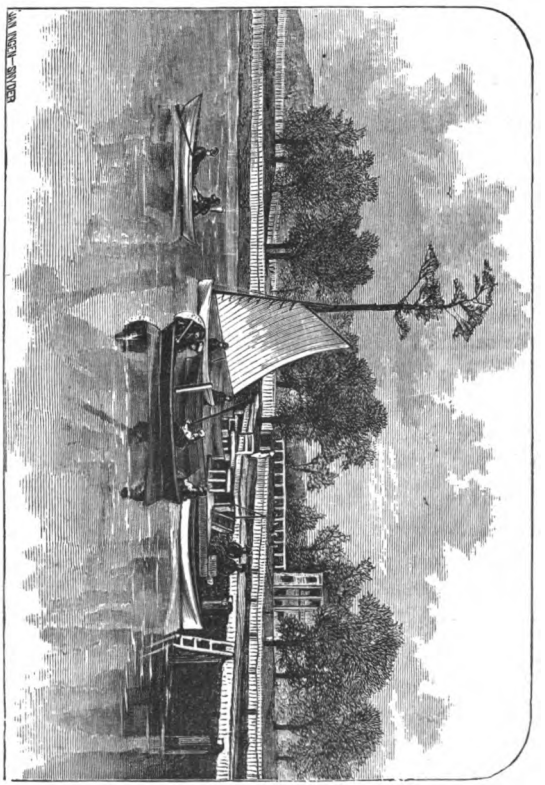
street of the city, and is a lively enough thoroughfare of a winter's morning. The curious visitors are trooping



DOWN BAY STREET.

everywhere along the sidewalks—to the post-office, to the fruit-stores, to the palmetto-braiders', to the curiosity-shops, to the wharf for a sailboat, to the fizzing steamboats for a trip up the St. Johns or the Ocklawaha. The mer-

chants and shop-keepers are all busy. Along with the noises of traffic comes the hum of the lumber-mills; fitly



BOATING SCENE ON THE S.T. JOHNS RIVER.

enough, for the latter are said to conduce no little to the prosperity of the former, in bringing about cheap freights. The three-masted schooners that you see lying at the wharves there, waiting for cargoes of lumber, will trans-

port heavy goods at almost any price when they come here, rather than sail in ballast.

The visitor strolling down this street soon discovers that not an inconsiderable item in the commerce of Jacksonville is the trade in "Florida curiosities," to which he will find several establishments devoted. These curiosities are sea-beans, alligators' teeth, plumes of herons' and curlews' feathers, cranes'-wings, angel-fish, mangrove and orange walking-canes, coral branches, coquina-figures, and many others. The sea-beans are interesting in more particulars than one. For example, how do they get on the eastern coast of Florida? After extensive inquiry, I was unable to find any person who had ever seen them* growing on the Florida shore; and the universal testimony of the sailors I met was that they were washed over from vines on the coasts of the West Indies. But, if Maury's idea of the Gulf Stream's shape and of its effect upon drift-matter be true, they *could* not be washed over from the West Indies. That author declares that the Gulf Stream is higher in the centre than at its edges, and that a subsidiary current, like rain shed from a roof, runs from the middle to the sides with sufficient force to carry a boat in a lateral direction; for which reason the drift-matter on the eastern edge is not, and cannot be, found on the western. This being so, how could sea-beans, grown in the West Indies—that is, east or south of the Gulf Stream —be washed over to Florida—that is, to shores west or north of it? And, if they do not cross it, what route do they pursue?

There are many varieties of sea-beans, differing greatly in shape and color, from the small round red ones, much

* They are the fruit of a leguminous plant, and drop from their pods into the sea.

affected by some for vest-buttons, through the medium-sized agate ones, which are split and mounted with gold for sleeve-buttons, to the large, perfect heart-shaped ones, of rich lava brown, more than two inches in length. The most beautiful, *me judice*, are those rare ones whose surfaces show a polished similitude of velvety leopard-skins.

The alligators' teeth are made into whistles, watch-charms, and the like. It may be that some poor half-invalid of limited means, but of independent disposition, might find his account at once as to health and purse, by wandering among the numerous small unfrequented streams in lower Florida and making a business of shooting alligators and gathering their teeth; for I heard one of the largest curiosity-dealers in Florida freely offering from four to eight dollars a pound for such teeth, in any quantities, however large or small. I was told that the process of gathering the teeth was simply to shoot the animal, leave the carcass lying for a couple of months, and then revisit it and draw the loosened teeth from their sockets. The variation in price depends upon the size, the large ones bringing much higher prices than the small.

Jacksonville is as it were a city built to order, and many provisions have been made for employing the leisure of its winter visitors. A very good circulating-library is to be found on the northern side of Bay Street, a short distance below the National Hotel, which is open to strangers for borrowing; and a lively news-vender in the same room supplies all the prominent current papers and magazines every morning. A pleasant sort of exchange for visitors is also to be found in the reading-room of Ambler's Bank, farther down Bay Street, on the opposite side. Beyond this, a few doors, is the post-office. At the sign "Boats to let," on the wharf, not far below the

Grand National, one can find pleasant sailboats for hire at prices ranging from seventy-five cents an hour upward.

Several good livery-stables offer first-class turnouts, in the way of saddle-horses, buggies, and carriages; and there are two shell-roads which afford pleasant drives. A very good objective-point for a ride is

MONCRIEF'S SPRING.

This is a mineral spring, not yet analyzed, but said to be of often-tested efficacy in the cure of intermittent fevers and of agues. It lies about four miles from town, near a creek also called Moncrief. There is a tradition—of somewhat filmy basis—that a Jew named Moncrief, who had married an Indian woman, was once murdered by the savages for his money on the banks of this creek and that its name is derived from that event. The spring has been recently taken in charge by a company and many improvements made in its environment. The water is unusually transparent, and is first received in a circular basin twenty feet in diameter. Below this, well-arranged bath-houses, separate for ladies and gentlemen, each sixty feet long by fifteen wide, are being built. A restaurant, bowling-alley, dancing-pavilion, and race-course of a mile in length are also in process of construction. On the way to this spring one passes through the pleasant suburb known as Springfield.

From the high ground here a good view may be obtained of Jacksonville and the river. The hill slopes down to Hogan's Creek, a boundary line of the city. Besides Springfield, the advancing growth of Jacksonville has developed several other named suburbs, such as East Jacksonville, Oakland, Wyoming, La Villa, Brooklyn, Riverside, South Shore, and Alexandria. A small boat

plies between Jacksonville and the three last-named points, running also to Reed's Landing.

IN THE WOODS NEAR JACKSONVILLE.

No traveler of proper sentiments in Jacksonville neglects to have all his womankind furnished with a braided palmetto-hat, trimmed with wild grasses; and this particular writer, with a profound ignorance of all millinery, declares without hesitation that some combinations of these lovely grass-plumes with richly-woven palmetto-plaits form quite the most beautiful coverings he has ever seen on the female head.

Jacksonville not only makes hats of palmettos, it makes champagne of wild oranges; and the drink is said to be

palatable enough. From the refuse lees, after the wine is made, the same chemist extracts a valuable essential oil.

Persons can spend their winters in Jacksonville without interrupting the education of their children, and delicate young people can here enjoy the advantage of the mild climate while pursuing their studies. Notable among the schools are: the Episcopalian Academy of St. Mary's Priory, under the personal supervision of the bishop of the diocese, who resides with his family in the school-building: and the Catholic institution, St. Joseph's Academy, under the charge of the Lady Superior and several Sisters of the order of St. Joseph.

In this connection may also be mentioned the "Conservatory of Music," just inaugurated in Jacksonville, which seems to be a really praiseworthy attempt to organize musical instruction in the city, and which is advertised as under the care of the Bishop of Florida as President, and of a large number of the prominent citizens of the State as Vice-Presidents.

The city has its full quota of churches, Catholic, Episcopal, Presbyterian, Methodist, and Baptist: and possesses all needful telegraph, express, and general ticket-offices, and other the like adjuncts of civilization.

Jacksonville is indeed the main gateway of the State; and while one is here, one will do well to get some general view of the

TRANSPORTATION SYSTEM OF FLORIDA.

The northern breadth of the State is nearly crossed by two railway lines, which are now operated as one, viz.: the "Florida Central," running from Jacksonville, westward, to Lake City, and the "Jacksonville, Pensacola

and Mobile," running from Lake City, farther westward, to Chattahoochee, its present terminus, where the Chattahoochee River and the Flint River unite to form the Apalachicola. The former line passes the important railroad point called Baldwin. The latter goes through Lake City, Live Oak, Madison, Monticello Junction, Tallahassee, and Quincy. It has two branches, one of twenty miles in length, from Tallahassee to St. Marks, on the Gulf Coast; and the other of five miles in length, from Monticello Junction to Monticello. It is intended to terminate at Pensacola, and is now running regularly to Chattahoochee, above named.

The Florida Central is crossed at the above-mentioned Baldwin—twenty miles from Jacksonville—by the railway line of "The Atlantic, Gulf and West India Transit Company." This was formerly known as the Florida Railroad, and extends from Fernandina, in the extreme northeast of the State, to Cedar Keys, on the Gulf Coast, one hundred and fifty-four miles southwest. This road runs through the important point of Gainesville, a good winter resort for consumptives. From Gainesville a tri-weekly stage runs to Tampa, on the Gulf Coast, about one hundred and fifty miles distant, *via* Ocala and Brooksville, which are relay-stations about a day's journey apart. A hack also leaves Gainesville for Newnansville twice a week.

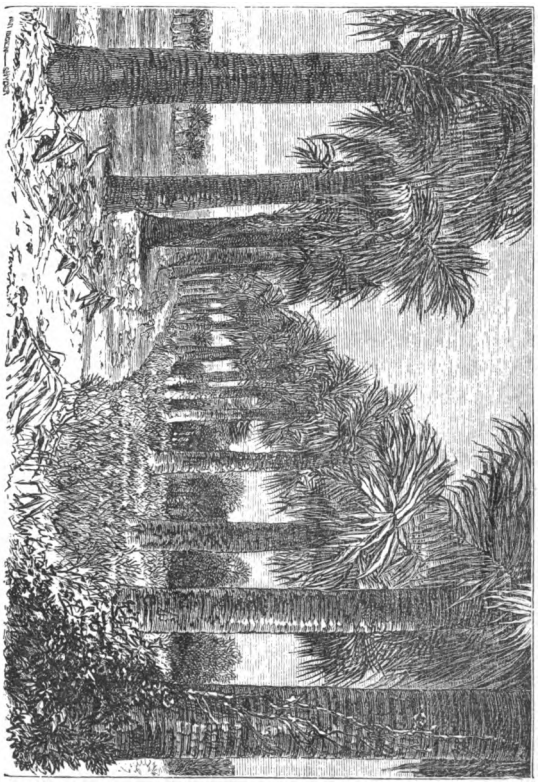
At Live Oak a branch of the "Atlantic and Gulf" Railroad (which runs from Savannah to Albany, Georgia) joins the Jacksonville, Pensacola and Mobile Road. Through trains run twice a day in winter from Savannah to Jacksonville over these roads. The Atlantic and Gulf also brings a through Louisville sleeping-car for Jacksonville daily, receiving it from the Macon and Brunswick Railroad at their crossing-point, Jessup, Georgia.

The "Pensacola and Louisville" Railroad connects Pensacola with the Montgomery and Mobile Road, at Pollard, Alabama. The "St. Johns" Railway runs from Tocoi (on the east bank of the St. Johns River, fifty miles above Jacksonville) to St. Augustine. It is fifteen miles in length, and connects regularly with steamers from Jacksonville plying up the St. Johns.

Returning now to Jacksonville, to begin a similar short *résumé* of the lines of water-transportation within the State of Florida, one finds that place to be the headquarters of a fleet of steamboats of all sorts, shapes, and sizes, plying up the St. Johns. A set of river-steamers make daily trips to Pilatka, seventy-five miles, and to points above as far as to Mellonville and Enterprise, two settlements on opposite banks of Lake Munroe, two hundred and five miles from Jacksonville. From Enterprise a small steamboat makes excursions to Lakes Harney and Jessup, a few miles distant, for the scenery, the fishing, and the shooting. Other steamboats convey the traveler from Jacksonville up the river past the points named to Salt Lake, whence a short drive conveys him to Sand Point, and to Titusville, on Indian River. The little steamboat Pioneer plies from Titusville to Jupiter Inlet, along the great lagoon of Indian River. Still other small steamboats run from Jacksonville up the Ocklawaha River to Silver Spring, *via* Pilatka; and sometimes, on high water, quite up to Leesburg and Okahumpka, or Okahumpkee, the head of Ocklawaha navigation. Pilatka is the headquarters also of a line up the Ocklawaha.

Down the western coast a weekly mail steamer leaves Cedar Keys for Key West, touching at Manatee, Punta Rassa, and Tampa. A weekly steamer from New Orleans also touches at Cedar Keys and Key West, on the way to Havana.

From Cedar Keys a small steamer plies once a week to Suwannee.



PALMETTO AVENUE, ON FORT GEORGE ISLAND.

It is probable also that a steamer will leave Cedar Keys once a week during the winter of 1875–6 for Sarasota Bay, on the Gulf Coast, touching at several minor points which are specified in what is hereinafter said under the head of "The Gulf Coast."

From Fernandina to Jacksonville water-communication is had by ("outside line") the steamers Dictator and City Point, which each leave Charleston once a week, touching at Fernandina and Jacksonville; and by ("inside line") the steamer Lizzie Baker, which leaves Savannah once a week, touching at Brunswick, Georgia, Fernandina and Jacksonville; both these lines extending up the St. Johns to Pilatka and intervening river-landings.

The details of all these matters will be found in the guide-book which constitutes the latter portion of this volume.

Jacksonville is in latitude 30° 19′ 38″ N., and longitude 81° 30′ 7″ W. Its climate and general meteorology are fully set forth in a subsequent chapter on The Climate of Florida. Twenty-five miles to the eastward is the mouth of the St. Johns. Here are two proposed places of resort: one to the northward, on Fort George Island, and one to the southward. at "Mayport," on the mainland.

But Jacksonville, although the main gate to Florida, is not the only one. Lying on the northern end of Amelia Island, at the extreme northeastern portion of the State, is the important seaport of

FERNANDINA.

The natural advantages of this now flourishing little city were known for some time before they were permanently brought into practical use. The bar gives about nineteen feet of water reliably to incoming vessels; the harbor is exceedingly capacious and securely land-locked; an inside passage between the islands lying along the Georgia shore and the mainland affords a quiet waterway to Savannah; and a similar passage between Amelia Island and the Florida coast extends to within a few miles

of the mouth of the St. Johns, thus facilitating water-communication with Jacksonville. The completion of the Florida Railroad (now the "Atlantic Gulf and West India Transit Company's Railway") connected Fernandina with Cedar Keys, on the Gulf of Mexico, and made it the shipping-point for Gulf products, as well as for the lumber and turpentine staples of the great pine-forests through which this railroad runs. The raising of early vegetables for the Northern market can, it is said, be carried on in this neighborhood with unusual advantages, arising from the facilities for transportation afforded by a weekly line of steamers direct to New York, a semi-weekly line to Charleston, and a weekly line to Savannah, besides the daily railroad communication with Savannah. To strangers, and, indeed, to many of the "natives" of Florida, the sandy soils which are found about Fernandina would not seem to give much encouragement to the raising of vegetables, or of anything else. As they say in the South, the land "looks like you could not raise a row on it." But careful and extensive inquiry appears to establish that these white sands, not only of Fernandina, but of a great deal of the other Florida territory, have in them many of the fecundities which one usually associates with black soils. And to this conclusion have come all who have investigated the facts. "When I first came here, nine years ago," said the venerable Solon Robinson in the Convention of the Florida Fruit-Growers, last January, "and saw the sandy soil, . . . I was inclined to be disgusted. The first thing that convinced me the soil was fertile was the abundance of weeds growing in the white sand. Then I saw large trees growing at the rate of an inch a year, and I said to myself, 'There is *something* in this sand not in my philosophy.'"

Said ex-Governor Reed in the same Convention, "The

truth is, we do not appreciate the productive capacity and value of our soil. . . . When I first landed on Amelia Island (Fernandina) I thought its sands barren and valueless. But I noticed that when the drifting sand formed a lodgment for a season, it was immediately overgrown by a rank vegetation," etc.

Fernandina has now a population of about three thousand; two hotels, the Riddell House and the Norwood House, besides a number of boarding-houses; seven churches, and a newspaper. A general idea of its climate may be obtained from the remarks on the climate of Florida in the chapter hereinafter devoted to that subject.

Amelia Island figures in the earlier chronicles of Florida history as the province of Guale. The dreadful crusade —a crusade *en revers*—of that bloody Indian, the son of the chief of Guale, in 1598, against the priests at St. Augustine and other places, is recounted in the historical sketch hereinbefore given. Fernandina was a port of some resort during the Spanish occupation, and came into considerable prominence during the war of 1812, when it was neutral as between the United States and Great Britain. It was also brought into notice in the year 1812 as the base of operations of a very absurd though finally bloody attempt by a party of "patriots" from near the borders of Georgia and Florida to seize and occupy the latter State. The United States had for its own purposes placed nine gunboats in the harbor of Fernandina; with the co-operation of these, the "patriots" under Colonel Ashley compelled the Spanish garrison of the town to surrender it, and then proceeded to march against St. Augustine. It was not long, however, before they retired, having effected nothing more than the massacre of several of their men by the negroes of St. Augustine, and the

imposition upon the United States Government of a very difficult and delicate matter to explain to the Spaniards.

A shell road leads out of Fernandina to its celebrated beach, where for fifteen or more miles the visitor can drive over one of the smoothest roads in the world.

Dungeness (called hereabout Dun-je-néss), on Cumberland Island, separated by the inlet only from Amelia Island, is an interesting objective-point for an excursion. Here is the seat of General Nathaniel Greene, upon the estate which was presented him by the grateful State of Georgia in recognition of his Revolutionary services. The olives, the gardens, the great oaks, the trailing mosses, are well worth seeing; and the grave of Henry Lee, the father of Robert E. Lee—him who was called "Light-Horse Harry"—lies some half-mile from the house, speaking many eloquent things there, betwixt the sea and the woods, to every man who loves knightly honor and manliness.

CHAPTER V.

THE GULF COAST.

FLORIDA possesses a coast line of about twelve hundred miles, of which greatly the larger half is washed by the Gulf of Mexico. There seems to be literally no end to the oysters, the fish, the sea-birds, the shells, the turtles, along these waters; and the shores and islands abound in the bear, deer, turkey, opossum and raccoon, and in smaller game. The most marvelous stories are told—ceasing to seem marvelous when one has really seen something of the multitudinous piscine life of these parts—of the hosts of the fish, even to the stoppage of vessels that have sailed into shoals of them. For mere variety these fish are wonderful. Here are the black-fish, white-fish, yellow bream, blue bream, silver bream, grouper, porgy, barracooter, trout, perch, eel, mullet, herring, flounder, gar, sheep-head, bass, grunt, yellow-tail, jew-fish, king-fish, pompino, amber-fish, angel-fish, red-snapper, drum, whiting, sturgeon, whipperee (whip-jack), skate, and one knows not how many more. Here, too, one can follow that most sardonic of all sports, turtle-catching. You walk along the lovely beach at night, when the turtle has come up from the waters to deposit her hundreds of eggs; you see one: you advance, and coolly turn it over on its back,—and that is all. You leave it, leisurely pursue your stroll, turn another on its back, leave it, and so on, till you are tired. When you come again on the morrow,

there they are. To walk up to a turtle of a morning, after having treated him in this manner overnight, and look steadily in the eye thereof without certain titillating sensations at once in your diaphragm (where you laugh) and in your conscience (where you do not laugh), requires more grim rigidity of the former and more supple elasticity of the latter than *some* people possess.

Nor can there be anything in life—considered without reference to your own act in making it so—more preposterous than an upturned turtle, lying, poor innocent, on its mildly-convex back, with its mildly-white obverse staring blearly at heaven, and its flippers wriggling in flabby helplessness toward the four quarters of the earth. It seems the very self-assertion of feeble wish-wash; it looks like mere Zero sick. The beholder's mind appears to resolve itself into a tepid pool of vapid lymph, in the shallow depths whereof one perceives slowly drowning out of sight any possible faith in the ancient fable which, through the sinew-strung tortoise-shell, connects the divine art of music with these inane creatures.

Yet there have been men who found pathos in this same situation of the turtle. In the year 1682 one "T. A.,"* "Clerk on board his Majestie's ship The Richmond," among many other sprightly lucubrations, wrote from these Western parts of the world an account of the turtle, wherein he says: "Before they" (the butchers) "kill them" (the turtles) "they are laid on their Backs, where, hopeless of Relief, as if sensible of their future Condition, for some hours they mourn out their Funerals, the tears plentifully flowing from their eyes, accompanied with passionate sobs and sighs, in my Judgment nothing more like than such who are surrounded and overwhelmed

* Supposed by some to have been Thomas Ashe.

with Troubles, Cares, and Griefs, which raise in strangers both Pity and Compassion."

Somewhat less overdrawn is T. A.'s description of another and better authenticated peculiarity of the turtle. "This I am assured of," says he, "that after it's cut to pieces, it retains a sensation of Life three times longer than any known creature in the Creation. . . . Compleatly six hours after the Butcher has cut them up and into pieces mangled their bodies, I have seen the Callope* when going to be seasoned, with pieces of their Flesh ready to cut into Steaks, vehemently contract with great Reluctancy, rise against the Knife, and sometimes the whole mass of Flesh in a visible Tremulation and Concussion: to him who first sees it seems strange and admirable;" a tenacity of life which T. A. doubtless connected in his own mind with a certain superfluity of vital organs possessed by the turtle: he records that "it has 3 Hearts."

T. A. gives also a lively description of the Manatee, or Sea-Cow, of these regions; from which, it may be remarked in passing, Manatee County—one of the Gulf Coast counties of Florida with a charming climate—derives its name. "The Manacy, or Sea-Cow," he declares to be "a Fish of an extraordinary Bigness, sometimes of a 1000 pound Weight: it feeds on the Banks and Shoar Sides on the grassy Herbage, like a Tortoise; but that which is more wonderful of this Creature is that she gives her young ones suck from her Duggs; she is indeed like a Cow, of a green Colour, her Flesh esteemed by some the most delicate in the world. It hath a Stone in the Head, which is a gallant Remedy against the Pains and Dolours of the Stone; . . . and its Skin makes excellent whips for Horses, if prudently used, which are very ser-

* *Callipee:* a part of the flesh.

viceable and lasting; with one of these Manaty straps I have seen a bar of iron cut and dented."

To the tourist and sportsman desiring a mild flavor of adventure, this portion of Florida offers a charming field; and any invalid who is able to endure the comparative rudeness of this manner of life cannot but find benefit from the liberal air and genial appetites which range together along these quiet shores.

It is probable that the air here is somewhat milder (getting more so, of course, the farther down one goes) and dryer than on the eastern coast in midwinter; and it is to be greatly hoped that increased facilities for reaching these favorable regions will soon render them practicable to those who now find the journey too trying. It is in contemplation to send a weekly steamer from Cedar Keys, touching at all the points which are hereinafter named in detail, as far down as to Sarasota Bay, at which latter location some Northern gentlemen have projected a colony. Information as to this steamer can be obtained by letter addressed to Captain A. E. Willard, at Cedar Keys, Florida,—of whom more presently.

At the extreme northwest end of the Gulf Coast is the city of Pensacola, on Pensacola Bay, ten miles inland from the Gulf. It is the county-site of Escambia County, and has about four thousand inhabitants. It is noted for its bar which admits vessels of twenty-two feet always and of twenty-four feet at high tide, and for the breadth and directness of the harbor-entrance. Seven miles down the bay is the United States Navy-yard, with its two settlements, Woolsey and Warrington. The channel is defended by Fort Barrancas—which is on the mainland, a mile below the navy-yard—and Fort Pickens, on Santa Rosa Island. The latter, however, is little used at present.

The main activity of Pensacola is in the shipment of

lumber, which is sent from here to the West Indies, South America, home ports, and other parts of the world. During the year ending September 30th, 1873, two hundred and fifty-nine vessels cleared here for various ports, carrying more than a hundred million feet of lumber and timber. There are here also small importations of liquors and cigars: and occasionally coal and salt are brought by ships coming for lumber.

The completion of the Pensacola and Louisville Railroad, running from Pensacola forty-four miles to Pensacola Junction, on the Mobile and Montgomery Railroad, has given the city a start, and it bids fair to become an important place.

The Perdido Railroad is a short line of nine miles, connecting Pensacola Bay with the large lumber establishments of Millview, on Perdido Bay.

During the old wars between the French, Spanish, and English, Pensacola was the scene of several animated contests. These are mentioned more particularly in the historical chapter of this book.

Cedar Keys, the western terminus of the Florida (or Atlantic Gulf and West India Company's) Railway, is a town of about five hundred inhabitants, in Levy County, one hundred and fifty-four miles from Fernandina. It is situated immediately on the Gulf, being built upon two "Keys" (from the Spanish *Cayo*, French *Quais;* same word as English, "Quay"), one of which is called Way Key, the other Atsena Otie. Between these a small sail ferry-boat plies, which you call to you—of course every one knows that a ferry-boat is always on the other side—by the hoisting of a flag on the pole which stands at the end of the wharf.

At Cedar Keys, and from there on in an increasing degree to the southward as one reaches the places herein-

after named, one finds that one has come into a country differing in many particulars from any part of Florida yet mentioned—a country of cedars, of sponges, of corals, of strange fish, of shells multitudinous in shape and tint, of hundreds of quiet bays whose circular waters lie embraced in the curves of their white beaches as the old moon in the cusps of the new. There is a certain large blandness in the atmosphere, a sense of far-awayness in the wide water-stretches, an indefinable feeling of withdrawal from harsh life, that give to this suave region, as compared with others, the proportion which mild dreams bear to realities. It is a sort of Arabian Nights vaguely diffused and beaten out into long, glittering, sleepy expanses, and the waters presently cease to be waters and seem only great level enchantments-that-shine.

The main commerce of Cedar Keys is in cedar and pine wood, turtles, sponges, and fish.

These turtles are caught by the fishermen and kept in turtle-"crawls," or inclosures staked off in the water, until ready for shipment; and I am told that the turtle-crawl occupies much the same relation in each private household along the Gulf Coast that the chicken-coop does to inland dwellers.

The sponging-grounds are about sixty miles in a southerly direction off Cedar Keys. The fishermen bring in their catch of sponges to Cedar Keys, where they are baled and shipped to market. Much of the product of these grounds, however, goes to Key West, for lack of capital at Cedar Keys.

There are two places of accommodation at Cedar Keys, one called the Gulf House, the other the Exchange. The accommodations at these are somewhat primitive; a fact which is to be particularly regretted, for the reason that this would unquestionably be a pleasant headquarters

for the most delightful excursions down the Gulf Coast if it were otherwise. The writer mentions it with genuine pain, because the proprietor of the house at which he stopped seemed anxious to do all in his power to serve his guests, and there can be nothing but thanks for his intentions; but with his materials, it was quite impossible to accomplish much. Nevertheless, tourists—particularly those fond of fishing and hunting—and invalids bent on the open air and rude life cure, which can be pursued with great advantage farther down the coast, may come by this route with no serious discomfort; and all that is meant by the strictures above is simply to protect oneself against the just reprehension of the daintier classes of pleasure-seekers and delicate invalids who might be tempted by the charms—which are certainly great—of this portion of Florida to come to Cedar Keys for a prolonged stay. Possibly, too, better hotel-accommodations may be offered during the winter of 1875–6. A good hotel building was commenced a short time ago, on the shell mound which rises abruptly at one end of the town, but was blown down while in the frame, leaving the parties unable to proceed.

There is indeed at "Ford's"—the next station to Cedar Keys on the railway, going inland—a large house, which, I am told, was built by a gentleman who came there three or four years ago, seemingly far gone with consumption, but who has recovered his health and gone largely into the business of market-gardening. Here one could apparently be well lodged and fed: and it is but a few miles by rail to the Gulf.

The objective-points along the coast below Cedar Keys are, first, the Crystal River and Hamosassa settlements, Bayport, Anclote River, Clear Water Harbor, Law's Store (John's Pass), McMullen's Store, Philippi's Grove (a noted orange-grove), and Point Penales. In the course

down to this point the mouths of the Withlacoochee, Crystal, Hamosassa, Chessawhiska, and Wecawachee (*alias* Wecaiwoochee) Rivers will have been passed, the last four of which are clear and splendid streams, formed by springs which break out ten or twelve miles from the coast. They are all set with numerous islands at their debouchments into the Gulf. One of the largest saw-mills in Florida is situated at the mouth of the Withlacoochee, and is supplied with material from the timber floated down that stream. There is an inside passage from Cedar Keys to this point: and one of the most important projects, it would seem, that has been mooted in Florida, is one to connect the Withlacoochee River with the Ocklawaha by a canal, for which a charter has been already obtained by Colonel Hart, of Pilatka. An astonishingly small amount of labor would accomplish this end, and would thus render practicable a clear water-way across the entire peninsula of Florida from the Gulf to the Atlantic. Lake Panasofka, which has the Withlacoochee for its outlet into the Gulf, is but about thirteen miles from Lake Harris, whose outlet is the Ocklawaha, flowing into the St. Johns. Thus this new water-way would be: from the Gulf of Mexico, up the Withlacoochee, *via* Lakes Panasofka, Okohumpka, and Harris, into the Ocklawaha, thence into the St. Johns, to the Atlantic Ocean.

The enumeration above has brought us down to Tampa, the county-site of Hillsborough County, lying at the head of Tampa Bay, just below the twenty-eighth parallel of north latitude. Here is a noble harbor, where De Soto landed in 1539, at the commencement of his wanderings.

Passing on southward from Tampa, the settlements are at Alafia (pronounced Alafeéa), Terrasea Bay, Little

Manatee, Manatee, Sarasota, Charlotte Harbor and Punta Rassa: in the course of which occur the mouths of the Hillsboro', Alafia, Manatee, and Myakka Rivers, Pease Creek, the Tsalo-Papko-Hatchee, Halpata Hatchee, and Caloosatchee Rivers.

At all the settlements named board can be obtained, as I am informed: and it is said that the Orange Grove Hotel at Tampa, which has been temporarily closed, will be again opened during this winter of 1875–6.

Three of these points, to wit, Tampa, Manatee, and Punta Rassa, are visited weekly by a mail steamer from Cedar Keys. Tampa, as has already been stated, is also the terminus of a tri-weekly hack line, from Gainesville, *via* Brooksville and Ocala.

The other points can be reached either by special contract for the steam-launch belonging to Captain A. E. Willard, of Cedar Keys, or by sail either from that point or Tampa. Any one making this excursion, would do well to communicate by letter beforehand with the gentleman just named, who is minutely informed as to this entire coast, is one of the most enterprising persons in this portion of Florida, and seems as courteous as he is active.

Below Tampa, these settlements I have named represent a belt of farming country, reaching a short distance inland, which contains fertile lands, sparsely cultivated, and forests of red cedar. Farther inland is a great cattle range, where the herds, belonging sometimes to far remote proprietors, feed at will the year round, without further attention from their owners than the annual expedition for the purpose of branding the newly-dropped calves, and of driving to the shipping port those which have been selected to be sold. The shipments are mainly to Cuba. One of the largest of these cattle-owners resides at Orlando, but ships his cattle from the port of Punta Rassa.

CHAPTER VI.

THE TALLAHASSEE COUNTRY OR PIEDMONT FLORIDA.

As we sat in the railway car, steaming towards Tallahassee, a certain entomological adventure of an unknown lady and gentleman on the seat in front prepared us, in an indirect yet satisfactory way, for the fact that during a night of travel we had arrived in a different land from that about Jacksonville. Having settled themselves in their seats after a somewhat elaborate car-toilet, *his* gaze became suddenly fastened on the back of her neck; he grew contemplative, then earnest; a short stage of conviction followed; then he took action; plucking the Object from her neck betwixt his finger and thumb and regarding it seriously, he said, in a tone at once meditative and inquiring, "My dear, this is a *strange* flea; *this* is not a *Jacksonville* flea!"

So little mention has been made of this part of Florida, that many persons will be surprised at learning that there is any portion of the State which could justify an appellation ending in *mont.* But the counties of Madison, Jefferson, Leon, Gadsden, and Jackson, all lying in what is called "Middle Florida" except Jackson, which is in "West Florida," embrace as fair a set of arable hills as one would wish to see, some reaching to the height of four hundred feet. The important towns of these counties are Madison (Madison County), Monticello (Jefferson County), Tallahassee (Leon County), Quincy (Gadsden County), and Marianna (Jackson County), all of which

except the last lie on the line of the Jacksonville, Pensacola and Mobile Railway.

Of these, the most important is the capital of the State,

TALLAHASSEE.

In the year 1539, after De Soto had made his landing in Tampa Bay (or *Espiritu Santo* Bay, as he called it), he fared northward with his army for several days, and came to a "Great Morass," about which he made a *détour;* then marching four days longer through a fertile and well-inhabited country, he arrived at the Indian village of Anhayca (or Anhayea), situated in the midst thereof; and appears to have made his headquarters at that place for some little while, awaiting there the return of the exploring expeditions which he sent in various directions.

Several circumstances make it probable that this Anhayca was near the present site of the city of Tallahassee; and I am told that a complete suit of old Spanish armor was found not long ago in a field in this vicinity.

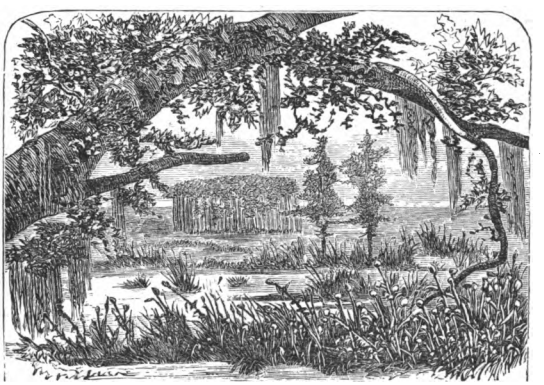
At any rate, the ground upon which the city is built had, in 1823, long borne signs of Indian occupation; and in that year the commissioners who had been charged with the duty of selecting a seat of government for the then new Territory of Florida, attracted by the general beauty of the location among the hills as well as by the "noble growths" (according to Fairbanks) "of live-oaks and magnolias, and . . . the vicinity of a beautiful cascade, which has long since disappeared," pitched upon this spot.

And surely no one with an eye either for agricultural advantages or for the more spiritual beauties of hill-curves and tree-arabesques can do other than praise the happiness of their choice.

For several miles before reaching Tallahassee one begins

to see a country differing wholly in appearance from the lumber and turpentine regions of Duval, Baker, Columbia, and Suwannee Counties, through which one will have passed on the way from Jacksonville. Long fences, generous breadths of chocolate-colored fields, spreading oaks, curving hills, ample prospects, come before the eye.

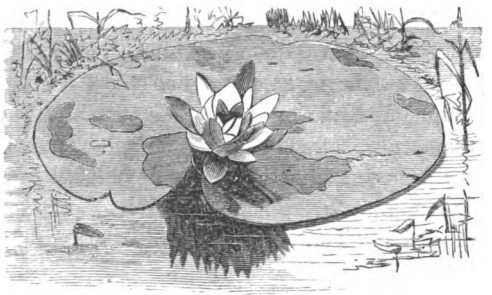
As we shot out by an unusually open expanse some four or five miles from Tallahassee, a little quick-drawn breath of pleasure from my comrade made me look through the car-window upon a lovely sight. We had emerged upon the shore of Lake Lafayette; it was early in the morn-



UPPER WATERS OF LAKE LAFAYETTE.

ing, and the water had that delicate sheen of distilled silver which it wears at no other time, a sheen like an indefinite rolling out of the two dainty cusps of the very newest moon, a sheen like the soft and innocent childhood of a brightness which at maturity will be dazzling. Over the stirless plain of pleasant glory lay hundreds and thousands and surely millions of virginal white water-lilies; presently they thickened, there were yards and

rods and acres of them, until the whole surface of the water was covered without break; it was a long winding



FLORIDA WATER-LILY.

lake of round green lily-pads, mysteriously upborne, and stretching away like a green heaven in which were set the innumerable spherical stars of the lilies. Occasionally, in shallow portions of the lake, young growths of cypresses stood with slender stalks thickly in the water and lifted their masses of tender green foliage a foot or two above the surface. Under this canopy, between these many-figured trunks, meandering away in the most charming galaxies and vistas and labyrinths, ran the lilies; the eye did not have time to regret the turning of one course of them out of sight ere another presented itself; the ranges and involutions of them seemed an endless fantasy of lilies involved in an endless dream of lily-pads and cypress-stems. The sun was not yet up, the perfect blue of the sky was in pellucid accord with the gentle and unglaring white and green that reigned below, and the noble and simple curves of the inclosing hills secluded this Diana's-troop of freshnesses and lovelinesses and purities in a firm yet velvety horizon.

Winding about among the hills for a few minutes longer,

we came presently to the Tallahassee dépôt; then a carriage took us up the bold hill, about whose base we had just been steaming; and we found ourselves drawn up in

ADAMS STREET, TALLAHASSEE.

front of a genuine old-fashioned tavern, with a long double piazza running along its entire front, with many nooks and corners here and there, and with a general suggestion of old-timey ease and honest comfort arising indefinably out of its aspect. These suggestions took, as we entered, the more substantial shapes of well-furnished apartments whose dimensions showed a Southern amplitude, and of a neat colored "Auntie" who took charge of our bags and ushered us into our quarters with a quiet respect that formed the very perfection of unobtrusive courtesy.

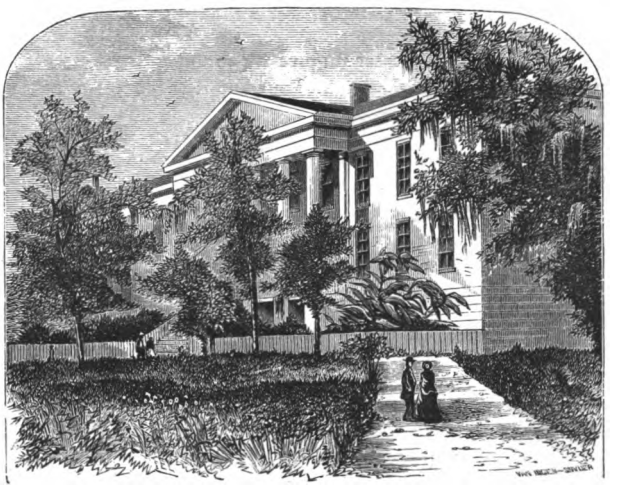
In which quarters, however, not long did we stay; for in ascending the long flight of stairs at the rear of the house we had observed that a double-story piazza also ran around the whole length of this side of it, ells and all, and an indistinct view of ground sloping rapidly

down from the back of the building, and of a wide and much-notched horizon, had revealed itself as we passed. Upon re-emerging on the upper story of the rear piazza, this vague promise fulfilled itself right fairly. Toward every side the hills swelled up, colored with colors that suggested fertility and abundance; their rounded brows, their slopes, the valleys between them, were full of green crops; comfortable homesteads and farm-buildings reposed in the distances, each cluster of which had its own protecting grove of oaks standing about it in the benignant attitudes of outer lares and penates; it was that sort of prospect which the grave old English writers would have called goodlye, pleasaunt, and smylynge. These hills carried with them no associations of hills. They did not in the least suggest agitations or upheavals. They only seemed to be great level uplands, distended like udders with a bounteous richness almost too large for their content.

And this indeed has always been the tone of things—not only of the hills, but of the social life—in Tallahassee. The repute of these people for hospitality was matter of national renown before the war between the States: and even the dreadful reverses of that cataclysm appear to have spent their force in vain against this feature of Tallahassee manners; for much testimony since the war—to which this writer cheerfully adds his own—goes to show that it exists unimpaired. Genuine hospitality of this sort is indeed as unconquerable as Zeno's problem of Achilles and the Tortoise is unanswerable. The logic of it is that if there is enough for ten, there is certainly enough for eleven; and if enough for eleven, enough for twelve; and so on *ad infinitum;* and this reasoning has such a mysterious virtue in it, that it has compassed among good-hearted folk many a repetition of the miracle of the loaves and fishes. It really appears to have been a serious question

LOOKING FROM THE REAR PIAZZA OF THE CITY HOTEL.

here, just after the war had completely upset the whole productive system and stunned every energy of the land, of what avail would so little be among so many; but no one has starved, and albeit the people are poor and the dwellings need paint and ready money is slow of circulation, yet it must be confessed that the bountiful tables looked like anything but famine, that signs of energy cropped out here and there in many places, and that the whole situation was but a reasonable one for a people who



NORTHEAST VIEW OF THE CAPITOL, TALLAHASSEE.

ten years ago had to begin life anew from the very bottom, with no capital, and with a set of laborers who had gone into politics to such an extent that their field-duties were often interrupted by taking their seats in the Legislature, or by other cares of office incompatible with the plow and the hoe.

Besides this "City Hotel," which has been recently

refitted and newly furnished, there are several boarding-houses in Tallahassee for the accommodation of travelers.

Opposite the City Hotel, in a well-kept square adorned with trees and flowers, is the Capitol Building. Here a visitor in the winter-time can study the working of Southern State Legislatures since the war.

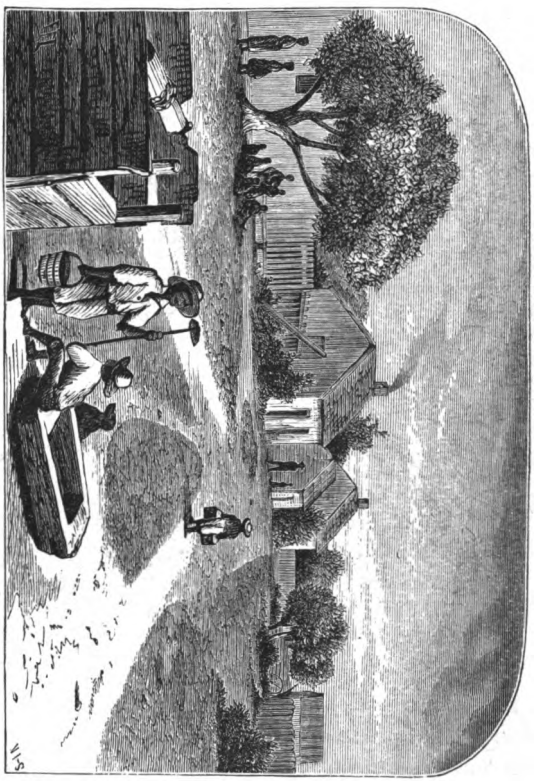
Tallahassee abounds in beautiful groves of trees. There is a fourfold avenue of noble oaks diagonally across and down the street from the Capitol, next the residence of ex-Governor Walker, whereof surely Dan Chaucer must have dreamed:

> And to a pleasaunt grove I 'gan to pass
> Long or the brighte Sonne up-risen was;
>
> In which were okes greate, streight as a line,
> Under the which the grasse, so fresh of hewe,
> Was newly sprong; and an eight foot or nine
> Every tree well fro' his fellow grew,
> With branches brode, lade with leves newe,
> That sprongen out ayen the sunne shene,
> Some very red and some a glad light grene;
> * * * * *
> And I, that all this pleasaunt sight ay sie,
> Thought sodainly I felte so sweet an aire
> Com of the eglentere, that certainely
> There is no heart, I deme, in such dispaire,
> Ne with no thoughtes froward and contraire
> So overlaid, but it shoulde soone have bote
> If it had ones felt this savour sote.

Besides this, a walk or drive down the main street reveals much other great wealth of leaf and flower loveliness clustering about the spacious Southern homes.

The city has its post-office, telegraph- and express-offices, two newspapers, and churches of all the main denominations; with a population of between twenty-five hundred and three thousand.

Lake Lafayette—so called from its situation on the estate granted to the Marquis de Lafayette by the United States—Lake Jackson, Lake Bradford, Lake Miccosukee, and Lake Iamonia (pronounced with the *I* long and the



FREEDMEN'S QUARTERS—NEAR LAKE JACKSON.

accent on the antepenult) all form charming objective-points for excursions, and offer the substantial results of fine fish as well as lovely views by way of invitations.

Wild ducks, brent, and geese are also found, often in great numbers.

One of these lakes—Lake Miccosukee—is supposed to be the true origin of the St. Marks River. The lake contracts to a creek at its southeastern end, and disappears in the earth through one of the numerous "lime-sinks" of this portion of Florida. The St. Marks (hereinafter referred to) rises abruptly from the earth a short distance from here, and is thought to be only the re-emergence of the waters of the lake.

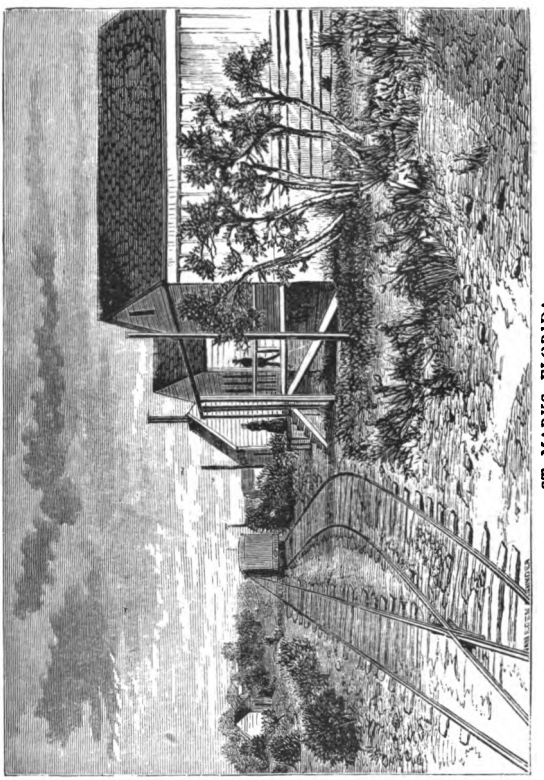
The environment of these lakes is varied and beautiful. The hills surround them now with gently-receding curves, now with bolder bluffs, now with terraces rising one above another to the height of a hundred feet in all; many growths of great glossy-leaved magnolias, of water-oaks and live-oaks, of hickory, ash, wild-cherry, mock-orange, glorify the shores; and between and around and over these hang the clematis, the woodbine, the wild grape-vines; while underneath appear the lesser growths of the red-bud, the old man's beard, the sparkle berry, the dog-wood, the wild plum; and still beneath these the yet more lowly but not less beautiful forms of daisies, violets, primroses, spigelia, bloodroot, and a thousand other delicate wild flowers and grasses; and the great "bonnets," a foot and a half in diameter, with their enormous white multiple stars, and the flags and water-grasses purfle all the coves and bays in never-ending new patterns and fantasies.

A mile and a half from town, on a commanding hill overlooking a broad sweep of cultivated farm-lands, is the unpretending dwelling where used to cluster a circle of witty and cultivated people about Murat and his accomplished wife. The place is now owned by ex-Governor Bloxham, whose own home-place one sees on the hill beyond, surrounded by a grove of oaks.

About fifteen miles from Tallahassee is one of the most wonderful springs in the world—the famous Wakulla Spring, which sends off a river from its single outburst. The easiest way to reach it is to cause a conveyance to be sent ahead from Tallahassee to Oil Station, on the St. Marks Branch Railway, to which point one proceeds by car, and takes carriage then for the spring, six miles distant. The road to the spring is uninteresting; but once arrived and afloat on its bosom, one renews the pleasures which have been hereinbefore described in what was said of Silver Spring. Like that, the water here, which is similarly impregnated with lime, is thrillingly transparent; here one finds again the mosaic of many-shaded green hues, though the space of the spring is less broad and more shadowed by overhanging trees than the wide basin of Silver Spring. In one particular, however, this is the more impressive of the two. It is one hundred and six feet deep; and as one slowly floats face downward, one perceives, at first dimly, then more clearly, a great ledge of white rock which juts up to within perhaps fifty feet of the surface, from beneath which the fish come swimming as if out of the gaping mouth of a great cave. Looking down past the upper part of this ledge, down, down through the miraculous lymph, which impresses you at once as an abstraction and as a concrete substance, to the white concave bottom where you can plainly see a sort of "trouble in the ground" as the water bursts up from its mysterious channel, one feels more than ever that sensation of depth itself wrought into a substantial embodiment, of which I have before spoken.

Three miles from the Oil Station just mentioned, in the opposite direction to that of Wakulla Spring, is the little village of Newport. Here, in the old days of long ago, when Apalachicola shipped its hundred thousand

bales of cotton and St. Marks was a busy port, grew a thriving country trading-point; but it now contains only a few families. A hotel has recently been opened, near



ST. MARKS, FLORIDA.

which is a good sulphur spring, and a few feet from whose doors runs the St. Marks River, wherein there is good sport to be had with rod and gig. Not far off, also, is the Natural Bridge, where the St. Marks River sinks, and

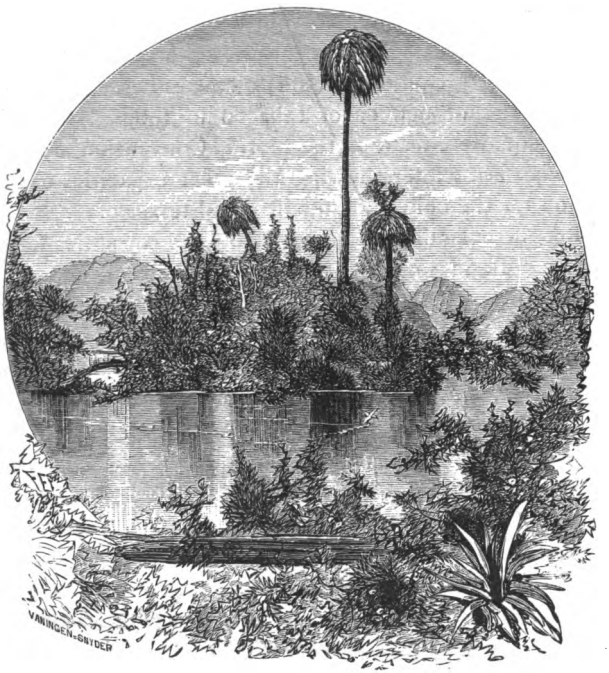
reappears after flowing some distance under-ground. The Rev. Charles Beecher resides at Newport.

This Tallahassee country, particularly Gadsden County, has been long noted for its tobacco-growing lands. The culture of tobacco in this region appears to owe its origin to Governor William P. Duval, who, in 1828, started the planting of a certain small-leafed variety of Cuba tobacco afterwards known as the "Little Duval." Then the "Florida Wrappers," a larger variety, came into demand. The county of Gadsden is said to have raised twelve hundred thousand pounds of tobacco in 1860; and many statements were made in the Florida Convention of Fruit-Growers last winter showing the great capacities of this region for the culture of fine-flavored tobacco.

But these lands really appear to have capacities for all things. Besides the great staples of cotton, corn, sugar-cane, wheat, tobacco, they produce market vegetables in prodigious abundance, and the growing of these for the Northern and Western markets appears to be rapidly becoming a great branch of profitable industry. A train from along the line of the Jacksonville, Pensacola and Mobile Railway, through to Chicago without break, has been recently inaugurated in the interest of those growing early vegetables and melons; and there seems nothing wanting to the development of this section into a prosperous and useful country save the muscles and the capital of the immigrants who must be attracted to it when once its genuine capabilities have become known authentically. These lands can be bought cleared for from five to thirty dollars an acre—in many instances at far less than the cost of their original preparation for the plow.

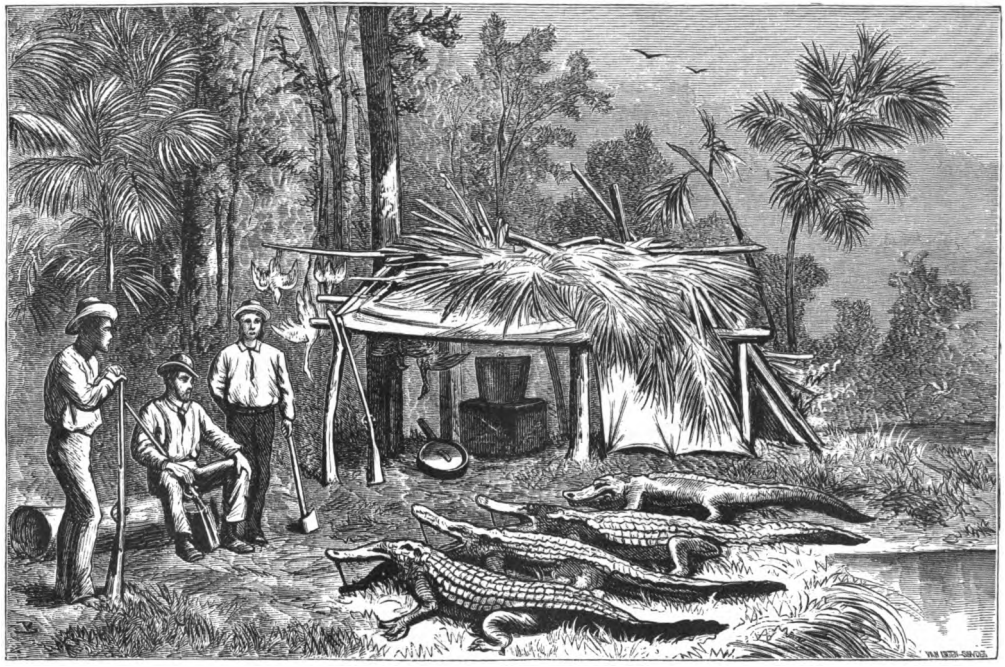
The climate of Tallahassee has been found exceedingly beneficial in consumption. One of the most active and enterprising citizens of the place is a gentleman who

came to it a few years ago suffering with large and exhausting hemorrhages from the lungs. He presents every appearance of a well man, and all signs of hemorrhage have ceased entirely for a long time. The elevation of the city above the sea—probably from two hundred and fifty to three hundred feet—must make it colder than



BIRD ISLAND: AUCILLA RIVER.

Jacksonville; and the invalid should here—as, indeed, in all the other portions of Florida—always wear warm woolen clothing, and have ample facilities for a fire even if it should be needed but a few times during a winter.



HUNTING CAMP: AUCILLA RIVER.

Tallahassee is, however, but about twenty miles from the Gulf of Mexico, and must therefore often share the bland airs of that water.

The invalid can vary his location occasionally by changing to the easily-accessible towns of Quincy, Madison, and Monticello, which offer much the same characteristics of general soil and climate with Tallahassee. Or he can extend his hunting and fishing excursions to the Aucilla (or Ocilla) River, which forms the boundary-line between Jefferson County, on the west, and Madison and Taylor, on the east, and empties into the Gulf of Mexico a few miles southeast of St. Marks; or in various other directions, which will be cheerfully indicated by any of the citizens.

CHAPTER VII.

THE ST. JOHNS AND INDIAN RIVERS.

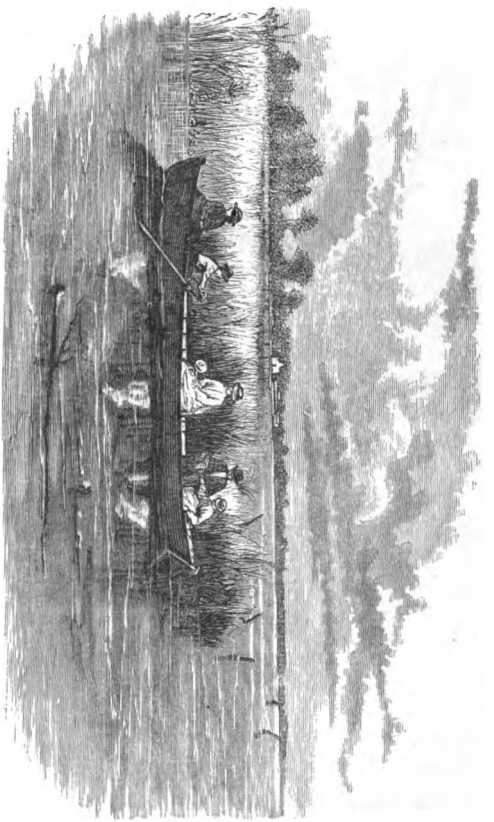
"THAT I may enter"—says the spirit of Heabani, the dead sage, crying from the Assyrian hell toward heaven —"the place of seers, *the place of abundant waters fed from eternal springs.*"

That is a true St. Johns River sensation: of abundant waters fed from eternal springs. Below Pilatka—that is, for seventy-five miles above Jacksonville — it reaches breadths of six miles, and is never less than one in width, while, above, the wide lakes continue for a long distance. The Indians, indeed, called it the Welaka—"chain of lakes." When the Frenchmen came they called it the River May; and Menendez's Spaniards called it the San Mateo River.

As you start up the stream from Jacksonville, the first landing is an unimportant one, called Mulberry Grove, twelve miles from the city, on the right-hand side.

Three miles above, on the left, is Mandarin, a small but long-settled village. Here, in the early Indian wars, occurred a dreadful massacre. It is now most noted as the residence of Mrs. Harriet Beecher Stowe. Her house is a brown cottage, near the shore, nearly obscured by foliage. It is not nearly so imposing as her Tree—a magnificent king that overhangs her roof with a noble crown. It is well enough to remark, in this connection, that in steaming up the broad levels of the St. Johns, a close observer will find that his eye should be re-educated in some par-

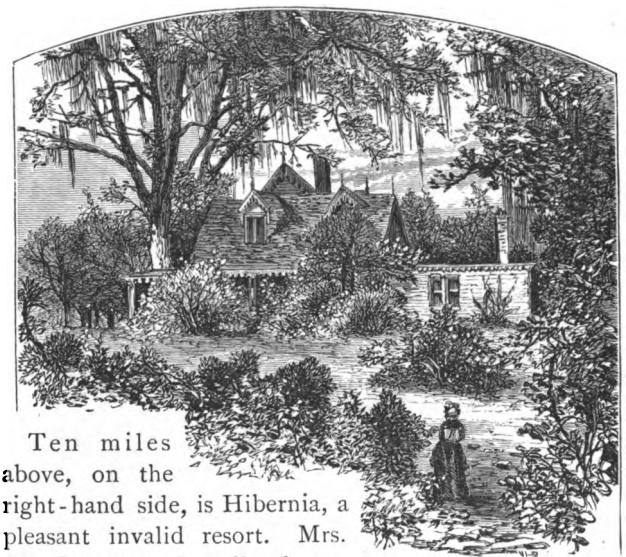
ticulars. For most persons are not in the habit of co-ordinating heights with such great horizontal expanses as here meet the eye; and until one learns to make the



ON THE ST. JOHNS.

proper allowance, the trees and shores appear lower than they should, in consequence of the disproportion thrown upon them by the long plane-lines of the water.

At Mandarin are a Catholic church and convent, a post-office, a store or two, and several fine orange-groves. There is no hotel, but travelers are accommodated at boarding-houses.



RESIDENCE OF MRS. STOWE.

Ten miles above, on the right-hand side, is Hibernia, a pleasant invalid resort. Mrs. Fleming's large boarding-house here usually attests its popularity by a state of repletion early in the winter.

Four miles beyond, on the same side, is Magnolia, where are a good hotel (The Magnolia) and private boarding-houses. Around Magnolia Point, a short distance beyond, is the mouth of Black Creek, a stream down which considerable quantities of lumber are floated to market, and along which a small steamer plies in the winter from Jacksonville as far as Middleburg.

Three miles beyond, on the same side, is Green Cove Springs, one of the most popular winter-resorts on the

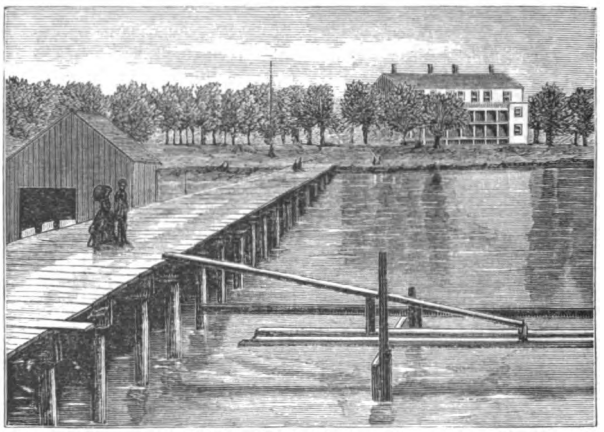
river. The springs, with the Clarendon Hotel adjoining, are but a short distance from the river-bank. Connected with this hotel are hot and cold baths, and swimming-baths, of the spring-waters. These waters contain sul-

MYRTLE AVENUE, HIBERNIA.

phates of magnesia and lime, chlorides of sodium and iron, and sulphuretted hydrogen, and have a temperature of 76° F. They are used for the cure of rheumatism, gout, Bright's disease of the kidneys, and such affections. Besides the Clarendon, the Union House, a charmingly-located hotel, offers accommodations to visitors; and there are good private boarding-houses.

Five miles farther, on the left, is Hogarth's Landing, a wood-station and post-office.

Ten miles above, on the same side, is Picolata, a place formerly of some importance as the landing for passengers bound to St. Augustine, but now of only historic interest. Here in the old Spanish days was the crossing of the river on the thoroughfare from St. Augustine over towards St. Marks; and the remains of an old defensive work are



MAGNOLIA HOTEL FROM LANDING.

still to be found on the opposite bank. Picolata was a considerable commercial Spanish settlement; and the Franciscans are said to have once erected a church and monastery here, of much architectural merit.

About five miles above (these river-distances are always to be regarded, indeed, as involving an "about" of a couple of miles or so) is Tocoi, where the St. Johns Railway takes on passengers for St. Augustine, fifteen miles distant. The name Tocoi is probably the same as Toccoa, the Creek name of the famous falls in Georgia, and indicates the derivation of the Seminoles (whose name is said

to mean "runaway") from the Creek tribe. Here is a factory for preparing the gray moss for market.

Thirteen miles above, on the same side, is Federal Point, a wood-station; three miles beyond this is Orange Hills; and one mile farther is Dancey's Place; the latter two noted for fine orange-groves.

GREEN COVE SPRINGS.

Eight miles beyond, on the right—seventy-five miles from Jacksonville—is the important town of Pilatka (the Florida world is hopelessly divided as to whether it is spelled Pi- or Pa- latka), containing a population of about fifteen hundred inhabitants. It is on high ground, the surface of which is much mixed with shells. It is a considerable resort for consumptives. The Putnam House,

St. Johns House, Pilatka House, and private boarding-houses give excellent accommodations to travelers. Pilatka is the terminus of the Charleston line of steamers (The Dictator and City Point) and of the Savannah line (The Lizzie Baker). From here steamers go up the Ocklawaha, and to Dunn's Lake. It has a telegraph-office, and a newspaper, the "Eastern Herald," noted for alligator-stories to such an extent that its editor is universally known as Alligator Pratt.

Five miles above is San Mateo, a pleasant settlement lying on a high ridge a short distance back from the river. This place is the residence of Rev. P. P. Bishop, a Northern gentleman who has found health in Florida and is now one of the most intelligent and judicious of its citizens. He is President of the Florida Fruit-Growers' Association. San Mateo is a post-office. A good boarding-house is kept here by Mr. Miller; and there are other places where accommodation can be had.

Twenty miles above, on the east bank, one hundred miles from Jacksonville, is Welaka, the site of an old Indian village, and subsequently of a Spanish settlement. Here the St. Johns narrows to a third of a mile in width. Near Welaka, on the same side, is the opening leading into Dunn's Lake. The peninsula lying between Dunn's Lake and the St. Johns has been named Fruitland, from the number of recent settlers there engaged in fruit culture. Immediately opposite Welaka is the mouth of the Ocklawaha River, hereinbefore described.

The expanse of the river just above Welaka is called Little Lake George: it is four miles wide and seven long. The next expanse, above Little Lake George, is Lake George proper: it is eighteen miles long by twelve wide. Not long after René de Laudonnière* with his Huguenots

* See the historical chapter of this book.

had built their fort on the St. Johns below Jacksonville, they made, among other excursions and explorations, one up the river as far as to this Lake George. The old chronicle gives a pleasant description of it, and of Drayton Island (which is called the "Island of Edelano"), near the entrance of the lake.

"I sent my two barks to discover along the river, and up towards the head thereof, which went so far up that they were thirty leagues good beyond a place named Matthiaqua; and there they discovered the entrance of a lake, upon the one side whereof no land can be seen according to the report of the Indians, which was the cause that my men went no further, but returned backe, and in coming home went to see the Island of Edelano, situated in the midst of the river, as fair a place as any that may be seen through the world, for in the space of three leagues that it may contain in length and breadth a man may see an exceeding rich country and marvellously peopled. At the coming out of the village of Edelano to go unto the river's side, a man must pass through an alley about three hundred paces long and fifty paces broad, on both sides whereof great trees are planted: the boughs thereof are tied like an arch, and meet together so artificially that a man would think that it were an arbor made of purpose, as fair, I say, as any in all Christendom, although it be altogether natural."

There are other islands here, one of which, Rembert's (by some called Rembrandt's) Island, is noted for a very large orange-grove on it. Lake George is noted for its birds—herons, white curlews, cranes, paroquets, etc.; and for its fish; and I am informed that some notable mineral springs have recently been discovered here.

Five miles above Lake George is Volusia. The settlement is some distance from the river-bank. This is supposed by some to have been the site of the colony brought over by Dennis Rolle from England in 1765; others suppose him, as is more probable, to have located at a point still called Rollestown, farther down the river. In the Spanish times Volusia was a point of importance

on the road from St. Augustine to Mosquito Inlet; and later, during the Indian war of '36–'42, a fort was built here, which was the headquarters of the left wing of the army during the short campaign of General Scott.

Orange Grove and Hawkinsville are two wood-landings above Volusia. About thirty miles farther above is the large and transparent basin of Blue Spring, four hundred yards in length by twenty-five in breadth. The river made by this spring is large enough to float a steamboat at its confluence with the St. Johns. The water is said to be slightly sulphurous. There is a post-office here; and the fishing and hunting are excellent.

The traveler now comes to the two towns on Lake Monroe which are at the head of navigation for all except the very small steamers that go to Salt Lake, etc. These are Mellonville and Enterprise. Mellonville is on the right-hand side of the lake, and is in a neighborhood which is beginning to exhibit much activity in settlement and improvement. It has two hotels. Hereabout are many orange-groves, and in the neighborhood are Sanford (where is a money-order post-office, a sanitarium—"The Onoro Hotel"—etc.), the flourishing Swedish colony brought over by General Sanford in 1871, Eureka, Eau-clair, Wekiva, Lake Jennie, Lake Maitland, Lake Conway, Fort Reid, and other settlements. Extensive interests have been established here in orange-groves. At the grove called St. Gertrude a large warm sulphur spring appeared in 1871. Adjoining General Sanford's lands are those of Mr. William Astor, consisting of eight thousand acres of timber- and orange-lands. Not far off is also the Fort Butler Grant—in which Mr. Astor is said to be interested —on which are numerous groves of wild oranges and the charming little Lake Schermerhorn. General Sanford seems to be a moving spirit of this side of Lake Monroe,

and to be working wonders by far-reaching intelligence and energy in the location and development of judicious colonies. One also hears the name of B. F. Whitner mentioned often in connection with his own beautiful residence and his general energy.

On the opposite side of Lake Monroe is Enterprise, the terminus of the larger steamboat lines. The Brock House here is much renowned among travelers. From here excursion-parties are conveyed in a small steamer to Lakes Harney and Jessup, a few miles distant, and also to Salt Lake, from which conveyance is had across the tongue of land—some six miles wide—to Indian River. Conveyances can also be here procured for New Smyrna, on Hillsboro' River, twenty-two miles distant. Other fishing and hunting routes are adopted by parties made up here, and it is the headquarters of those who desire to sport among the head-waters of the St. Johns. It is proper to mention, however, that parties are also made up at St. Augustine to go by yacht to Indian River.

Consumptives are said to flourish in this climate; and there are many stories told of cadaverous persons coming here and turning out successful huntsmen and fishermen, of ruddy face and portentous appetite, after a few weeks. Not far from the Brock House is the Green Sulphur Spring with a basin a hundred feet deep, filled with faint green but wonderfully transparent water.

Above Enterprise the St. Johns becomes much shallower than below. A project was on foot a short time ago to deepen it as far as to Lake Washington, and to dig a canal from the eastern edge of that lake across to Indian River, so as to give free water-communication with that stream. Above Lake Washington, somewhere near the middle of Brevard County, the St. Johns appears to have its origin in hidden springs.

The following complete list of stations and distances on the St. Johns will be useful. The distances are from Jacksonville:

	MILES.		MILES.
Black Point	10	Mount Royal	109
Mulberry Grove	11	Fort Gates	110
Mandarin	15	Georgetown	117
Hibernia	22	Benella	120
Remington Park	25	Lake View	132
Magnolia	28	Volusia	137
Green Cove Springs	30	Orange Bluff	140
Hogarth's	36	Hawkinsville	160
Picolata	45	Cabbage Bluff	162
Tocoi	52	Lake Beresford	165
Federal Point	60	Blue Spring	172
Orange Mills	64	Emanuel's or Wekiva	184
Dancy's	65	Shell Bank	193
Whetstone's	65	Sanford	199
Pilatka	75	Mellonville	200
San Mateo	80	Enterprise	205
Buffalo Bluff	88	Cook's Ferry and King Philip's Town	224
Horse Landing	94	Lake Harney	225
Welaka	100	Sallie's Camp	229
Beecher	101	Salt Lake	270
Orange Point	103		

INDIAN RIVER.

"Indian River" is a term sometimes used to include the body of water which at its northern end is known as Halifax River, south of this as Hillsboro' River, and at the lower extremity as Mosquito Lagoon. The Indian River proper, however, is separated by a narrow isthmus from the lower end of Mosquito Lagoon as well as from the Halifax and Hillsboro'. From here it runs far to the southward, along the eastern edges of Volusia, Brevard, and Dade Counties, separated from the Atlantic by a narrow strip of land through which it communicates with

open water by the two entrances of Indian River Inlet and Jupiter Inlet.

About forty miles south of St. Augustine the Halifax River commences. From this point southward for twenty-five miles, to Mosquito Inlet where it communicates with the Atlantic, it is about a half-mile wide and three or four feet in depth. South of the Inlet it commences to be called Hillsboro' River. The Hillsboro' extends some thirty miles farther southward, its lower extremity (also called Mosquito Lagoon) lying parallel with the upper part of Indian River. For the first ten miles below the inlet it is said to be eight feet deep, and three feet for the next fifteen miles southward. At this distance—twenty-five miles south of the inlet—the "Haulover" canal, eight hundred yards long and twelve feet wide, connects its waters with those of Indian River, which thence extends, with a depth of three to four feet and a width of one to six miles, for a hundred and fifty miles southward.

On the Halifax and Hillsboro' Rivers are several settlements, most of which are due to the interest which has been excited within the last two or three years with regard to this portion of the State. This interest has resulted in the settlement, among others, of a party of people from New Britain, Connecticut, on the Henry Yonge grant; the Daytona settlement; the improvement of Port Orange; and the beginning of Halifax City. Judge Howell Robinson, of St. Augustine, is one of the principal promoters of this last-named settlement, and, I doubt not, would cheerfully furnish much valuable information to those wishing to visit this part of the country. I have before mentioned that parties are sometimes made up at St. Augustine, to go by boat from that place, for Indian River.

South of Halifax City is New Smyrna, the point to

which Dr. Turnbull brought over his colony of Minorcans in 1767, whereof some account is given in the historical chapter of this book.

Farther south are the celebrated Dummitt and Burnham plantations, where large quantities of famous oranges, sugar and syrup are produced; still farther south, opposite Lake Washington, is Eau Gallie, which has recently been selected as the site of the Agricultural College of Florida.

The general character of the lands in the Indian River country appears to be a strip of "high, light, sandy" soil, lying immediately on the western shore, from a half-mile to a mile in width; then, coming westward, a belt containing "hammocks and savannas" of great fertility, from one to two miles in width; then ridges of "light hammock" and "scrub" lands; then, still westward, grazing lands.

Upon these lands oranges, sugar-cane, bananas, pine-apples, lemons, limes, guavas, strawberries, blackberries, hay, corn, grapes, indigo, sweet-potatoes, and all manner of garden vegetables are said to yield profusely.

The fertility of this soil seems to have been better known a century ago than now. I have already alluded to the settlement of Dr. Turnbull at New Smyrna in 1767; besides this, many large and flourishing estates were commenced about the same period by wealthy English proprietors, and the ruins of these, frequently occurring through the woods that have since grown up, often attract the traveler's attention to the mutations of time. In those days the main products appear to have been sugar, rum, and indigo.

Along this Indian River country is a marvelously bland air, and I have been told of many overworked men and incipient consumptives who have here found new life.

The waters are full of fish in great variety; the woods abound in deer and other game; and the whole land amounts to a perpetual invitation to the overworked, the invalid, the air-poisoned, the nervously prostrate people, to come down with yacht and tent, with rod and gun, and rebuild brain, muscle, and nerve. Accommodations for travelers are found at the Bostrom House, some thirty miles above New Smyrna, and at the hotels of Port Orange, New Smyrna, and Daytona, besides private arrangements for board which almost all settlers' families are willing to make.

The following extract from the papers included in the report of Hon. Dennis Eagan, State Commissioner of Lands and Immigration, will be interesting in connection with this account of the Indian River country:

"*How good lands may be obtained and settled up* will be seen by citing a single case. Last winter a company was formed of mechanics, in a machine-shop in New Britain, Connecticut, of which Lucas P. Summers is President, and Chester N. Penfield is Secretary, both of that city. They sent a party immediately to Florida to prospect for a place of settlement. The party reported favorably of the Henry Yonge grant of one thousand acres, lying on the west bank of the Halifax, and about six miles above Daytona, owned by the Swift Brothers, of New Bedford, Massachusetts. A more fortunate selection could not have been made. They have half a mile of most beautiful river front. The land, commencing at once to ascend, gradually rises for some forty rods back, then retains its height, some twenty feet above the water, for a quarter of a mile to the westward. All this front is excellent land for gardens, for oranges, and other fruits. The best farming lands are in the hammock, about one mile west of the river. These were formerly well drained, and put under a high state of cultivation. Through the centre of this hammock, north and south, there is an old field of one hundred acres of the very best soil for orange-trees, and on which the clearing is worth more than the cost of the whole tract. To this place two of their party immediately returned, and commenced clearing the river front, all of

which they alone have chopped down some twelve rods back, clearing off a part and planting sweet-potatoes. They have worked every day since the first day of March, and have enjoyed good health. There are fourteen families in their company, most of whom are expected out in the early fall."

The price of lands ranges from five to fifty dollars an acre.

This section may be reached directly from Jacksonville by water; three schooners ply between Port Orange and Jacksonville, and, though not meant for passenger packets, offer tolerable accommodations. Further information of their movements can be had of Messrs. John Clark and John Foster, commission merchants at Jacksonville. Larger schooners also run from New York into Mosquito Inlet, during the winter, transporting live-oak; of which further information may be had from Messrs. Van Brunt & Brothers, 75 South Street, New York.

The common method of reaching the Indian River country, however, is by stage from Enterprise, on the St. Johns; or by small steamer from Enterprise to Salt Lake; thence by wheels to Sand Point or Titusville. It is in contemplation to establish a route from St. Augustine, by the steamer Mayflower down the Matanzas; thence by stage or tramroad along the shore to Halifax River; thence by small steamer along the Halifax and Indian Rivers. I am informed the little steamboat Pioneer has already been sent round into the Indian River, to ply along its entire length; and it may be that the Mayflower route, just mentioned, will have been consummated by the ensuing season of '75–6. These routes are being constantly improved, as the increasing needs of the winter tides of Florida travelers demand; and visitors should make inquiry at the many ticket-offices in Jacksonville as to the best and latest routes in projecting any journey into these regions of the upper St. Johns and Indian Rivers.

A letter has recently been printed in the New York Evening Post, from "A Florida Housekeeper," which is so full of a pellucid truthfulness and of a certain undertone of brave vivacity, as well as of common sense and precise information, that I am going to close this sketch of the St. Johns and Indian River countries by copying all except the opening paragraph of it, *verbatim et literatim.*

"We live on the St. John's River, up and down which thousands of people have gone this year and returned with very little more idea of Florida than they had when they came from their homes. A hotel life, a trip on a boat on the rivers, and a run to St. Augustine do not tell much of life here. Our house is a good stone's throw from the river bank, and is on a shell mound a good many feet above the water level. These shell mounds are frequent on the river, are very high and dry, and make lovely walks about the grounds. Our house is built of wood, like a New England house, and has shingles for roofing.

"For shingles we pay $3.50 per thousand, and $12 a thousand feet for building lumber. (This is statistical.) Our house is very comfortable, and we live a pleasant life, I think. Much is written of 'no milk,' of 'tough beef,' of 'canned fruit,' etc. Persons who have to do with such things simply, do not know how to live. Cattle can be bought for $15 a head, and live on the food in the woods. Our cattle are branded and range for twenty miles. The milch cows are not bereft of their calves, but we keep the calves at home, and the cows come up to them every evening. We have from three cows, besides what their calves take, about sixteen quarts of rich milk daily. Of course, this is not like Northern cows, but it is good rich milk, and keeping cattle so is no expense, so it is as easy to have a dozen as one. So much for 'no milk.' In the spring we make our own butter. We have about sixty cattle, most of them fat, and about once in two or three weeks we kill one of them and have as good beef as you can get at the North anywhere. We eat some of the beef while fresh, and corn the rest, sell the hide, make oil of the feet, and soap of the fat; and our fifteen dollar beast has paid us well.

"Chickens we get for thirty cents each. They lay well, so we have eggs enough, and we kill them from time to time. About once

a week our man kills a wild turkey in the woods near the house. About once in two weeks some one of the household shoots a deer, and we have venison. Let me here say that the reason so many Northerners do not like venison is because it is not properly cooked. Cooking venison is a thing not universally known—like some other things. Early in the morning we send a man with a net to the river, and he catches about twenty fish. A 'cast net' costs six dollars. People do not know about them. That is why fish are scarce on many tables. Our hogs number about thirty, I believe, and we kill them off for lard, bacon and pork. (A grown pig is worth four dollars.) They range the woods and feed on what they find. Besides the above list of meats we have quail and ducks, pigeons and bear's meat. Bears are to be had in the woods. Sometimes they like our pigs and help themselves to one or two. So much for milk and beef, which our friends say cannot be had in Florida. Now as for canned things. We have had, all this last year round, Irish potatoes, sweet potatoes, cabbages, lettuce, tomatoes, peas, turnips and beets, all of which came from our own garden, and which the soil yielded with very little trouble and expense. We also had figs in the autumn, oranges (sweet, sour and bitter-sweet this winter), lemons and citrons, grapes and blackberries, huckleberries, and musk and watermelons, and peaches and bananas. All these were grown and not canned. We never saw a can. We expect another year to have raspberries and strawberries, but these expectations are not facts, and it is only with facts that I am dealing just now. We buy Florida made sugar; and have our own corn and hominy, also our own syrup of sugar cane grown here, and also our own rice. We have a mule to plow and work, as mules do better than oxen. Price $130. And we have a horse for family use. We have also one watch dog and ten hunting dogs, which eat sweet potatoes and keep us in venison and game. We have colored servants. We pay the men $10, and the women $8 per month, and they do well. I should not desire more faithful 'help,' as you call them at the North. You know about wood here, of course—pine for house fires, and oak for cooking in a stove. This is all picked up on the place. You know all about our fine air, and our bright sun, and how we sail and drive and walk. We are busy enough, early and late; and so we are not lonely, especially as we have nice neighbors.

"Now, who of your readers who has sailed up to Enterprise and

back knows all this? If I succeed in resenting the 'beef, milk and canned food' slanders on Florida, I shall rest satisfied.

"By the way, I heard a Northern party remark that they had seen no flowers in Florida but pumpkin blossoms. I suppose some people go through the world with their eyes shut. Or what shall I suppose, with flowers all about me?

"A FLORIDA HOUSEKEEPER.

"ON THE ST. JOHN'S, May 1st."

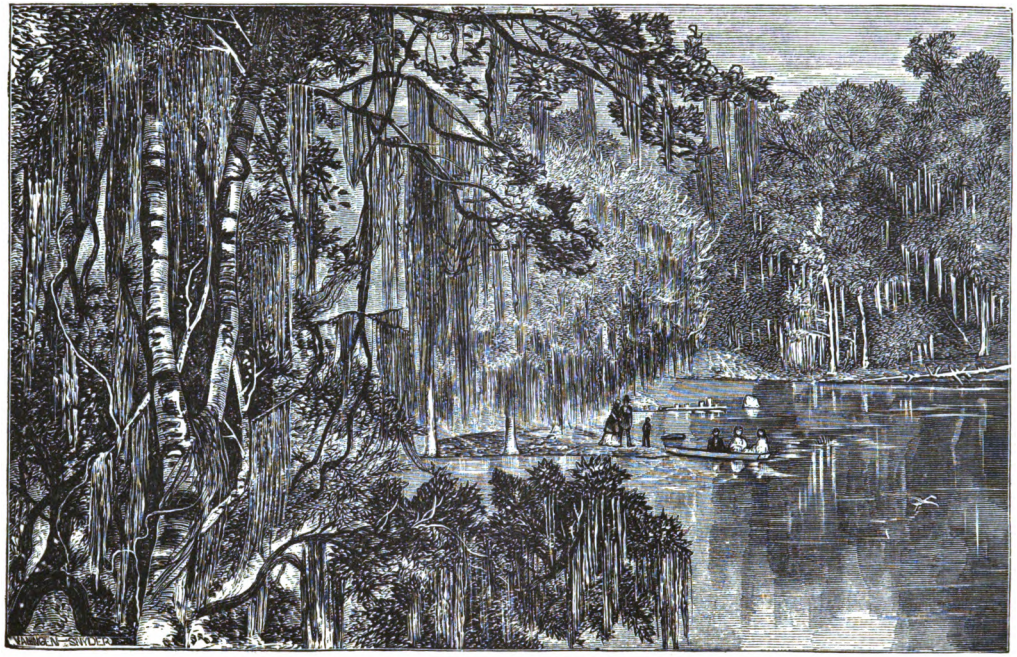
CHAPTER VIII.

THE LAKE CITY AND GAINESVILLE COUNTRY.

GAINESVILLE lies on the line of the Florida (or Atlantic, Gulf and West India Transit Company's) Railway, ninety-six miles from Fernandina and fifty-five miles from Cedar Keys. It is nearly equidistant from the Atlantic Ocean and the Gulf of Mexico, and the great forests which intervene between it and those waters appear to protect it in great measure from that rawness which seems to be inherent in some sea-winds. This circumstance, together with its accessibility and pleasant hotel-accommodations, has made it a place of much resort for invalids.

By the term "Gainesville Country" is meant to be specifically designated the inland and forest-protected portion of peninsular Florida: for example, those parts of Alachua (pronounced Al-la'sh-oo-ah), Lafayette, Putnam, Levy, Marion, Hernando, Sumter, and Orange Counties which lie so far removed both from the St. Johns and from the salt waters as not to partake of the river and sea-coast characteristics; to which may be added, in virtue of its similar position, Lake City, lying to the north of Gainesville some fifty miles, and fifty-nine miles to the westward of Jacksonville—the western terminus of the Florida Central and eastern terminus of the Jacksonville, Pensacola and Mobile Railroads, which are now operated as a single line, though not merged into one.

The associations proper for the general reader to connect in his mind with this division of Florida may be



ALACHUA SINK.

roughly outlined as follows: the lumber and turpentine business carried on along the lines of the two railroads mentioned, finding its outlets at Jacksonville and Fernandina; the growing industry of the culture of early vegetables, which continually increases along the two railroads mentioned, finding its transportation by steamer from Fernandina to New York, by rail to Savannah and Charleston and thence by steamer to New York, by steamboat from Jacksonville to Savannah and Charleston and thence by steamer to New York, or by all rail through to the West as mentioned in the last chapter; the four lakes, Isabella, De Soto, Hamburg, and Indian—in the midst of which Lake City is situated, and from which it takes its name—together with the trout, bream, perch, and other fish, which they readily yield to hook and line, and the deer, partridges and ducks which thereabout abound; Lake City itself, a pleasant town of some two thousand inhabitants, county-site of Columbia County, with seven churches, three hotels (probably thirty rooms in each), a newspaper, and the terminal station of the Cuban telegraph line; Olustee, twelve miles eastward of Lake City, the site of a sanguinary battle in 1864 between General Seymour, commanding the Federal army, and Generals Finnegan and Colquitt, commanding the Confederates; Gainesville, the county-site of Alachua County, with fifteen hundred inhabitants, four churches, two newspapers, and three hotels; the celebrated Payne's Prairie and Sink, a short distance from Gainesville, the former about eighteen miles long and reaching a breadth of five miles, the latter a strange body of water therein, which is fed by a stream, but whose outlet is subterranean and probably communicates with the Gulf or the Atlantic Ocean; the two mail lines running from Gainesville, one to Newnansville, and one to Tampa *via* Micanopy, Ocala and

Brooksville; the crates of cucumbers and cantaleups packed in slat-boxes stuffed with gray moss, the melons, and all the host of the early vegetables which one sees at the Gainesville station awaiting shipment; the uninteresting nature of the approach to the towns of Gainesville and Lake City, as compared with their interiors; the great Gulf Hammock, along which one travels for some distance just after leaving Gainesville, on the railroad to Cedar Keys, with its magnificent masses of oaks and magnolias and vines, and its rich soils awaiting the muscle of man; the numerous other portions of all the named counties above where are fine marls and fertile limestone hammocks, and where lands, which probably cost twenty-five dollars an acre to clear originally, having been abandoned in the vicissitudes of war and of new settlement can now be bought for from two to five dollars an acre; and finally the great natural groves of wild orange-trees about Orange Lake and Lakes Weir and Bryant, in Marion County, Lakes Griffin and Harris in Sumter County, and at other places in this belt of country.*

Apropos of which wild orange groves is a story told by Judge Gillis, of Putnam County, to the fruit-growers of Florida last winter:

"In 1863," said he, "I was at the house of Mrs. McNabb" (between Micanopy and Pilatka, "on a very poor black-jack sand-ridge") "and saw a few sour orange-trees in the yard, and inquired, Why do you not have these trees bearing sweet oranges? The answer was, How can this be? I replied, Bud or graft them with the sweet orange; that I could bud them. I did so. About two years since I passed her house with Colonel Baugh, of Atlanta. He pointed to a fine tree and inquired how many oranges it bore. She mentioned a large

* There are such groves in several other parts of Florida; see paper on "The Wild Orange Groves of Florida" in the Appendix, for much detailed information on this topic.

number, and said she sold the fruit from that tree last year for fifty dollars; that this was a good deal to a poor widow and her family. She turned, and pointing to me said, There is the man who budded that tree for me. I had forgotten my little service till then. I was repaid ten thousand times."

Of course it is not every orange-tree that will come thus to be worth fifty dollars a year in a short time; and in the interests of soberness, as well as by way of presenting both sides of the orange-question, the reader interested in these matters is advised to consult all that is said in the Appendix hereinafter given under the head of "Orange Culture."

In the southerly part of this belt of country is the growing town of Leesburg, to which the Ocklawaha steamers penetrate except when low water in the river prevents navigation above Silver Spring. It is considered the head of Ocklawaha River navigation, and is situated between Lake Griffin and Lake Harris, having practically a frontage on both. A few miles to eastward lie Buck Lake and Lake Eustis; southeastward, Lake Apopka; and westward, Lake Panasofka. Leesburg is the centre of an active and rapidly-improving fruit-growing section. It is estimated that within a distance of ten miles around the town fifty thousand orange-trees have been recently started, which will be in full bearing condition in five years' time. Besides oranges, the guava, citron, lemon, lime, grape-fruit (a fruit much like a very large pale-yellow orange, having a sweetish pulp but a very bitter white tissue between the pulp and the skin), banana, and pine-apple are being successfully raised; and experiments are being made, with much prospect of success, in the culture of a native grape for wine. These products are transported mostly down the Ocklawaha by steamer (or barge to Silver Springs when the water is too low for the steamers between there

and Leesburg) to Pilatka, thence down the St. Johns to Jacksonville.

Leesburg is the county-site of Sumter County, has a church, court-house, post-office, Masonic hall, a hotel and private boarding-houses, and a steam cotton-gin and grist-mill.

To the southeastward from Leesburg, a little beyond Lake Apopka, and twenty-four miles southwest from Mellonville, is Orlando, the county-site of Orange County. It is situated in a high and rolling pine region, and, though not as near the routes of transportation as Leesburg and Mellonville, seems to be a growing place. Nor far from Orlando is the residence of the poet Will Wallace Harney, whose dainty translations of his sylvan environment into poetry must win friends for him among all who love nature. The town has a new court-house, and there are good boarding accommodations.

Of course no delicate invalid—I mean an invalid too weak, for example, to try the open-air camp-life cure—will think of taking the journey of twenty-four miles from Sanford or Mellonville to Orlando, by hack in winter, nor any similar journey in Florida—a precaution which some sad experience (not of my own) leads me always to repeat, even at the risk of being tiresome.

Besides these general ideas, one associates with this region the Suwannee and Withlacoochee Rivers, both emptying into the Gulf of Mexico; and also the fearful Dade massacre—referred to in the historical chapter of this book—which occurred not far from Leesburg.

Fourteen miles from Lake City are the Suwannee White Sulphur Springs, on the Suwannee River. They have considerable local reputation for efficacy in the cure of rheumatism.

The Register of the United States Land Office is lo-

cated at Gainesville. The State Land Office is at Tallahassee.

Through this Gainesville country stretches down to the southward a series of hammock lands, including the great Gulf Hammock below Gainesville, and the celebrated Annuttelaga (pronounced An'nuttylah'ga) Hammock, in Hernando County, which is fourteen miles in length by seven in width.

There are also many marls and clay-soils to be found, and the river-mucks furnish great quantities of valuable fertilizing material.

CHAPTER IX.

WEST FLORIDA.

"WEST FLORIDA" is a term commonly used in the State to designate that portion of it lying west of the Apalachicola River, and has been brought to the attention of most news-readers in connection with a long-pending proposition to cede this part of Florida to the State of Alabama; to which, indeed, regarding it from the point of view of the geographical fitness of things, it seems rightly appurtenant.

It is comprised of the counties of Jackson (county-site, Marianna), Calhoun (county-site, Abe Spring Bluff), Washington (county-site, Vernon), Holmes (county-site, Cerro Gordo), Walton (county-site, Ucheeanna), Santa Rosa (county-site, Milton), Escambia (county-site, Pensacola), and part of Franklin (county-site, Apalachicola). Of these counties, the first-named, Jackson, is so much like the hill-country about Tallahassee that it was included in the account of that portion of Florida given in Chapter VI.: and Pensacola, the principal town of this section, has been spoken of in the last chapter.

West Florida is sparsely inhabited; and the inaccessibility of most of it by rail causes it to be much less visited than the other portions of Florida. Its main industries are agriculture, the fish and oyster trade, and lumbering. It is abundantly watered by numerous creeks, rivers, and estuaries from the Gulf. These afford great facilities for getting out the logs and spar-timber, in which the country

is enormously rich. Many portions of it are extremely fertile, and yield good crops of long- and short-staple cotton, ramie, tobacco, sugar-cane, turnips, sweet-potatoes, and garden vegetables. The principal growths of timber, besides the main product of the yellow-pine, are the magnolia, cypress, juniper, cedar, wild cherry, live-oak and water-oak. The coast abounds in beautiful bays, which those persons visiting Florida in their own steam-yachts might find well worth exploring; and the waters hereabout are noted for yielding fine fish and oysters, as detailed in the chapter on the Gulf Coast.

Apalachicola, on the bay of that name, near the mouth of the Apalachicola River, is a town of four or five hundred inhabitants, and is now little more than the shell of a once prosperous city. It was formerly the shipping port for large quantities of cotton sent down the Chattahoochee and Apalachicola Rivers; and even after the war it moved forward with much animation, until the building of the railroad across the northern portion of Florida together with the combinations of the Georgia railway system succeeded in diverting almost all of its trade. Its fish, and particularly its oysters, are celebrated for their excellent flavor. It is connected by weekly steamer along the Chattahoochee and Apalachicola Rivers with Columbus, Georgia, and there with the railway systems of Georgia and Alabama; and with the Gulf ports by occasional sail and steamer. Vessels are also brought from other points by its lumber-mills. Pleasant excursion-parties are sometimes made up in the spring at Columbus, for the purpose of descending the Chattahoochee and Apalachicola in a chartered steamer, fishing, hunting, and exploring the strange Dead Lakes of Calhoun County, as well as the brighter waters of St. Josephs, St. Andrews, and other beautiful bays of this coast.

The Scotch settlement along the Uchee Valley, in Walton County, centering about Ucheeanna, is worthy of mention; and the lands of the valley of Holmes Creek, about Vernon, the county-site of Washington County, are spoken of as particularly fertile.

Besides the steamboat line mentioned as running to Apalachicola, the other main line of transportation in this part of Florida is the Pensacola and Louisville Railroad, connecting Pensacola with the Montgomery and Mobile Railroad at Pensacola Junction. There is also a railroad, nine miles in length, connecting Pensacola Bay with Perdido Bay at Millview, where there are large sawmill interests.

CHAPTER X.

LAKE OKEECHOBEE AND THE EVERGLADES.

In the midst of the great cattle-ranges and prairies of Manatee, Monroe, Dade and Brevard Counties lies the large and lonesome sheet of water known as Lake Okeechobee. Its length is probably from forty to fifty miles, its width is about twenty miles, and its depth varies from eight to twenty feet. It is fed by the Kissimee River, which comes down from the north through Cypress and Kissimee Lakes; and likely also by internal springs. Its waters probably escape through the Everglades. This Kissimee River is but a short distance from the head-waters of the St. Johns, and flows parallel with them generally, though in the contrary direction. It is said to be deep enough for navigation by steamers of four feet. The country lying between it and the St. Johns, as well as that west of it, consists largely of prairies and savannas which afford fine ranges for cattle, and the business of stock-raising has been carried on here with great success by many parties.

Stretching off to the southward and southwestward is the great, shallow, island-studded lake called the Everglades. It is in many portions, indeed, not always under water; and, where covered, varies in depth from six inches to six feet. It is full of water-grasses and flowers, and abounds in islands containing from one to one hundred acres of dry land, covered with profuse growths of vines, palmettos, cocoa-trees, oaks, crab-wood, mastic, and

cypress. These islands, as well as the shores of Lake Okeechobee, present inexhaustible resources to the huntsman and the fisherman. Deer, bears, panthers, wild-cats, alligators, wood-ducks, and many varieties of tropical water-fowl are to be found, with several sorts of fresh-water fish and turtles.

The space covered by water in the Everglades has in time contracted, owing to geological causes, and has left a belt of prairie varying from a half-mile to a mile in width around it, which contains a great quantity of dry and fertile land. The Everglades have been found to be considerably higher than the level of the sea, and drainage could be easily effected, thus reclaiming a very large body of extremely fertile soil for agricultural purposes.

The Everglades run through a large portion of Dade County and a part of Monroe. To the westward, in the space inclosed between the Everglades and the Gulf Coast, in Monroe County, dwell the remnant of the Indians who for so many years defied Spaniard, Frenchman, Englishman, and American, in this bloody Florida. In the year 1842, at the close of his remarkable campaign against the Florida Indians, General Worth announced to the Government that there remained but about three hundred of them—men, women, and children—and suggested that these be allowed to stay, without further pursuit, within specified limits—being the space inclosed between Pease Creek, from its mouth along the southern fork of it, to Lake Istokpoga; thence down along that lake, the Kissimee River, Lake Okeechobee, and the Everglades to the Gulf Coast; thence along the coast back to the starting-point. This suggestion was finally acceded to, and with the exception of two insignificant disturbances quickly suppressed by State troops they have peacefully remained in their allotted territory, living

mostly upon fish and game. They are said to retain their customs, and I met one resident of Florida who knew their old chief Tiger-tail, and had received an invitation to their Green-Corn Dance, then about to be held. Their number is now estimated to be about three hundred in all. They are seen by few whites, save the "cow-boys," and those dwelling in the lower portions of Orange County, and in Polk, Brevard, Manatee, and Dade.

CHAPTER XI.

THE KEY WEST COUNTRY.

A NARROW strip of high, rocky pine-land, varying from three to fifteen miles in width, intervenes between the southern margin of the Everglades and the waters of Biscayne Bay and Barnes' Sound. This strip, together with the numerous keys which inclose Biscayne Bay and Barnes' Sound and extend on a westward curve until they terminate in Key West, Marquesas Keys and the Dry Tortugas, constitutes the part of Florida which I mean to designate by the term Key West country. The strip of mainland is mostly in Dade County; the keys are partly in Dade, partly in Monroe.

Here one finds the land adapted to the cultivation of many tropical productions, and the warmth of the climate renders others available at seasons when they are impracticable farther north. Sea Island cotton, it is said, will grow throughout the year along the mainland about Biscayne Bay: and here also flourish the lime, lemon, citron, sapodilla, cocoanut, banana, plantain, maumee, tamarind, guava, pine-apple, fig, olive, grape, sisal hemp, sugar-cane, and tobacco. The maumee, sugar-apple, and avocado pear of this section are highly spoken of; and it is said to be extraordinarily productive of limes and to offer great facilities for the manufacture of citric acid from lime-juice.

The climate is happy in its effects upon rheumatism and consumption, and its details will be found in the climatic chapter of this book.

The "Coontee," a term, probably Indian in its origin, for a species of sago palm, grows profusely near Biscayne Bay, and yields a good commercial starch and farina.

It is in contemplation to connect the lower end of Indian River with the waters of Biscayne Bay and Barnes' Sound by a canal from Indian River to Lake Worth, and from the latter to Biscayne Bay. The same company ("the Southern Inland Navigation and Improvement Company") propose to connect the St. Johns with Indian River by a canal across the narrow strip between Lake Washington and the latter stream, and thus to afford an inland water-route from Jacksonville entirely down the length of the Florida peninsula to Biscayne Bay. It is said that twenty-five miles of canal-cutting would suffice for the whole line. A railway ("The Great Southern") has also been projected to run from Jessup, Georgia (the intersection of the Atlantic and Gulf Railroad with the Macon and Brunswick), to Jacksonville, and thence down the centre of the peninsula to Turtle Harbor, between Biscayne Bay and Barnes' Sound. Some work has already been done on the northern end of this road.

There are settlements in Dade County, at the mouth of the Miami River, along Biscayne Bay and at Key Biscayne, the latter being the county-site. This Miami River is thought to indicate in its name a possible connection between the Indians of this region and those of the Miami country of Ohio. Three hundred years ago, when Menendez was sending out exploring-parties from St. Augustine, the Indians declared that the waters of the St. Johns could be reached in boats from a certain Lake "Miami," and that this lake had also an outlet to the sea. Dade County is sparsely inhabited, and the facilities for reaching its settlements, outside of private boats, are confined mostly to occasional sail from Key West. Those

desiring to know more of this portion of Florida would doubtless be cheerfully informed upon application by letter or otherwise to Rev. W. W. Hicks, at Fernandina, Florida, or Hon. W. Gleason, Miami, Florida, who seem to be the stirring men of Dade County.

Key West, the county-site of Monroe County, is the most populous city in Florida next to Jacksonville, having about eight thousand inhabitants. It is situated on the western end of the island of the same name, which is about five miles long by one mile wide. It has a deep and ample harbor, whose entrance is defended by Fort Taylor, and is a prosperous city, with a large trade in cigar manufacturing and in the gathering and shipping of sponges. The sponge-gatherers inhabit mainly that quarter of the city called Conch-town.

Fish and turtle are shipped from here to New York and Cuba; and Florida cattle in large numbers are sent to the latter country from this point. It is headquarters also for the Florida wreckers, into whose hands the reefs throw many a prize. These industries, together with the influx of Cuban refugees, and the activities incident to its being a coaling station and naval dépôt, have contributed to build here a thriving city; and its position with relation to the West Indies and the Gulf must always make it an important point.

The great leaves of tall cocoa-palms, the feathery fronds of the date-palm, the almond-tree, and many varieties of the warmer-natured flowers and vines, reveal themselves about the town. There are excellent hotel and boarding accommodations at the Russell House and at boarding-houses. Very few of the other "keys" are at all inhabited, save by great numbers of white herons, spoonbills, cormorants, cranes, gulls, egrets, pelicans, and other water-fowl. The plumes of these herons are in much commer-

cial demand for head-decorations. Indian Key is the residence of several wreckers, who cultivate its soil. Plantation Key is noted for the pine-apples which have been grown on it; and Key Largo, which is the most extensive of the group, being some forty miles in length, is said to possess a considerable quantity of soil available for the cultivation of cocoanuts and pine-apples. The ordinary growths on these keys are mangrove, crab-wood, palmetto, and sweet-bay. Their surfaces are generally not more than two feet above the water at high tide.

Key West can be reached by steamers from New Orleans and Havana, by the New York and Galveston steamers, and by the Baltimore and New Orleans steamers; all of which touch there. A steamer also runs weekly from Cedar Keys to Key West, carrying the mails, and touching at several intermediate points, as hereinbefore mentioned in the Gulf-Coast chapter.

CHAPTER XII.

THE CLIMATE.

PERHAPS no more important initiatory observation could be urged upon the attention either of invalids or healthy people than that there is absolutely no such thing as a perfect climate. As surely—and perhaps upon the same awful economic principle at bottom—as the rose has its thorn, so your Nice has its *mistral*, your San Antonio its norther, your Darjiling its monsoon.

The climate of Florida is perhaps more nearly a perfect consumptive's climate than either of these; but it has a northeast nick in it.

As well to advise the intending invalid faithfully of perfection and of imperfection, as because the presentation involves many curious matters which cannot but be of interest to the merely general reader, it is proposed first to give here—in a wholly unscientific way, for this author is not a scientific person—some account of the chief physical circumstances in the nature and environment of Florida which contribute to differentiate its very remarkable climate, and then to present a set of tables which have been prepared from digested records of all the important meteorological instruments for a period of from twenty to twenty-seven years, and which will enable invalids, physicians, and tourists to determine the nature of the climate with reference to all given exigencies.

The very first step in the investigation of this subject leads one into the presence of a phenomenon which still

baffles the explanatory power of science, and the contemplation of which no man can approach without a fresh uprising of wonder.

For of the many circumstances not astronomical which tend to individualize the climate of Florida, the first in importance are without question

THE GULF STREAM AND THE ARCTIC CURRENT.

Although under certain conditions the warm air from over the Gulf Stream may blow westward, and thus indirectly heighten the temperature of some unusually cold winter-day, yet this would be but a trifling variation from the main effect of the Gulf Stream upon the Florida climate—which is, to cool it. Why, indeed, should we have an Italian climate ten degrees nearer the equator than the Old-World Italy? Florida is entitled by its latitude to a climate considerably warmer than that it possesses. Why is it cooler? Unceasingly the Gulf Stream is employed in conveying heat away from the neighborhood of Florida, and thus of course in cooling it. "The quantity of heat daily carried off by the Gulf Stream from these regions and discharged over the Atlantic is sufficient to raise mountains of iron from zero to the melting-point, and to keep in flow from them a molten stream of metal greater in volume than the waters daily discharged from the Mississippi River."* What, then, is the Gulf Stream? The answer—such answer as is possible—to this question cannot be better begun than in the celebrated words of one who studied the sea as a lover studies his mistress, and who, in spite of many crudenesses and inconsistencies into which he was led to fall by the great mass of undi-

* The Physical Geography of the Sea, by M. F. Maury, p. 53. London: Samson Low, Son & Co., 1859.

gested and hitherto unclassified facts which his labors collected, must yet be held to have been the greatest expounder of this subject. Says M. F. Maury, at the beginning of the first chapter in the work just above quoted:

"There is a river in the ocean. In the severest droughts it never fails, and in the mightiest floods it never overflows. Its banks and its bottoms are of cold water, while its current is of warm. The Gulf of Mexico is its fountain, and its mouth is in the Arctic Seas. It is the Gulf Stream. There is in the world no other such majestic flow of waters. Its current is more rapid than the Mississippi or the Amazon and its volume more than a thousand times greater."

Its waters are bluer than those of the surrounding sea, and the line of demarkation, for a long distance from the starting-point of the stream, is so sharp that a vessel has been distinctly seen to be half in and half out of it. This deeper blue is probably owing to the fact that the Gulf Stream is also more salty than its neighbor water.

It is not only more blue and more salty, it is also warmer than the water about it by twenty or thirty degrees in a winter's day. Its maximum temperature is 86°, and after a run of three thousand miles over and between cold water it still retains a summer heat.

It runs out of the Gulf of Mexico and the Caribbean Sea, along the coast of the United States, in a northeastern direction to Newfoundland. Here it meets a cold under-current, which is forever coming down out of the Arctic waters and making its way under the ocean-surface to those points which are being depleted by the outflow of the Gulf Stream. Off the coast of Newfoundland this cold current runs under the warm one; icebergs whose great bases extend beneath the depth of the warm

current are seen to make their way across it, under the influence of the cold one beneath, which is pushing them to the southward.

From this meeting of the warm vapor-exhaling waters and the cold vapor-condensing waters result the great fogs of that region. A still more wonderful effect of their meeting is that the animalcules of the warm stream are, as it were, frozen to death by the cold one, and those of the cold stream are, as it were, boiled to death by the warm one; as these minute creatures die their shells fall; and in the farther course of the Gulf Stream over the ocean towards Ireland these shells have been deposited until in the course of ages they have formed a great ridge in the bottom of the sea, upon which the Atlantic Telegraph Cable is laid. For after leaving Newfoundland the Gulf Stream—retaining probably the motion which it had acquired while whirling with the earth from west to east along the equator or greatest circumference—strikes across to the eastward and finally spreads itself over the European waters, giving out its genial warmth to modify and temper the climates of Western Europe. By so much, therefore, as the air of Western Europe is warmed through the agency of the Gulf Stream waters, by just so much has the climate of Florida been cooled.

It is not a great many years since people believed that the Gulf Stream was caused by, or was a mere prolongation of, the current of the Mississippi River, or perhaps of the Amazon. When it came to be found out that the volume of the Gulf Stream was a thousand times larger than that of its supposed progenitors this idea had to be abandoned. It gave way to the theory of Dr. Franklin: that the Trade Winds piled up a vast head of water in the Caribbean Sea, which, owing to the tendency of water to seek its level, must of necessity find some outlet, and

that this outlet was the Gulf Stream. This theory is still extensively entertained, though Maury's objections to it would seem to be conclusive enough. To mention only two of them: The Trade Winds, which are supposed to pile up surplus water in the Caribbean Sea, only do so for six months in the year, since for the other six they blow in a different direction; what accounts for the Gulf Stream during the latter six months? And again, it is well known that there is an enormous submarine current setting southward out of the polar basin, and flowing opposite to the Gulf Stream toward the very head of waters supposed to originate it; and this cold current runs along at a distance beneath the surface of the ocean to which the winds do not reach at all: hence there is plainly some other agency than the wind which *does* originate currents. Indeed, the supposition that the Caribbean Sea and the Gulf of Mexico are at a higher level than the rest of the Atlantic seems to be rendered untenable by the probability—which Maury's researches appear to have developed—that there is a constant tendency of waters and of drift-matter from all parts of the Atlantic Ocean *into* the Gulf of Mexico, excepting of course the Gulf Stream, and that curious Sargasso Sea, lying between the Azores, the Canaries, and the Cape Verde Islands, which appears to be a sort of slow whirlpool in which the drift and sea-weed collect—a pivot upon which the whole Atlantic slowly turns, as Maury strikingly says. Without wholly denying that the winds may have some agency in the production of the Gulf Stream, and without professing to be able to detail the precise method of its formation by any other means, Maury assigns as active causes in the formation of ocean currents generally the three following agencies. Starting with the familiar principle that water will necessarily flow to or from any part of a body of it where its

equilibrium has been disturbed, he finds disturbing causes in heat, evaporation and secretion.

Heat renders the waters of the tropical regions lighter: and as they rise to the surface and flow off—as, for instance, in the Gulf of Mexico—their place must be supplied by colder waters.

Evaporation—the second disturbing cause—takes place with enormous rapidity on the surface of the warm tropical waters. In the evaporation of sea-water, the salt contained in solution is not evaporated but left behind. The water which receives this surplus salt becomes heavier and sinks, and to supply its place water must flow in from somewhere. Any one who will take the pains to observe closely what occurs the next time he holds a lump of sugar half submerged in a cup of tea for the purpose of melting it more quickly may actually perceive currents set up by a process much like that which Maury believes to result from evaporation. One will see that as the particles of water immediately around the sugar-lump become saturated they grow heavier than their neighbors and sink; these neighbors then flow in from all directions, saturate themselves, sink, and are succeeded by *their* neighbors: and so on, the course of the currents being indicated by the progress of the bubbles from the sides of the tea-cup toward the place of the lump.

And lastly, the secretions of sea-animals from sea-water produce differences in the gravity of the water, and hence currents. All persons know that the shells of marine animals are made of lime, and that this lime is drawn from sea-water which holds it in solution. Now when, for example, each one of the corallines who built the great coral arches upon which Florida rests passed a drop of water through his little crucible and extracted its lime, it became lighter in consequence of this loss and rose toward

the surface. Hence, along with the progress of the work of these busy creatures, must occur a constant uprising of light water and a constant compensating inflow of heavier water, the light water rising to the surface and flowing off. This cause of currents will appear at first insignificant; but it seems much less so as one tries to force one's mind to the proper estimation of the myriads of large and small shell-secreting animals who are daily causing these flights of lightened water toward the surface—animals whose minutest families have left such monuments of their multitude as the State of Florida itself, or as that enormous ridge hereinbefore referred to, which stretches its plateau entirely across the Atlantic Ocean for the cable to rest on.

Such are the theories of Maury, though it is proper to say that most scientific men, while according him the highest praise for the diligent collection of facts, reject most of his inferences from them, and attribute the Gulf Stream to the heating of the Indian Ocean, the inflow thereby set up from the neighboring waters, and the relative westward motion of these, coming as they do from the smaller circumferences toward the equator—thus producing a current which strikes across to the westward and splits on the central projecting point of South America, one branch flowing south, and the other north through the Caribbean Sea, out of which it emerges as the Gulf Stream.

Of course it is not the place here to discuss these matters, but it may be said that to the unscientific mind it is exceedingly difficult to find mental repose in either of these hypotheses, as explaining the eternal flow of the sharply-defined current of the Gulf Stream.

But it is not only by the Gulf Stream that Florida is cooled. The same magnificent scheme of oceanic circulation which sends out that great heated current to temper the cold of Western Europe brings down a counter cold

current from the Polar seas to temper the heat of Florida. There are many circumstances which tend to show that the waters immediately bathing the coasts of Florida are shoalings of this Arctic stream.

In regarding Florida, therefore, with reference to its temperature, one must conceive it as a long pier running down nearly four hundred miles, having on the left, looking southward, first a band of cool water, then the warm band of the Gulf Stream, then the great expanse of the Atlantic—all these water-expanses of different temperatures—and on the right the reservoir of the Gulf of Mexico, constantly pouring off from its surface the heated volume of the Gulf Stream, and constantly receiving, beneath, the supplies of new water from the return Arctic current.

I shall have occasion, presently, to present the details of the temperature resulting from these circumstances, as well as to refer to some other indirect effects of these variously temperatured bands of water; reserving these, I go on to remark that a second important circumstance peculiarly affecting the Florida climate is *the position of the State with reference to the breeding-places and tracks of general storms in the United States.*

Any one who will run the most cursory glance over the storm-maps of the Signal Service Bureau will be immediately struck with the fact that the black lines, representing the courses of the storm-centres, or "low barometers," almost all originate in about the same spot on all the charts. There would seem to be indeed a definite breeding-place of storms in the United States, from which they issue as wasps from a hive. Not only so, but they mostly pursue the same general flight. No one can regard this sameness of origin and direction without astonishment.

This territory, which is the place of the beginning of

storms, may be roughly indicated as lying not far to the eastward of the Rocky Mountains, and about on a line produced to the westward from New York. It would seem that there is here a sort of wild Debatable Land or Scottish Border of the winds. The cold blasts come down through that end of the wide Mississippi Valley which opens out toward the north; the warm, vapor-laden airs from the Gulf of Mexico blow freely into its lower end; thus alternately the wild forayers rush downward and upward; and when they meet, snows and rains and gales rage like running battles from west to east.

Such, at least, is the theory which has been suggested by Dr. A. S. Baldwin, of Jacksonville, Florida, a gentleman to whose courtesy in placing his accumulations of meteorological material and learning at disposal this writer desires freely to acknowledge obligations.

"The influence of the Valley of the Mississippi," says Dr. Baldwin, in a pamphlet containing his Address to the Medical Association of Florida, of which he is President, "upon the weather of the United States is much greater, in my opinion, than has been heretofore accredited to it. The valley is open on the south to the Gulf of Mexico, and is bounded on the west by the Rocky Mountain range, which has a direction from southeast in the lower end of the valley to northwest, and extends to the Polar basin in the north. At the lower and southern portion, it has the Alleghany range for a boundary on the east, which has a direction from southwest to northeast. . . . This valley, however, does not terminate at the sources of the Mississippi River, but extends still northward until it reaches the Polar basin; no ridge of mountains crosses the valley to separate the lower part from the Polar basin, or prevent the winds of the Polar regions from traversing its entire length, nor those from the Gulf of Mexico —winds which alternately move up and down this valley, the one cold and dry, and the other hot and loaded with moisture from the Gulf, the Caribbean Sea, and the equatorial regions farther south. . . . Professor Coffin . . . says, 'In any well-defined valley of con-

siderable extent, it is a well-known fact that the winds are influenced to take the direction of the valley.' An example is given of the Hudson River Valley, where half of the winds or more follow the river up and down; and yet the mean direction of the winds of the whole is nearly at right angles to it. Now, if we make application of this well-established principle to the Mississippi Valley, which certainly is a well-defined one, what is the result? As the winds of the Polar belt have been shown to have a southerly direction by Professor Coffin, there is nothing to prevent their free entrance into that broad, northern mouth of this valley, and the high wall of the Rocky Mountains on the western boundary of the valley for its entire length would tend to continue this direction to the Gulf of Mexico, and even beyond; for the mountains of Mexico—the Sierra Madre—are but the continuation of the Rocky Mountain range, extending to Central and even South America, curving to the eastward so as to embrace the Caribbean Sea, and then taking a southern direction and joining the Andes. This is the course taken by the Polar winds. . . . The winds from the Polar basin would move close to the surface in consequence of their greater density. . . . If the rain-bearing winds from the south should meet those from the north with anything like equal force, there would necessarily be a conflict in opposing directions, . . . and some new direction would be given to the opposing currents. They could not return back upon themselves; they could not go far west on account of the barrier opposed by the Rocky Mountain wall. Now, what way or direction is open to them? They can go to the east or northeast. And in this conflict of winds from north and south, the mass might, and probably would be, elevated and carried up the eastern slope of the Rocky Mountains, until brought into the influence of the high westerly belt of winds" (which Professor Coffin has shown to encircle the earth), "and then would be swept across the States north of the Alleghanies, as storm-winds, which would pass up the coast of New England and follow the Gulf Stream, . . . or turn farther north and pass down the St. Lawrence. . . . The winds which come over the Rocky Mountains have hitherto been considered the great weather-breeders of the Mississippi Valley, and of the United States."

Now, of the storms thus bred, all move to the eastward. The large majority trend north of east, and trouble the

great lakes of the United States, giving them that stormy character for which they are noted. Out of about three hundred such general storms which I counted on these charts for two years, only thirteen passed across the State of Florida.

Doubtless some faint ticklings from the fringes of storms which did not pass centrally over the State must have been felt, but they were not vigorous enough to produce more than small variations of comfort.

Of course, what is here said applies purely to general storms; there are local and peculiar storms over and above these, of which I shall speak in the proper place.

Thirdly, the quantity of moisture in the atmosphere of Florida, while not great enough to render it a damp climate, appears to be sufficient to prevent the diurnal changes of temperature from being excessive. This is accomplished through the intervention of the principle that moist air allows the passage of direct rays from the sun to the earth, but prevents the re-escape of radiated rays from the earth into space. Direct heat seems to be readily transmitted through moist air; reflected heat, not. It is said that in the Desert of Sahara, where the superincumbent air is of course very dry, the radiation of the earth's heat is so rapid after sundown as to send the thermometer quickly down to freezing-point;* and Dr. Baldwin quotes General Emory as stating that he had observed a difference of 60° in temperature between the day and the night on the dry Western plains.

A fourth circumstance is the number of bands of unequally-heated land and water, of which Florida is one. The Gulf Stream, of a temperature of 86°, is one band; the intervening Atlantic water between the Gulf Stream

* See Dr. Baldwin's Address, above referred to.

and the coast (which the exploration of the Gulf Stream made under A. D. Bache has shown to be itself broken up into two more bands, whose temperature differs considerably at the surface and very greatly at twenty fathoms below) is another of different temperature; the peninsula itself forms another of still different temperature; and finally comes the Gulf of Mexico, of yet different temperature, to which might be added the further complication of the St. Johns River and its lakes, and of the expanse of the Atlantic Ocean. Every one is familiar with the phenomenon that air resting upon a warm surface grows lighter when heated, rises, and sets up thus an inflow of air of different temperature to supply its place; and it will be readily seen how the proximity of these varying bands of surfaces which I have specified must produce a constant circulation of fresh air in the highest degree beneficial.

Fifthly, there are no snow-capped mountain ranges within any such distance of Florida as to render it liable to any of those rawnesses and sudden variations which proceed from this cause.

Sixthly, the rainy season in Florida is in summer, and it does not consist of steady rains but of afternoon showers which come up in the heat of the day with purifying thunder and lightning. This disproportion of summer rain leaves the winter an agreeable excess of clear days, as will more definitely appear presently.

Lastly, I merely mention the plenteous pine-growth of the State, without going into details for the reason that Florida possesses this feature in common with the seacoast of Virginia, the Carolinas, and Georgia. It is believed by eminent physicians that, aside from the purely meteorological effects of these masses of foliage, the terebinthine odors exhaling from pines form a healing and antiseptic constituent in the atmosphere. Such evidence

as has come under my own observation is favorable to this idea. It is curious to note in this connection that Spenser appears to attest the antiquity of this opinion as to such remedial virtue, in the Shepherd's Calendar. In the July Eclogue, Morrell says:

> Here grows Melampode everywhere,
> *And terebinth, good for goats;*
> The one my madding kids to smear,
> *The next to heal their throats.*

Regarding these, then, as the main physical facts which go to modify the normal climate of Florida, it now remains to set forth the final result, in reliable figures, of this mixture of climatic ingredients which I have specified.

TEMPERATURE.*

The mean temperature of Jacksonville (lat. 30°19′38″), calculated upon twenty-seven years' observations, is for spring 70.06° Fahrenheit; for summer 81.82°; for autumn 70.35°; for winter 56.33°.

The mean temperature of St. Augustine (which is immediately on the eastern coast, about half a degree farther south than Jacksonville), calculated upon twenty years' observations, is for spring 68.54°; for summer 80.27°; for autumn 71.73°; and for winter 58.08°.

These figures, it will be observed, show St. Augustine to be slightly warmer in winter and cooler in summer than Jacksonville.

The mean temperature of Tampa Bay—which is on the western coast, 1°48′ farther south than St. Augustine—calculated upon twenty-five years' observations, is for

* The following figures are derived from Dr. Baldwin's above-quoted pamphlet, and are believed to be thoroughly reliable.

spring 72.06°; for summer 80.2°; for autumn 73.08°; for winter 62.85°.

The mean temperature of Key West (in latitude 24°32′), calculated upon fourteen years' observations, is, for spring 75.79°; for summer 82.51°; for autumn 78.23°; for winter 69.58°.

These averages may be fairly considered to give a just view of the range of the thermometer over the whole State; for while I have been unable to gain any thermometric accounts of points in the interior of the State based upon periods of time sufficiently long to render them perfectly authentic, yet no information I have received has led me to infer more than such variations from the above means as one could easily approximate by considering the distance of any given point from the localities above specified.

It must be apparent to the most casual reader of the foregoing figures that the popular idea which conceives the Florida climate as a tropical one is thoroughly erroneous. Surely 82½°—which is the highest mean of summer temperature—and 69½°—which is the highest mean of winter temperature—enumerated in the above table, for Key West, the point nearest the equator—surely, these are not tropical temperatures! No, the air, here, is bland, it is not hot: it is cool enough to retain some little bracing quality in itself and to prevent the invalid from that dangerous inanition which the tropical languors are so apt to superinduce; yet it is not so cool as to irritate the membranes or check the healthful exhalations of the body, if the plainest precautions of proper clothing and of proper freedom from exposure are taken. Let me, therefore, here earnestly desire all persons, whether invalids or pleasure-seekers, who come to Florida with the expectation of spending their midwinters in white linen

blouses, lying on beds of roses under spice-trees and palms, to exchange this delusion for the far finer and truer notion of a temperature just cool enough to save a man from degenerating into a luxurious vegetable of laziness, and just warm enough to be nerve-quieting and tranquillizing. Warm days there are, truly, in winter; and there are roses and palms, too; nevertheless, moderate flannels, moderate woolens, good reddening exercise, —these are the things for Florida, and he who knows how to use them properly will always think of the land with a lighter heart.

Again: it should be here said, before I leave the subject of temperature, that in general points in the interior of the State are warmer than those on the coast, because protected from the northwest and northeast winds. The northwest wind is dry-cold: the northeast wind is cold and raw.

I have already had occasion to speak of the insanity of that exodus of consumptives from Florida which begins to occur even so early as March. Suffice it to say here again that the plainest logic conceivable proves that no sick man should leave Florida, to go to any point more northerly than (say) Charleston, before the very last of May.

FROSTS.

At Jacksonville frosts are possible in any month from October to April, inclusive. Dr. Baldwin found, from twenty-seven years' record, an average of 2.3 frosts for November; 5.2 for December; 5.4 for January; 3.1 for February; 1.3 for March. In April and October there is .2 of a likelihood of frost; none, between. As the traveler goes southward along the Peninsula the number of frosts of course diminishes; and at Key West and along the tier of southern coast counties they practically

disappear. Much inquiry left me unable to fix any line north of this where it could be said that one had gotten below frost; but the phenomenon is rare at any rate below 28°.

RAINFALL AND HUMIDITY.

During something over sixteen years the average rainfall at Jacksonville was 50.29 inches. Only 7.06 inches of this amount fell, on the average, in the winter; 9.19 inches during the spring; leaving 20.5 inches for the summer, and 12.98 inches for the autumn. I have not been able to find any records of rainfall at other points based upon a sufficient length of time to render them authentic. But it may be in general remarked that the yearly average given above for Jacksonville will probably serve as a fair basis for judging of the rainfall at other points, except that the amount should probably be decreased for points on the immediate eastern coast. There seems to be here somewhat less rain than farther inland. A gentleman at St. Augustine informed me it often occurred that the steady sea-breeze blowing in from the east would drive back rain-clouds advancing from the west, and prevent them from discharging over the city; and Dr. Baldwin mentions having repeatedly witnessed the same phenomenon on the eastern coast.

This brings me to say, however, that although there seems to be less precipitation of rain on the eastern coast than elsewhere, it is nevertheless probable that more humidity exists in the atmosphere of that region; for the reason that the northeast wind, which is the raw wind, has a fairer sweep there than at points which lie farther inland and which are consequently more sheltered by the forests from winds that come out of this quarter. The average annual amount of humidity at Jacksonville was found to be 5.7 grains of water to the cubic foot of air.

This is said to be about enough to be pleasant for respiration. It is probable that this amount should be increased a little for the eastern coast and decreased for the interior and western coast.

Hereof asthmatics may take heed, who usually require more moisture in the air for free breathing than invalids with other diseases of the air-passages.

Yet—when a man thinks of it—what is the use of talking to the asthma? It is a disease which has no law, no reason, no consistency; it pulls logic by the nose, it spins calculation round with a crazy motion as of a teetotum about to fall; and as for the medical faculty, it deliberately takes that august personage by the beard and beats him with his own gold-headed cane. It is as whimsical-inconsequent as Mollie Sixteen; it is the capriccio in five-four time of suffering; it is Disease's loose horse in the pasture. I have a friend who begins to wheeze with asthma on reaching New York City, but recovers immediately on arriving at Philadelphia; and another who cannot exist in Philadelphia, but is comparatively a free-breather in New York. People are known who can live in London but are changed to gasping asthmatics five miles away from it; and their opposites are equally well known, who gasp in London but can live five miles out. Yonder is a man, over on the North Beach, within three miles of St. Augustine, who has gone to reside there, though whenever he comes over in the boat to St. Augustine he wheezes by the time he is half-way, and does not prosper at all in the city.

And I am told there are asthmatics in New York to whom Canal Street is a perfect barrier of asphyxia, and who can live below it, but would die above it. I know one who has to sleep part of each night in his chair, but cannot have his feet on a level with his body; and I have

no doubt there are those who are obliged to elevate their feet at an angle of 45° in order to get a wink.

I obstinately refuse to repeat the story—which a friend has just told me for true—that there is a man here who sleeps standing every night before a window with the sash out.

NUMBER OF CLEAR DAYS.

This is a matter of great importance to healthy pleasure-seekers as well as to sick people. The most unsentimental of vigorous folk respond to a sunny sky in a manner of which they are often wholly unconscious; and I have seen a car-load of people who had preserved a grim silence so long as we steamed along through the rain glide into a cheerful buzz of conversation in a few minutes after the sun came out.

During a period of twenty-two years (and some years longer for several of the months hereinafter mentioned) it was found that at Jacksonville, January averaged about twenty clear days; February, nineteen; March, twenty; April, twenty-five; May, twenty-two; June, seventeen; July, eighteen; August, nineteen; September, seventeen; October, nineteen; November, twenty; and December, twenty. It is not to be understood by any means that the cloudy days in this calculation were rainy days; probably on something like half of them rain fell.

THE WINDS.

I have before remarked that the northwest wind is the cold dry wind in Florida. It is the wind that kills the orange-trees; and its prevalence may be estimated from the statistics of frost, which I have given above. The northeast wind is the cold wet wind; and the reader is referred to what is said of it in the chapter on St. Augustine (Chapter III.) for some account of its nature and

habits, which are not pleasant. The east wind is a delightful wind; and the south wind is somewhat like in the temperature it brings and the sensation it produces.

It is proper to refer, in closing this account of the Florida climate, to the popular impression that malarial diseases render it unhealthy. Perhaps this impression will be most authoritatively corrected by the following extract from a report of U. S. Surgeon-General Lawson:

"Indeed, the statistics in this Bureau demonstrate the fact that the diseases which result from malaria are a much milder type in the peninsula of Florida than in any other State in the Union. These records show that the ratio of deaths to the number of cases of remittent fever has been much less than among the troops serving in any other portion of the United States. In the Middle Division of the United States the proportion is one death to thirty-six cases of remittent fever; in the Northern Division, one to fifty-two; in the Southern Division, one to fifty-four; in Texas, one to seventy-eight; in California, one to one hundred and twenty-two; in New Mexico, one to one hundred and forty-eight; while in Florida it is but *one to two hundred and eighty-seven.*"

CHAPTER XIII.

HISTORICAL.

THE history of Florida for some three hundred years is but a bowl of blood; and if a man could cast something into it, like the chemists, that would throw aside the solid ingredients from the mere water of it, he would find for a precipitate at the bottom little more than death and disappointment.

It reads like a bill of mortality; the writing of it can be done briefly, and almost on a formula.

As thus:

There seems to be no sufficient evidence that Sebastian Cabot, as has been claimed by some, went as far down as Florida in 1497.

In 1512, Ponce de Leon, a *caballero* then verging upon old age, who had been a comrade of Christopher Columbus, set forth from Porto Rico to find a certain island called Bimini, where was said to be a fountain of youth. He failed to discover it; afterwards sailed northwestward, made land on Palm-Sunday (a day called *Pascua Florida* in Spanish), and shortly afterwards effected a landing somewhere a little to the north of St. Augustine's present site. After two months of worry with fierce natives he went back home, not a day younger than when he came. Net result of the expedition: a multitude of jokes, which they of Spain cracked on the old searcher after the fountain of youth.

In 1516 comes Diego Miruelo, and goes back. Result:

a little gold obtained from the natives, and a large bundle of lies manufactured aboard ship, which got spread over Cuba and grew out of all proportion by the time they flew to Spain.

In 1517 comes Fernandez de Cordova. Result: one killed and six hurt by the Indians; wherewith De Cordova goes back to Cuba, and dies of his own wounds.

Immediately afterwards comes one Alaminos with three ships. He twice makes a landing; twice has immediately to unmake it by stress of Indians; and goes home. Result: nothing.

About 1520 comes De Ayllon, thinking to procure slaves from among the Indians. It appears that Las Casas, that magnificent patriot, had caused the Spanish Government to stop this business; but where there is a will there is a way. People are found who declare that some of the Caribs are cannibals: these De Ayllon may take. He does not succeed in getting any among the islands; the storms beat him about, and finally he comes to the land of Chicora—at present known as South Carolina. Here, by a wretched trick, he allures a hundred and thirty natives aboard and starts home. But he never got a lick of work from them: for they all to a man died of sorrow. Moreover, one of the ships is wrecked, and the whole crew drowned on the way home. Result: a pack of ludicrous lies (as, for instance, that they had found enormous giants among the natives—the kings of Xapida—who were made so when children by having their bones forcibly elongated, the bones having been treated with herbs to make them plastic; that they had also found men with tails, which they could lash fearsomely about, and the like), and a burst of indignation at De Ayllon's vile inveigling of the Chicora people.

In 1521 again comes Ponce de Leon, with two ships.

Result: the Indians fall upon him, slaughter many of his people, and wound himself; whereupon he goes back to Cuba and straightway dies in bitterness.

In 1524 again comes De Ayllon, with further designs upon Chicora. It may be here remarked parenthetically that this expedition belongs to the history of Florida only in virtue of the fact that in these days of which we speak everything from the Chesapeake to the Gulf is called Florida. This time the natives play off his own trick upon him, and quite beat him at his own game. They deceive him with hospitable shows for some days; then suddenly massacre an unsuspecting party of two hundred men whom he has sent off from the main body, and fall upon the balance so fiercely that they have great difficulty in regaining their ships. Result: the death of De Ayllon, and afterwards of his son, who is commissioned to carry out the project of his father but appears not to have been able to command means to do so and to have died of disappointment.

Then comes Panfilo de Narvaez, in 1528. On the way, a hurricane wrecks two of his ships and drowns seventy men. He lands on the western coast of Florida, somewhere about present Tampa Bay, takes possession of the country, and, leaving a hundred men in the ships to coast along to the northward, marches with three hundred into the interior. Presently he is wiled by the Indians, with tales of gold, into the northern country of Apalachee. But he never finds the gold; after seeing his dreams of palaces and cities—he knows of Cortez's Mexican glories, revealed a year or two before—continually melting away into the disgusting realities of petty towns composed of a few Indian huts; after unspeakable fatigues, hungers, privations, ending in naught but disappointment; he gives up the gold-quest, long before he reaches the Georgia

hills where he might have found it, and makes his way back to Auté (as the Indians call it), a point probably not far from Apalachicola. But here is no rest. They are starving; and when they fish or hunt, the Indians kill them. Ten men disappear in this way. The fevers help the Indians: forty more die. The ships never come. Finally, in despair they build five boats, rig them with cordage of palmetto-fibre and horsehair and with sails of clothing, tie up horse-skins for water-bottles, embark, and make westward. But they do not know their geography: they fare hither and thither; they live on the flesh of their own dead and endure all manner of suffering, till finally all but four (with one who had been previously captured, and of whom we shall hear more) are either drowned, starved, or killed by the Indians. The fate of Narvaez himself is particularly tragic. Arrived somewhere beyond the Perdido River, his men go ashore, leaving him with a sailor and a boy in the boat. In the night the wind comes, and blows them to sea, and they die a lonesome death. The four survivors become medicine-men among the Indians; and after six or seven years make their way westward by land to their countrymen in Mexico. These four cross the Mississippi River some years before De Soto "discovers" it. One of them, Cabeça de Vaca, writes an account of these matters, which, albeit it reports lions and kangaroos as among the fauna of Florida, nevertheless contains much valuable matter for the historians. The vessels originally left with the hundred men aboard finally return, having missed their land-party all through. Results: the narrative of Cabeça de Vaca.

In 1539, Hernando de Soto, brilliant with fame and wealth brought from Peru where he has been Pizarro's right-hand man, comes with a thousand men and lands in Tampa Bay, which he calls Espiritu Santo, after the Whit-

sunday upon which he comes ashore. Here he is presently joined by one Juan Ortiz, the captive who has already been mentioned as one of the five survivors of the Narvaez expedition. About this man Ortiz hangs a noble story of salvation from death by an Indian maiden, which, for the pure unrewarded magnanimity of it, should compel the world to hold her in even higher reverence than the Virginian Pocahontas. It is the story of Hirrihigua's daughter. Early in the Narvaez expedition King Hirrihigua's Indians brought in two captives—Ortiz and a companion—whom they had decoyed ashore. The companion was quickly killed; but by the greatest ill-luck in the world, at that moment King Hirrihigua bethought him of having a roast; being all the more intent upon it through the remembrance of certain dreadful treatment which his mother had received from Narvaez. Her nose had been cut off by that commander in the pursuance of his bloody Spanish policies. Hirrihigua therefore caused Ortiz to be bound upon a sort of huge gridiron composed of wooden poles, under which a fire of hot coals was fiercely burning. At the instant when the poor boy—he was but eighteen years old—hovered upon the brink of death by fire, King Hirrihigua's daughter, a young girl (another account adds other females as assisting at this first intercession), fell at her father's feet, and by many persuasions—such as that Ortiz was but a youth, whom it was ignoble to fear and cowardly to kill, and the like sweet argument—prevailed upon him to release his victim. She ministered to the poor young man, and herself cared for his hurts. And finally married him, of course, you say? No; and this is the magnanimous part of the story. No long time passed before King Hirrihigua repented him of his clemency. His mother was not avenged. Ortiz must certainly die. The daughter discovered his

intentions, apprised Ortiz thereof, and under the darkness of night guided him away herself (another version says, furnished him with a guide) into the forest, with minute directions how he should reach one Mucoso, a chief, who was her affianced lover. This Mucoso appears to have been a man that God made, a man rooted in honor. He consented to protect Ortiz; and, having once undertaken, carried out his word with fidelity under temptations that would have shaken a Christian mightily. For it was not long before King Hirrihigua demanded the return of Ortiz. Mucoso refused. Hirrihigua put on the screws: Mucoso should not have his daughter unless he gave up the prisoner. Still Mucoso refused. He refused to the end; to the end Hirrihigua's daughter upheld him in the refusal; and to the end this savage man and woman, for pure honor, expended their love's happiness to save a foreigner who had come to conquer them.

One turns with regret from this fair story to follow the long march of De Soto. Why, indeed, follow it? De Soto travels on and on for eighteen months; gets into South Carolina, Georgia, Alabama, and has great battles with the natives. One of these battles was with King Vitachuco, early in the march, not far from Ocali (modern Ocala) in Florida; and after the fight De Soto, finding himself run short of chains for his captives, causes all whom he cannot manacle securely to be shot. Sometimes he catches a lot and cuts off their hands. But cruelties to his enemies avail not; hungers and fatigues and deaths of his own avail not; and at the end of these eighteen months he has marched back southward to Mauvilla, a place likely on the Alabama River, and thought to have originated the name of Mobile. Here he fights another great battle with the Indians, has eighteen killed and a hundred and fifty wounded, and, alas! what is worst of

all, in burning the Indian houses burns up with them the bushels of pearls which he had obtained through the kindness of the beautiful Indian queen—the Ladie of the Countrie, they call her—whom he had met in South Carolina.

At Mauvilla he learns that Maldonado with the ships is not far away—at Ochuse, or Pensacola. Here is a chance to get home. But he will not take it. He and Ortiz keep the news secret from the troops; and soon they all fare again into the interior, to the northwestward; they must have some gold, or die.

And presently, with poor De Soto, this last alternative comes to be plainly inevitable. After leaving Mauvilla they wander about: the summer, the fall, the winter, pass, and still they are wandering; they have crossed the Mississippi (*Rio Grande*—Great River—they call it) in cottonwood boats, have penetrated up into the White River country; until finally the spring is come again, and they have got back among the desperate canebrakes, on the banks of the Great River.

And now De Soto, with his Ulysses' wanderings, is literally tired to death. A fever wears him away. One day in May of 1542 he calls his people together; in the presence of death he forgets about gold and plunder: he makes them a grave and noble speech, and appoints them a commander. Next day he dies; and for fear of the Indians they let his body down, in a dark night, to the bottom of the Mississippi River. This man has been one of the most brilliant of his brilliant time. He has been a great conqueror, he has brought a hundred and eighty thousand ducats out of Peru; and the sum and final good of it is,—a little pitiful water-gurgle in a May night.

The balance of the men start towards Mexico; and,

after wild adventures, three hundred and forty out of the original thousand get back to Panuco.

As for the result of this expedition, it is far beyond all the others: for it is the story of Hirrihigua's daughter—a story to which, in comparison, the "discovery" of the Mississippi River is but as a dried fig.

One would think that this disastrous expedition was enough in all conscience to have been thoroughly satisfactory to these Spaniards. But it was not; the glamour of the riches of Mexico and of Peru still lay on their eyes; and so here, in 1559, comes the greatest expedition of all. Fifteen hundred men, with many priests bent on missionary work, under the command of Don Tristan de Luna, come up and land in the Bay of Santa Maria, or Pensacola. At the very start there is disaster: a hurricane destroys the whole fleet a few days after their arrival, with most of their provisions; but they send back for more and push into the country. They go through much the same experience with that of their predecessors. Sometimes the Indians are friendly, sometimes not. The priests do not convert any worth mentioning. It appears that even the friendly Indians do not always appreciate the pleasure of the Spaniards' company; and one day a party of savages who have been entertaining them, and who find themselves likely to be eaten out of house and home by their guests, devise a pretty trick to get rid of them. A very gorgeous person, with a retinue, appears in the Spanish camp, declares amid much ceremony and grave formality that he is ambassador from the King of Coca (likely Coosa, in Alabama) to invite them there, and desires that he may conduct them. They receive him with effusion; and march towards Coca. Next morning the ambassador and all his suite are nowhere to be found; and the caballeros discover that the whole

thing is a grievous hoax. One fancies that these old Dons were villainously heavy persons, swashbucklers iron-clad as to their bodies and souls. If they had had the wit of Yankee soldiers or Confederates, then "going to see the King of Coca" would have been synonym for a hoax the world over.

They marched on, however, to Coca. It was the old story. Quarrels arose in the camp; disaffection and mutiny sprung up; hunger—even to the living upon acorns—weariness, and death, all worked together; and finally my Lord Tristan de Luna, having got back to Santa Maria with a few followers, was ordered by the Viceroy of Mexico to come home.

It would really seem that the Spaniards were now seriously thinking of letting Florida alone. But they were soon stirred up to fresh endeavor by the appearance of certain French Huguenots, who, under Jean Ribaut, came over in 1562, and after coasting along to the northward established a short-lived colony at Port Royal. In 1564 came René de Laudonnière, also of the Huguenot party in France, and built Fort Caroline on the St. Johns, after having landed at the present site of St. Augustine and had amicable entertainment from a "*paracoussi*," or chief, and his attendant subjects.

The history of Florida now becomes the history of St. Augustine, for some years; and the reader is referred to the latter half of the chapter devoted to that city, where he will find some brief account of the wars between the Spaniards and the Huguenots in Florida; of the massacre of the priests at St. Augustine by the son of the chief of Guale; of the sacking of the town by pirates, and the like matters, bringing up this outline to 1670–1.

About this time certain English colonists get over to

Port Royal, and soon thereafter to the Ashley River. One would think there was room enough between the Ashley and the St. Johns for these little bands of colonists. But no. People in these old days seem to have had a perfect mania of truculence upon them. No sooner does one man see another than he wants to fight him. They are not tamed and rendered social, as *a priori* one would conclude they might have been if even by the mere common brotherhood of the sensation of exile. So far from it, they land upon the shores of the New World ready, like Trinculo's party on the sands, to smite the very air for breathing in their faces.

And so the two colonies straightway fall into hostilities which continue a long time. The Carolinians accuse the Spaniards of harboring their runaway servants; the Spaniards accuse the Carolinians of harboring pirates; until, in 1676, they come to blows. The Spaniards on their first expedition encounter entrenchments, and retreat; but in 1678 they come up again from St. Augustine, pillage Lord Cardross's Scotchmen on Port Royal Island and other settlements, and commit many atrocities.

In 1696 the Spanish Government, roused to new energy by envy of the success of Monsieur de la Salle in exploring the Mississippi River, commenced colonizing the western coast of Florida, and build a fort at Pensacola (Pençacola).

The South Carolinians, in the mean time, have not forgotten the Port Royal barbarities; and, in 1702, they proceed to chastise the Floridian Spaniards. With about twelve hundred men, equally composed of white militia and red allies, they advance in two parties—one by sea under Governor Moore (then Governor of South Carolina), and another under Colonel Daniel moving in boats down the protected sounds on the coast and up the St.

Johns to Picolata, thence across to St. Augustine, which is the objective-point of both columns.

This latter party reach their destination first, drive the Spaniards into their fort, and hold the town.

Governor Moore, on the sea-side, makes less headway. His guns are not big enough, he finds, after trying them; and Colonel Daniel is sent to Jamaica to get bigger ones. But while he is gone a couple of Spanish vessels appear, and Governor Moore seems to take a panic. He destroys his transports and extra supplies, burns poor St. Augustine (this burning of St. Augustine really appears to have acquired the force of a habit among all its conquerors, and the setting this ill-used town afire gets to be as much a matter of course as the lighting a cigar), and puts back to South Carolina, leaving Colonel Daniel, who returns from Jamaica in ignorance of this hasty departure, to come very near falling into the hands of the enemy.

And now the Indians, as if they had not quarrels enough of their own, embrace the whites'. Nine hundred Apalachees advance against Carolina in behalf of the Spaniards; five hundred Creeks oppose them in behalf of the Carolinians. When the two meet, the Creeks more than make up for their deficiency in numbers by a trick of war. They hang up their blankets, as if they were all asleep, and hide near by; the Apalachees plunge into the camp, thinking to surprise it, and are completely whipped in a short time by the ambushed Creeks.

Governor Moore is worried now about the St. Augustine *fiasco*, and gets together a thousand Creek Indians and a handful of militia to help him repair that failure. This time he lets St. Augustine alone, and moves down into the country about San Luis, a Spanish missionary station very near the present site of Tallahassee. He has better luck than last time. In his first serious battle he is so

fortunate as to kill the Spanish commander, Mexia, who is in charge at San Luis, together with about half of the four hundred Apalachees who are Mexia's allies. Then he has no further trouble, and he proceeds to smite and spare not. Fort or church, arms or communion-plate—it makes no difference; all are burnt and plundered.

That such things could go on down among these green woods and streams—where any man in his senses must, one would think, be drawn by the very force of nature into large labors and peaceful dreams—is to me only another proof that the world has not nearly enough insane asylums.

Thus these neighbors, South Carolina and Florida, with their respective Indian sympathizers, continued to fare up and down for years, first one side, then the other, like so many shuttles weaving death and sorrow. Their expeditions and counter-expeditions were so numerous that in a meagre sketch like this one has not room even to specify their dates and commanders. On every side were heard the war-whoops, were seen the scalps. In one uprising of the Yemassees—although they were defeated finally and driven into Florida, where they had previously sent their wives and children to the protection of their Spanish friends—it is said that four hundred of the South Carolina people were slain.

As time goes on, too, here come some new neighbors to Florida, who of course straightway begin to fight; these are the French who have made a settlement at Mobile. De Bienville, in charge there, about 1718, lands with a party on Santa Rosa Island, captures some Spanish soldiers, puts their uniforms on some of his Frenchmen, and, skillfully pursuing his stratagem, captures the Spanish fort at Pensacola with its commander and entire garrison, being probably assisted (so say the Spanish) by four

French frigates with their guns. The prisoners are sent to Havana, according to the terms of capitulation; here the Spanish resort to treachery, seize the vessels De Bienville had dispatched with the prisoners, and straightway organize a party to retake Pensacola, which De Bienville had left in charge of the Sieur de Chateaugué with a garrison. This counter-party play their trick in turn; they deceive De Chateaugué by sending in one of their treacherously-taken French ships under her own flag; then suddenly dispatch another of their own vessels and open fire; and so, after some days of negotiation, recapture their fort. But the French do not let them have it long. They retake it in 1719, and, probably considering the game not worth the candle, shortly afterwards destroy the fort and burn the town and abandon the whole business. The Spanish made another settlement on Santa Rosa Island; though it was still some years before Pensacola was commenced. The present Pensacola is probably only about one hundred and twenty-five years old.

In these days it is this same mournful fugitive slave trouble that keeps the sore festering. When the Yemassees come up foraying from Florida, any negro that has a mind joins them and finds harborage with the Spanish. The absconding debtors and escaped criminals, too, find their Texas down in Florida; and altogether there is a grievous exodus of people who are wanted in South Carolina. In 1725 two Spanish commissioners come up and meet Governor Middleton in Charleston to settle these matters; but they do not succeed; and finally things become so intolerable that one Captain Palmer, in 1727, with three hundred militia and a party of Indian allies, fares down into Florida and strikes the enemies with the arm of a long-suffering and much-injured man, burning and killing, even destroying the Yemassee

village of Macariz not more than a mile north of St. Augustine.

In 1732 came still another neighbor of Florida's on the scene; and, of course, again began to fight. The only thing in nature which approaches these people in truculence is crabs. Bring one crab near another, on shore; immediately they spit at each other, and grapple. Thus with Georgia, under General Oglethorpe. This time it was the Spaniards that commenced. They desired politely that Oglethorpe would immediately withdraw from all that portion of Georgia lying south of St. Helena's Sound, for that the same was the land of the King of Spain. General Oglethorpe refused; negotiations between England and Spain followed: no settlement; and finally in May of 1740 we find Oglethorpe, with a regiment of English regulars, a company of Scotchmen from the Altamaha under Captain McIntosh and a few Indians, at the mouth of the St. Johns on his way to attack St. Augustine, forty miles below. He advances without trouble, and captures and garrisons Fort Moosa, or the Negro Fort, a sort of stockade and block-house some two miles to the north of St. Augustine which the runaways had built and had been occupying. Then planting three batteries on Anastasia Island, and blockading, as he supposes, all the inlets by which supplies could reach the Spaniards from their friends, he leisurely proceeds to bombard and starve out Monteano, who is in charge of the fort.

But, as might have been expected, matters do not work well. The three officers left at Fort Moosa (Colonel Palmer and Captains McIntosh and McKay) begin to quarrel among themselves; and presently some three hundred Spaniards sally out, surprise the place and retake it after killing and capturing many of the garrison. Moreover, the men get discontented; the weather is warm,

and the mosquitoes—Spaniards by bloody instinct as well as by territorial nativity—shed a great deal of English blood.

This Governor Monteano appears to have been a Spaniard at once stout and stately. He keeps up an energetic defense; in reply to Oglethorpe's demand that he surrender his fort, he swears to defend it to the last drop of blood, "and hopes soon to kiss his Excellency's hand within its walls." He maintains a sharp look-out with small armed boats, which are very troublesome. Finally Oglethorpe hears that Monteano has just received supplies through Mosquito Inlet—a hole which the general had neglected to stop up; and then, after much discussion, abandons the siege and carries back his men to Georgia, without having acquired any very great reputation as a military commander.

But it was not long before Governor Oglethorpe proved himself to be really a man of many resources, who could learn by failure. For in 1742 his opponent Monteano in turn assumed the offensive, and set out from St. Augustine with thirty-six vessels and some three thousand men for the purpose of striking a decisive blow at the new English colony. Monteano sailed for the bar of Brunswick harbor, between St. Simon's and Jekyll Islands; and on arriving was stoutly resisted by batteries which Oglethorpe had placed on the shore of St. Simon's and on vessels stationed near, in a rude and hasty way. It was not long before Monteano had passed these; but here his triumph ended.

Proceeding some days afterwards to attack Frederica, where Oglethorpe had retreated, Monteano's people were so stoutly assaulted while crowded together on a narrow causeway that he was compelled to fall back with the loss of many killed and captured. A subsequent attack by

water resulted in no better success for Monteano. At this stage of the expedition, one of those tricks which the reader of the Florida wars soon comes to expect as a matter of course turned the tide in favor of the English.

Governor Oglethorpe had resolved to profit by the causeway defeat, and had disposed his forces so as to attack the Spanish before they recovered from the demoralization of it; but a deserter from his forces to the Spanish carried the news and spoiled his plan. Oglethorpe at once avenged himself upon the deserter and mystified Monteano, by bribing a Spanish prisoner to carry a letter to the deserter in the Spanish camp, purporting to be written by a friend of his in Oglethorpe's camp, and offering him a large sum if he would represent to the Spanish commander that the English force was much weaker than it really was and would lead him upon an ambush after having thus induced him to attack. The Spanish prisoner, upon arriving at his own camp, was immediately searched, and Monteano was thrown into a muddle of profound bewilderment by the plot and counterplot which arose betwixt the letter and the poor deserter's stout denial of having any such friend as the writer of it. In this ripe moment of perplexity three vessels from Charleston, with succors for Oglethorpe, appeared, and gave the finishing stroke to Monteano's wavering resolution; he called together his forces and straightway made sail backwards to St. Augustine. A few months afterwards Governor Oglethorpe completed his triumph by marching into Florida—to the very walls almost of the fort at St. Augustine, where his men captured and killed forty Spanish soldiers—and offering battle to the Spaniards at their own stronghold. They refused; and matters appear to have been much more quiet thereafter for several years, except certain murderous forays of

Indians, which still continued. This peaceful state was confirmed by the treaty of peace between England and Spain in 1748. In 1762, however, war broke out again, in the course of which England captured Havana. Up to this time Florida had remained of a consistent color, blood-red, as one may say—right Spanish. But she now commenced to change like a chameleon, and for some years thereafter the people must have been often in some uncertainty whether they were Spaniards, Englishmen, Frenchmen, or United States citizens. In the tripartite treaty of 1763, between England, France and Spain, the former ceded Havana to the latter in exchange for Florida.

The cession was a melancholy blow, however, to the Spanish in Florida; and it is said that all but five of the Spaniards in St. Augustine hastily disposed of their possessions and left the country, some of them being only prevented by compulsion from even destroying the town.

A new era now dawned upon Florida, which placed in strong relief the contrasted colonial policies of Spain and of Great Britain. Upon reviewing this sketch, one reflects with astonishment that here these Spaniards have held this magnificent country of Florida since 1512—two hundred and fifty years, and over—and nearly the entire results of their labor are the beggarly settlements at St. Augustine and Pensacola,—even these mostly consisting of soldiers and office-holders! The English at once commenced to infuse a more vigorous life into Florida. The country called by that name was divided into East Florida and West Florida; East Florida comprising all of the present State of Florida except that portion lying to the westward of the Apalachicola River, and West Florida embracing the country lying between the Mississippi and Lakes Pontchartrain and Maurepas on the west, and the Chattahoochee and Apalachicola Rivers on the east, as far

up as the thirty first parallel of north latitude. In the same year—1763—General James Grant was appointed Colonial Governor of East Florida, and appears to have at once commenced to carry out wise plans. Immigration was invited; liberal grants of land were made to the soldiers in the late wars upon condition of settlement and of quit-rents after ten years, the field-officers getting five thousand acres, captains three thousand, subalterns two thousand, non-commissioned officers two hundred, and privates fifty acres, each. Books, pictures and other descriptive publications were issued and distributed; the production of indigo and of naval stores was stimulated by offering bounties thereon; good roads were constructed (among others, the road from Fort Barrington to St. Augustine, which still remains good, and is still called "the King's road"), and every means was used to develop the country. Beresford and Spring Garden were settled; Dennis Rolle brought over a hundred English families and located a colony at a point still called Rollestown, a few miles above Pilatka, on the opposite side of the St. Johns; and Sir William Duncan and Dr. Turnbull established fifteen hundred Greeks and Minorcans, brought over from Smyrna, at a point called New Smyrna near Mosquito Inlet. This latter colony was fostered by great expenditures, and seemed likely to prosper at first in cultivating indigo; but quarrels arose between the settlers and Turnbull; the matter was carried into the courts, the contracts of service were rescinded, and the whole colony removed to St. Augustine, where their descendants still occupy what is called the Minorcan Quarter—that portion of the town lying next the fort.

The war of the Revolution now came on, and Florida became an asylum for the tories and loyalists of Georgia and South Carolina. It is said that in 1778 nearly seven

thousand of these persons moved there. Several ineffectual attempts and counter-attempts at invasion were made between Florida forces on the one side and those of Georgia and South Carolina on the other; but it was not until the latter part of 1778 that General Prevost moved up from St. Augustine with the Florida troops to unite in the operations before Savannah. It was in this expedition that the celebrated Rory (Roderick) McIntosh figured, a redoubtable gentleman of Scotch ancestry, whose name is connected by dozens of droll stories with the cities of St. Augustine, Savannah, and Charleston during these days.

"I recollect seeing," says the venerable John Cowper in a letter published in White's Historical Collections of Georgia, "in St. Augustine, on some public day, Rory, Colonel McArthur, and Major Small . . . parading the streets in full Highland costume, *attended by their pipers*. . . . In 1777 he must have been about sixty-five years of age, about six feet in height, strongly built, (with) white frizzled bushy hair, and large whiskers (then uncommon) frizzled fiercely out, a ruddy McIntosh complexion, handsome, large, and muscular limbs. In walking, or rather striding, his step must have been four feet."

Rory was keenly solicitous for the honor both of his country and of his dog. *E.g.*, he one day makes his appearance in Savannah and calls on Cowper & Telfair, his bankers, for money to bear his expenses to Charleston. He appears unusually agitated, and Mr. Cowper, after much difficulty, elicits the outburst:

"'That reptile in Charleston, Gadsden, has insulted my country, and I will put him to death.'

"'What has he done?' says Mr. Cowper.

"'Why,' says Rory, 'on being asked how he meant to fill up his wharf in Charleston, he replied, *with imported Scotchmen*, who were fit for nothing better!'"

With repeated persuasions the irate Scotchman was finally induced to return to his home at Mallow.

"He was fond of dogs, . . . one in particular named *Luath*, which he had taught to take his back scent. He laid a considerable bet that he would hide a doubloon at three miles' distance and that Luath would find it. Luath went off on his trail and returned panting, his tongue out, but no doubloon. 'Treason!' cried Rory, and off he and Luath went. The log was turned over, and the dog had scratched under it. A man appeared at some distance splitting rails. Without ceremony Rory drew his dirk, and swore that he would put him to instant death unless he returned the money. The man gave it up, saying that he had seen Mr. McIntosh put something under the log, and on examining had found it gold. Rory tossed him back the money. 'Take it,' said he, 'vile caitiff! It was not the pelf, but the honor of my dog I cared for.'"

One evening in Charleston, Rory marches into the house of Captain James Wallace, attended by his piper. "I am come, madam," said he to Mrs. Wallace, who was from the Highlands, "to take a cup of tea and give you a taste of our country's music!"

This Rory had been in that melancholy Fort Moosa capture, hereinbefore related. During the expedition under Prevost to Savannah, just spoken of, Sunbury (in Liberty County, Georgia) was attacked. Among the Florida troops before the fort, there, was Rory McIntosh. "Early one morning, when he had made rather free with 'mountain dew,' he insisted on sallying out to summon the fort to surrender. His friends could not restrain him; so out he strutted, claymore in hand, followed by his faithful slave Jim, and approached the fort, roaring out, 'Surrender, you miscreants! How dare you presume to resist his Majesty's arms?'" . . . The commander of the fort knew him, and seeing his condition forbade any one from firing on him. As Rory kept advancing, the commander, whose name was also McIntosh, and who seems to have been a man who understood how to carry a joke, "threw open the gate and said, 'Walk in, Mr. McIntosh,

and take possession.' 'No,' said Rory, 'I will not trust myself among such vermin, but I order you to surrender!'" This appears to have been too much for some of the men in the fort, and a rifle was fired at Rory, "the ball from which passed through his face," below his eyes. "He stumbled and fell, but immediately recovered, and retreated backwards flourishing his sword. Several dropping shots followed, and Jim called out, 'Run, massa! dey kill you!' 'Run, poor slave,' says Rory; 'thou mayst run, but I am of a race that never runs!'" and the redoubtable old hero got back safely into his own lines.

Sunbury, which had been unsuccessfully attacked a short time before by an expedition from Florida, was this time captured, and the troops moved on and took part in the reduction of Savannah.

In 1780, Governor Tonyn called the first General Assembly of the province of Florida together.

Florida now seemed to have emerged upon a steady career of peaceful prosperity. The culture of indigo had succeeded admirably; forty thousand barrels of naval stores had been shipped in 1779; turpentine was worth thirty-six shillings a barrel; and the estimation of all the manifold agricultural capacities of the State was growing so rapidly abroad that there can be no doubt it would have received a very great accession of hard-working immigrants had not one of those sudden changes of fortune occurred which seem for three hundred years to have made this unhappy country a mere ball of fate to be tossed about from king to king. In the year 1783 the Government of Great Britain concluded suddenly that it was worthless to retain the province of Florida. Those constituting the United States had been taken away; and even a part of Florida was already gone; for in the year 1781, De Galvez, the Spanish Governor of Louisiana,

had attacked Pensacola—which was at that time a strong post, garrisoned with a thousand men, under General Campbell—and after a stout resistance, which was finally rendered hopeless by the explosion of a shell in the magazine of Fort San Michel, had captured it. Florida being thus isolated, Great Britain ceded it to Spain in 1783, by a treaty which allowed the British inhabitants of the State eighteen months to move out; and the unhappy Floridians found all their labors brought to ignominious result. It was no small addition to the troubles of their situation that many of them, having been loyalists, could look to no very pleasant residence in the now independent States of the Union; and there was really great difficulty in finding a suitable place of refuge. Transportation was provided by the Government, and the inhabitants were carried to England, the Bahamas, Jamaica, Nova Scotia, some, not loyalists, returning to South Carolina.

Possession was taken by Spain, at St. Augustine, in 1784; a Spanish lethargy settled upon the land; the fine estates of the thrifty Englishmen mouldered into decay; few settlers came in from Spain; the activity of the State was principally confined to trading with the Indians, and to foiling the desperate attempts of adventurers like William Bowles and Daniel McGirth, who were for some time moving about among the Indians and exciting them to bloody disaffections with ingenious stories against the Spanish. Those who desire to pursue further the arts and machinations of these singular men, and to learn more of the remarkable Alexander MacGillivray, who was chief of the great Creek Nation at this time, will find some interesting particulars of them collected in the History of Florida, by George R. Fairbanks: Lippincott & Co., Philadelphia, 1871.

Florida continued now for a long time a mere border-

land, torn with Indian fights, and with irregular conflicts of adventuring parties and of ill-advised republican frontiersmen. In the year 1812 a party of these latter went so far as to meet in Southern Georgia and adopt a constitution, which they proposed to set up over the benighted inhabitants of Florida. They elected General John H. McIntosh to be head of the new republic, and Colonel Ashley commander of the army, moved down upon Fernandina, then just growing to be a place of some commercial resort, and captured the fort and garrison, with the ill-advised assistance of some American gunboats which happened to be in the harbor of Fernandina at that time under special instructions from the United States Government. They then marched upon St. Augustine; but in the mean time protests were made by the Spanish Government, followed by disavowal and recall on the part of the United States; and the new republic had to take itself out of Florida, with the loss of eight men killed by bushwhacking negroes from St. Augustine. It was during this expedition that a party of one hundred and ten men, under Colonel Newnan, of Georgia, penetrated into the Alachua country to near Lake Pithlachocco, where, in a severe battle with the Indians, under their King Payne, the latter were defeated after the exercise of much clever strategy and stout bravery by Newnan and his party. Payne is said to have behaved like a hero in this fight, and to have ridden a white horse into action, urging his men forward with consummate bravery.

Bowlegs, a co-leader with Payne, kept up the fight with great vigor; and it was only after eight days, in which Newnan had been compelled to fortify and undergo a siege, that he managed to effect a retreat. During the retreat he was again attacked by the Seminoles, and lost several men. His command suffered greatly for food

before getting back to Picolata, even eating alligators in their distress.

Florida could not have been a pleasant place of residence in these days. Some account of a singular fort which existed for several years on the Apalachicola River may illustrate the state of affairs at this time. During the war of 1812 between Great Britain and the United States, General Jackson moved down upon Pensacola and captured it by storm. Thereupon its former commander, Colonel Nichols, who had gotten away by water, proceeded with some British troops and friendly Indians up the Apalachicola River and caused a fort to be constructed on a bluff of that stream at the point now known as Fort Gadsden, in which was placed a garrison of British troops and Creek Indians. This fort was intended to be used as a rendezvous and base of operations for the runaway negroes, from which they might depredate upon the neighboring border. The war of 1812 having closed, the British troops left the fort; but a negro named Garcia retained possession of it, the runaways under his lead garrisoned it, and it became a really strong point of defense to that large colony of runaway outlaws who had settled on the banks of the Apalachicola. The walls of the fort were fifteen feet in height and eighteen in breadth; it had a swamp behind, and creeks above and below it; it was armed with nine cannon and three thousand small arms, and had amply-stored magazines. This fort existed until 1816, when Colonel Clinch of the United States army reduced it, after a set battle with the negro garrison which opened hotly enough and would have doubtless been a troublesome piece of work for the whites had not a lucky hot shot from one of the United States gunboats exploded a magazine in the fort, causing great slaughter and demoralization among those inside.

Garcia, and a Choctaw chief who was aiding and abetting him, were executed after the capture; and property amounting to two hundred thousand dollars in value is said to have been recovered in the fort.

The extent of Indian depredations at this time may be gathered from the fact that in the course of the expedition under General Jackson in 1818 against the Seminoles he discovered at Miccosukee "three hundred scalps of men, women, and children, most of them fresh."* In this foray General Jackson severely punished the Indians, hanging their chiefs without hesitation and even executing two Englishmen who were supposed to be instigating the Indians and supplying them with munitions of war.

That portion of West Florida west of the Perdido had been already acquired by the United States, it having been ceded to France by Spain in 1795 and thus forming a part of the Louisiana purchase of 1803. The balance of Florida was ceded by Spain to the United States in the treaty of 1819, ratified in 1821, in which latter year the United States Government took formal possession.

In 1822 an act of Congress consolidated East and West Florida into the Territory of Florida, and organized a territorial government for it. Soon afterwards the site of the former Indian settlement of Tallahassee, a place distinguished for its beautiful trees, was selected for the capital.

As the rich agricultural capabilities of the State began more and more to invite immigration, the demand now became more and more urgent for the Indians to be removed, so that the lands might be worked in peace. These Indians, the Miccosukies and Seminoles, occupied some of the best portions of the State. The latter tribe

* Fairbanks.

was an offshoot from the powerful Creeks. (Their name is usually, but wrongly, pronounced Se'minole; in conversation with General Sprague, who has a thorough acquaintance with this tribe, I observed that he always called them Semino'lehs, making four syllables and placing the accent on the penult.)

In the course of many "talks," a proposition was made to the Indians by the United States Government, offering them strong inducements to remove to the West; and finally a treaty was made at Payne's Landing on the Ocklawaha River in 1832 by which many of the chiefs agreed that if the proposed Western country should be acceptable to a delegation which they should appoint to examine it, and if the Creeks would reunite with them, they would remove. This delegation actually visited the proposed reservation, and after spending several months in examining it came back and made a favorable report to their people. But meantime the party which had originally opposed removal had grown stronger. It included Osceola, who was exceedingly violent in his denunciation of the project; and the negroes (of whom it is said there were a thousand living with the Indians, some of them being very prominent persons in the councils of the savages) were also hostile to the movement.

This party-feeling among the red men ran so high that in 1835 Osceola came upon the old chief Charley Emathla, who was making his preparations for removal, and killed him. This taste of blood seems to have whetted Osceola's* appetite. About a month afterwards he secreted

* The real name of this remarkable Indian was As-se-se-ha-ho-lar. He was also called Powell. He was a brave man both in appearance and action, and was a brilliant leader. He was captured—some say inveigled—by General Hernandez in one of the ensuing campaigns,

himself near the Florida Indian Agency, and after lying in wait for some days shot down General Thompson and a companion as they were strolling and smoking after dinner. On the same day (December 28, 1835), and partly by the contrivance of this same Osceola, occurred in another part of the State a massacre which was in some particulars one of the most remarkable in history. Major Francis L. Dade of the United States army, with one hundred and thirty-nine regulars and a six-pounder, while marching on his way from Tampa to Fort King through an open pine and palmetto country near the Withlacoochee River in Sumter County was fired upon suddenly by a band of one hundred and eighty Indians secreted in the palmetto. It is said that at the first fire nearly half the whites fell. The Indians fell back for a little while. The remainder of the command erected a hasty breastwork of pines, and in less than an hour the attack was renewed by the savages, and continued until the last man in the breastwork had fallen. After possessing themselves of the soldiers' arms, the Indians left. But the measure of cruelty was not then full; for in a short time a party of negroes rode up and butchered with knife and hatchet all who were not yet dead. One man had bribed an Indian to spare him; another successfully concealed himself and made his way to Tampa; and these two were the sole survivors. Osceola was to have been at this ambuscade; but he was busy on this day, as we have seen, at other similar work.

That such a band of savages should have been able to accomplish these results against a party of regular troops and under such circumstances shows a capacity for vigor-

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and imprisoned in Fort Moultrie, Charleston harbor, where he died of pure heart-break in a few weeks.

ous and persistent attack on the part of the Indians which must ever remain matter of astonishment.

This massacre opened the long and bloody Indian war which followed in Florida. General Clinch, who was in command in Florida, immediately called for volunteers after the Dade massacre, and defeated the Indians under Osceola and Alligator after a severe battle. He was compelled to abandon active operations, however, by the expiration of his volunteers' term. Meantime, General Gaines had come down from New Orleans, in the emergency, without waiting for orders; but General Scott, who had assumed command, appears to have treated him with the grossest discourtesy and to have managed to completely paralyze his movements. General Clinch soon retired in disgust, and General Scott's campaign resulted in nothing. The Indians were now devastating and burning the whole country east of the St. Johns between St. Augustine and New Smyrna, and putting the unhappy families to the knife. Toward the latter part of the year 1836, General R. K. Call, of Florida, commanding twelve hundred troops under General Armstrong and a small force of regulars, militia and friendly Creeks, conducted a short campaign on the Withlacoochee and defeated the Indians in one engagement; but he had to fall back for supplies, and at the end of the year the whole lower portion of the State was practically in the hands of the savages.

Early in 1837, General Jessup inaugurated an active campaign upon a plan of rapid movements, designed to prevent those annoying withdrawals for the purpose of obtaining supplies which had deprived the preceding campaigns of results. He prosecuted his plan with vigor. The Indians began to ask for "talks," and in a few weeks many of them were assembled at one post or another—

among others Osceola, King Philip and his son Coacoochee, near Fort Mellon—ostensibly for the purpose of carrying out the old project of a Western exodus. A rendezvous was appointed near Tampa, and some seven hundred had actually come in for this purpose, when early in June Osceola arrived with two hundred Miccosukies and so worked upon the intending Western emigrants that the whole party took themselves off toward the southern morasses and left General Jessup to commence over again. Which he did in the following fall with great vigor, and with a largely-increased force amounting to about nine thousand in all. These were divided into several columns and detachments, with specified districts for operation. One body of eleven hundred came from Tampa, under General Taylor, and immediately encountered four hundred Indians near Lake Okeechobee. After a gallant charge, which was desperately resisted by the Indians, the latter retired; but in all substantial results it was an Indian victory, for they lost but eleven killed and nine wounded, while the whites lost twenty-seven killed and one hundred and eleven wounded, and returned to Tampa.

The other detachments captured and killed a considerable number of Indians. Meantime, John Ross with a party of Cherokees had gone down among the Seminoles to treat with them, much to the disgust of General Jessup, who regarded the time lost from active fighting as wasted. While the Ross negotiations were pending, Coacoochee escaped through the embrasure in a cell of the fort at St. Augustine where he had been confined, and so stirred up his people upon rejoining them that the "talk" resulted in nothing. Meantime, by hook or by crook, over fifteen hundred Indians had been captured, who were transferred in May and June of 1837 to the West.

General Jessup was succeeded in command by General Zachary Taylor, and that officer carried on an active campaign during the winter of 1838–9. It resulted in little, however. The Indians had found out wherein their true strength lay, and could not again be tempted into a set battle, confining themselves to their own peculiar system of bushwhacking in small parties. General Taylor then established block-houses at a great many points, each with mounted scouts who were always on the search in their respective districts. It is probable this plan might have been very efficient had not General Macomb been sent down at this time by the Government to have another peace "talk" with the Indians. It so happened that it was just at that time of the year when—as any one must observe in reading these Florida wars—the wily Indians were ready to "talk," to wit, in the spring, when, if they could get the whites to suspend hostilities by some show of peace, they could have an opportunity to rest awhile, draw rations, get some sort of crop raised by the squaws off in the woods, and thus recruit as it were for a renewal of hostilities whenever they got ready. So it proved in this instance. General Macomb actually issued a sounding General Order proclaiming that the war was over, upon the strength of an agreement he had made with Halleck-Tustenuggee, Tiger tail, and Chitto-Tustenuggee; and peaceful operations were being universally resumed, when suddenly, little more than a month afterwards, the Indians broke out more bloodily than ever, killing without mercy. It was now found so difficult not only to fight, but even to find the Indians, that over thirty blood-hounds were actually brought from Cuba, at an expense of several thousand dollars, to be employed in tracking up the invisible red-men. But they failed, and the Indians kept up their cunning fights.

In May, 1840, Brigadier-General Armistead took command, and during a terrible year, filled with tragic Indian revenges, did his best to hunt out the foe. Notwithstanding the blood which was flowing on all sides, continual "talks" were had with small bands of Indians, who would come in and draw rations for awhile, then disappear and levy war again. It was to have one of these "talks" that Coacoochee (Wild Cat) came in once to meet Colonel Worth, arrayed in a very remarkable dress which he had made up from the properties of some play-actors whom he had killed and plundered not far from St. Augustine a short time previously.

General Armistead's command ended in 1841, when he was relieved at his own request. During the year some four hundred and fifty Indians of both sexes and all ages had been secured by various means.

General Worth now took the field in command, and immediately succeeded in turning the aspect of affairs. The Indians had been in the habit of escaping from the very clutches of their pursuers, and of retiring to places thought to be inaccessible to the whites. I was told a story of their facility in these matters some days ago. During one of these campaigns a party of soldiers had surrounded an Indian in a small pool of swampy water, in such a manner that they thought it absolutely impossible for him to escape. Upon a minute search, however, they were unable to find him, and abandoned the quest. Some time afterwards he was captured; and upon being asked how he had managed to escape, declared that he was lying under the very log upon which one of their party had stood, with his entire body under water except the mere tip end of his nose. Perhaps this may account for the marvelous feat recorded in the account of one of the great battles of De Soto near Ocala with King Vita-

chuco—how that two hundred Indians, having been driven into the lake by stress of battle, remained swimming in it for twenty-four hours.

General Worth, at any rate, appears to have convinced the Indians that all places accessible to them were accessible to him also, and that he could campaign in summer as well as in winter. Having secured the person of Coacoochee, he used that chief to great advantage in capturing others; and managed matters so well, bringing in band after band of captives and deporting them to the West, that early in 1842 he suggested to the Government to allow the small remainder of the Indians to stay within specified limits on the extreme southern end of the peninsula. His suggestion was finally adopted, and in August of the same year he formally announced that hostilities had closed.

About three hundred Indians remained. They, with their descendants, still carry on a peaceful life in the lower portion of Florida, supporting themselves by hunting, fishing, cattle-driving and scanty planting.

Thus ended a war which had lasted nearly seven years, had taxed the resources of six or seven United States generals, and had cost the Government more than nineteen millions of dollars.

This was indeed not the last blood shed on the soil of Florida in battle. The war between the States has its record here. This is so recent that it would not be interesting now to detail what is still in most people's recollection.

One cannot close this outline without reflecting upon the singular fate of this land which for three hundred and sixty years has languished, and has now burst into the world's regard as if it had but just opened like a long-closed magnolia-bud.

Surely it ought to give us a great many oranges, a great many bananas, and a great many early vegetables, after having been so bloodily fertilized for such a time. Surely it ought to restore to us a great many sick men,—it has swallowed up so many well ones!

CHAPTER XIV.

FOR CONSUMPTIVES.

In the course of a desperate but to all present appearances successful struggle with a case of consumption which had everything in its favor at the start—the prestige of inheritance on both sides and the powerful reinforcement of a bent student's habits—this present author finds remaining prominently in his recollection a few cardinal principles of action in this behalf which may possibly be of practical service to consumptives. In view of such a possibility, one cannot hesitate upon the sacrifice of personal delicacy involved in referring to oneself. A pain that cures a pain justifies its being.

And it often happens that the recommendations of a fellow-sufferer insinuate themselves into a patient's acceptance when the injunctions of a physician fail; they come with more force, because with less formula. The gentlest of invalids is sometimes disheartened with the best of doctors; "it is his business to tell me these things: *lege artis*," one says, wearily, and turns away in apathy and neglects all the advice.

First. *Set out to get well, with the thorough assurance that consumption is curable.*

Do not allow yourself to be fobbed off with well-meant but often ill-advised reiterations of your friends that there's nothing in the world the matter with your lungs, it's only your throat, or your bronchial tubes, and the like. There is really no time for the Pickwickian methods in

consumption. Once suspecting that you have it, show to some capable physician that you are strong enough to bear the certainty of knowing the fact, and then get his honest opinion of your condition. Let it be said here that in hundreds of instances these opinions, even of the most skilled practitioners, have been proven mistaken; the methods of examination, the apparent facts revealed by them, and the humanly drawn inferences therefrom, are all three liable to divers sources of error, and there is always a large margin of doubt to be attached to the diagnosis of even the best physician in the early stages of this disease.

But the declaration of the physician being given that you have consumption, then the first cardinal principle above stated comes into play: set about curing it; and with the certain assurance that it *can* be cured. It is now too late for the superstition, prevalent some years ago, that consumption is an incurable disease. This writer has personally seen a score of persons in active health who had seemed hopelessly ill with it years before; and the instances of the formation of healthy cicatrix in the lung are so numerous as to leave no doubt that many serious lesions of that organ may be repaired.

Secondly. *Give faithful and intelligent trial to every apparently reasonable mode of cure suggested for the disease.*

As has been before remarked in this book, the personal equation is almost as great an element in the phenomena of consumption as of asthma. Individual idiosyncrasies of either physical or mental temperament become frequently just the weights that turn the scale in favor of life or death. The effects of these personal peculiarities cannot be foreseen, and often develop themselves during treatment. Of course, it is quite out of the range of this short chapter to discuss these various modes of cure. The

milk cure, the beef-blood cure, the grape cure, the raw-beef cure, the whisky cure, the health-lift cure, the cure by change of climate, and many more have been devised. It will be observed that none of these depend upon medicine. Most intelligent physicians rely nowadays upon medicines only to alleviate the immediately distressing symptoms; the *curative* powers of drugs, in this as in any other disease, are much doubted by many of the most eminent persons in the faculty. In taking a general view, however, of all the methods of cure mentioned above, as well as of all others not mentioned, the consumptive immediately discovers that one fundamental principle underlies them all, to wit, *the making of the body as strong as possible by food, drink, air, and physical development.* It is to this indeed that all the recommendations of the physicians converge, namely, *that consumption is an unknown blood-poison, the only known method of counteracting which is to use such generous diet, fresh air, ameliorative appliances, and muscular and respiratory expansions as will bring the system to its highest state of resistive capacity.* This may be considered the eleventh commandment in consumption, including all the rest.

The problem is, therefore, for the consumptive to find out how best to practically apply this general rule to his own particular idiosyncrasies, habits, environment, and ability. In this connection it may be of use to mention two details of treatment.

(*a*) There is but one beneficial method of using stimulants. That is, *first to ascertain the proper dose (which varies indefinitely with different individuals), by experimenting until you have found such a quantity as neither quickens the pulse nor produces any sensation in the eyes, this quantity being usually very small; and then to take this ascertained dose at intervals of not less than one hour and a half, with*

the greatest regularity; the theory being, that as the stimulus of the first dose decreases, its reaction will be met by the new stimulus of the second dose, the reaction of that by the action of the third, and so on, thus maintaining the system at its highest stage of resistance for such periods of time as enable it to throw off the disease. The kind of stimulant to be used is simply such as is found upon experiment to be most easily digested. In most cases, pure whisky (which should always be taken without sugar or any other mixture save its own quantity of water) has been found to be the best possible form of stimulant. Most wines available to persons of ordinary means are probably hurtful. Feeble and nervous patients, who find headache produced by stimulants, should diminish the dose, even to ten drops, and take it more frequently, say every hour. Perseverance for three or four days has been found to remove the tendency to headache and give full play to the beneficial effects of the stimulant.

This treatment—by regular doses of whisky administered at intervals of from an hour to an hour and a half through each entire day from sleep to sleep—has been known to effect marvels, unaided by any other remedies save generous food and proper exercise.

(*b*) *The physical expansion of the lungs is of the greatest importance in removing congestion and preventing hemorrhage.* It can be constantly practiced without any cumbrous appliances whatever. Whether you are standing, sitting, walking, riding, or lying in bed, at any time, whenever you think of it, *draw in your breath slowly until the chest is tolerably full—or, if you have a cough, until you feel that the inspiration is about to provoke it—and hold the breath so for a considerable time, then gently release it.* If not painful to do so, straighten the body and put out the arms during the process. A habit of this sort once ac-

quired will soon develop a comfortable feeling in the chest and a freedom from oppression quite astonishing in view of the simplicity of the means used. The process itself is a better expectorant than any known to the pharmacopœia, and often has more efficacy in relieving the dreadful hack of the consumptive than all the drugs that can be administered, without any of their injurious accompaniments. This gentle and constant expansion of the vesicles of the lung cannot be over-estimated; every means should be devised to remind oneself of it, and even to make it pleasant. The latter has been accomplished with great efficacy by playing the Boehm flute. The operation of playing the flute—so far as it depends on the breath—involves the precise motion of the lungs which is of benefit to the consumptive, to wit, a full inspiration (always take care, not *too* full, not straining in the least) succeeded by a slow and gentle delivery of the breath. Of course an inexperienced player wastes breath at first; but with increasing skill this disappears, and the operation of playing becomes so gentle as to involve scarcely more violent inspirations and expirations than those which a fully healthy man makes in ordinary breathing while asleep. It is hardly necessary to add that practicing should never be carried to excess; the least sign of fatigue should be the signal for stopping until the next day.

The recommendation of flute-playing to consumptives will seem strange to some, and possibly there may be physicians who would oppose it. It has, however, been long known as beneficial; Quantz, the flute-player to Friedrich, speaks particularly of its value in this behalf. Perhaps it may be proper to add that this author knows positively and personally of most signal benefits resulting therefrom.

In regard to the stimulant treatment marked (*a*) above,

one finds it necessary to say that no person entertaining the least doubt as to the possibility of the stimulant habit so fastening upon him or her as to become itself a controlling disease should meddle with it. As between dying a drunkard and dying a consumptive no one in his senses could hesitate a moment in favor of the latter alternative. And in this instance the dilemma is not so hard as that; for there are many other methods of treatment not involving this form of stimulant.

Thirdly. *Never get in the slightest degree wet, cold, or tired.*

One feels like saying, after Jean Paul, that herefrom many inferences are to be drawn, and I advise the reader to draw them. If, for example, you are a consumptive bent upon the open-air cure, and are going to the Indian River country in Florida to hunt and fish and camp out, you should provide yourself with a perfect suit of light India-rubber for head, neck, body, and feet, and a plentiful supply of thick flannel huntsman's-shirts to wear next the skin, no matter if it *is* warm; and your party should obey your lightest whim, with the instant devotion of slaves to a tyrant, in stopping and pitching camp as soon as you announce that you are tired. If, on the other hand, you are a feeble invalid, you should beware of long journeys by rail or otherwise in cold weather, where you may be subjected to sudden changes from hot cars to cold air; and should visit Florida (*e.g.*) while the weather is pleasant, remaining, then, over the whole winter, until the spring is nearly become summer. The same principle will lead you to avoid, after you have reached Florida, any long journey which might involve exposure. A single half-hour in the night air, a drenching from a five-minutes' shower, a walk of half a mile beyond your strength, may undo fatally the work of long and well-employed months.

Often, in traveling, one's mere delicate reluctance to ask the person in the seat ahead to close his window may cause one to sit in the draught until the terrible chill comes on which bears its result in weeks of fever and of cough. In such case either change your seat, or, if that be impossible, make the request which seems so dreadful as long as you sit and brood over it and so simple as soon as made.

Finally, carry the supportive treatment herein recommended beyond the material into the moral. Be brave with your consumption: do not discuss it with bated breath. It is not necessary to go to the irreverent point of a certain jolly sufferer at San Antonio, Texas, who used to burst into one's room with "Halloo, ——, how 're your tube's* this morning?" Yet he was conducting an active business, and was faring along with considerable comfort upon something like half a legitimate allowance of lung. Probably he would not have done so if he had puled about it. Endeavor, therefore, in pursuance of this policy, to have some occupation consistent with your disease's requirements. Brooding kills. If you are near a Florida farm (*e.g.*), interest yourself in something that is going on there, the orange-culture, the grape-culture, the early vegetables, the banana-culture, the fig-culture, the fine tobacco culture, and the like. The field of Florida in these matters is yet so new, so untried by the resources of modern agricultural improvement, as to be full as fascinating, if one should once get one's interest aroused in it, as it was in the old days when the Spaniards believed it to be full of gold and pearls. Or you may, if you like that sort of woods-life, kill alligators and sell their teeth, as mentioned in the Jacksonville chapter of

* Short for *tubercles*.

this book; or shoot herons, and collect their plumes for market—an occupation by which at least one invalid, of whom I have heard, has managed to support himself; or you might get a contract with some of the numerous colleges in the country to supply their cabinets with stuffed birds, or fish, or botanical specimens, from Florida. Of course, if you have means which preclude the necessity of doing these things for support, you can do them for pleasure, and in applying yourself to the study of science you will soon cease to wither under that true consumptive sense that life is done with you and that you have nothing left but to die. The flute-practicing above recommended is also valuable as affording some definite occupation for each day.

The ingenuity of every patient will indefinitely improve upon all these mere hints. If there were but any words in which to speak those devout and fervent hopes for the mitigation of any least pang which go with these meagre suggestions as they are hastily offered to you who are beyond all measure the keenest sufferers of all the stricken of this world!

CHAPTER XV.

OTHER WINTER-RESORTS ON THE ROUTE TO FLORIDA.

MANY invalids, consumptive, rheumatic, or asthmatic, have varied their Florida experiences by spending a part of their winter in Charleston, Augusta, Savannah, or Aiken; and there are others who, in obedience to that difference of temperament which I have before referred to as making it impossible to predict with certainty the precise shade of climate best suitable for any given individual, have found complete or partial restoration in one or other of those places without going farther South. Besides this, the attractions which they present in the way of comfortable lodgment, of good company, of mild climate, of various diversions, and of the facilities of established cities draw many tourists and pleasure-seekers and tired people, who without being sick nevertheless desire to flee from the rigors of the Northern climate.

CHARLESTON.

As one stands upon the steeple of old St. Michael's Church, a sheer hundred feet above any roofs in the neighborhood (where every visitor *should* stand, at his first sallying-forth into the city after arrival, for from here one may gain a complete idea of the entire environment almost at a glance), and looks over the general face of the city, perhaps no impression is more prominent

than the thorough gentlemanliness of it. There is nothing "loud" in sight. This gentlemanly aspect is all the more striking, in that it exhibits itself under the disadvantage of at least two very unfavorable circumstances. One is, that the houses are all turned to a dingy color—even those newly-painted—by the unusually strong quality of the sea-air which here sweeps freshly in from the near ocean. The other is, that the physiognomy of the city is so peculiar as to render it absolutely unlike that of any other city in the world within my knowledge. The houses, with their long three-storied stretches of piazzas, do not front the street, they front the sea-breeze; they are all arranged with their ends upon the street, precisely like pews in a church.

I have called these disadvantageous circumstances, because it is certainly a severe test of a man's gentlemanly bearing, when he preserves it intact in spite of being dressed at once rustily and unlike everybody else.

But Charleston does: its air, as it stands there under the steeple of St. Michael's, is distinctly full of affable decorum; and no visitor with the least perception of the fitness of things can stay in the pleasant old city for a day or two without imbibing this sense of genial old-time dignity, to the extent of wishing that Charleston might always be, as it is, at once sober-suited and queer and delightful.

Going round the balcony of the steeple of St. Michael's to the battery-side, and facing seaward: the river sweeping down on your right is the Cooper; that on the left is the Ashley; as the glance runs down the farther bank of Cooper River seaward, the points of land which last meet the eye represent James and Morris Islands, whose batteries were so famous during the war; inclosing the harbor on the left is Sullivan's Island, on which one perceives

the town of Moultrieville and Fort Moultrie. In the centre-view one sees Fort Sumter, and, more inland, Castle Pinckney. On the right appears Fort Johnson.

Yonder low banks of the Cooper and Ashley Rivers up which one's eye roves for a long distance from this elevated station, seem to be really in the strange Micawberness of things about to pour even as much wealth into Charleston as the friendly currents which run between them, or as the tributary sea itself. It is from them that the celebrated phosphate ores are being dug in great quantities; and now that the world—not only the American world, but England, France, Germany, Spain, Scotland, Ireland—has quite convinced itself of the enormous substantial value of these singular deposits as fertilizing material, no reasonable-sounding prophecy can be made concerning the ultimate extent of the trade in them from this point.

The "phosphate rocks" of this region occur in the form of nodules, which are of a yellowish-gray color, emit a fetid odor when broken, and vary in size from an inch in diameter to masses weighing two hundred pounds. The deposit along the peninsula between the Ashley and Cooper Rivers near Charleston lies below the surface at a depth of from four to five feet, cropping out immediately at the banks of the rivers. It is but a short time ago that the farmers along the river-banks piled up these outcropping rocks in pyramidal heaps to get them out of the way, their value being unknown. The deposit here is often from eighteen to twenty inches thick. It sometimes reaches a thickness of three feet; and is sometimes found in "pockets" several feet in width and depth. A uniform deposit of fifteen inches in depth yields six hundred tons to the acre; there are some now yielding a thousand tons to the acre. It is not confined to the

Charleston peninsula, but is found—though not in a continuous stratum—all the way from the Wando and Cooper Rivers, fifteen miles above Charleston, running parallel with the coast as far as to St. Helena Sound, near Port Royal. It is often exposed in the beds of streams at low tide; and one of the numerous mining companies is devoted exclusively to collecting these river-bed riches.

The nodules constituting the ore are mainly composed of phosphate of lime. Their geological history is strange and intensely interesting.

The Eocene Marl "is the foundation of the whole seaboard country of South Carolina, and . . . is composed of the Santee, Cooper, and Ashley River Marls, which in the aggregate are seven hundred feet thick, and extend from North Carolina into Georgia. Before the low country of South Carolina was raised above the level of the ocean, the waves of the Atlantic beat upon the granitic hills of Edgefield, Lexington, and Richland.

"The shallow water of the coast with its submarine formation of undulating sand-banks was then, as now, resting upon this surface of the great Marl formation, of Eocene age; both were below the level of the ocean, exposed to the degrading influence of its waves, and bored by Mollusca and other marine animals.

"The Eocene Marl is here represented as we have found it, with its surface washed into deep cavities and holes, bored by animals just named, and honey-combed to the depth of five or six feet. This is its condition off Charleston harbor at the present time; and wherever the surface of the bed inland has been uncovered, it is found irregular and broken, and the phosphate rocks show this plainly. From the coarsely honey-combed surface of this mother-bed, fragments were being continually broken off by the waves, rolled over the sand-beds, which wore off their angular edges, and finally deposited them in extensive masses in the great hollows or basins below the ocean-level. . . .

"We apprehend it did not require a very long time nor much friction to reduce these comparatively soft lumps of Marl rock to the rounded or nodular forms they now have. Every gale drove them farther and farther upon the submarine beach, until at last they were

deposited in the lagoons or basins formed within the sand-reach of the coast. . . .

"Professor Ansted, describing the phosphate-beds near Cambridge, England, writes—and we quote him in corroboration of our own views on this subject: 'Many years ago a discovery of phosphate of lime was made in the so-called Crag-beds of Suffolk, and afterwards in the Green-sands of many parts of the southeast of England.' (This corresponds with the Eocene or Green-sand of South Carolina.) 'The former contain beds consisting of nodules of exceedingly hard material, which, when ground, are soluble in sulphuric acid, and then form a most valuable manure. . . . The nodules themselves are believed to have been washed out of older rocks, also of Tertiary age.' It was, undoubtedly, so with the South Carolina phosphate-rocks."

"The next great change was the upheaval of the whole seaboard country by some geological agency, and the elevation of the coast above the level of the ocean. When the sand hills and the submarine lagoons were raised, the basins contained sea or salt water, and must have been so many small salt lakes along the sea-coast, having their bottoms covered or paved with a thin layer of the nodular fragments of Marl rock. As the evaporation of the salt water progressed, what was left became day after day a stronger brine, until at last a deposit of salt ultimately formed as a crust upon the pavement of Marl rocks. And here we must remind the reader, that these nodular fragments of Eocene rocks are composed (like the mother-rock from which they had been broken off) entirely of the dead shells of marine animals, which age after age were deposited at the bottom of the ocean or Eocene sea, and finally became an immense bed or formation of Marl, inclosing throughout its great depth not only the *Polythalamous** shells, corals and corallines, but the teeth and bones of sharks and other fish, and of whale-like and alligator-like animals: such alone as live in the sea; but no remains of any land animal *have ever yet been found in it.* All the remains of land animals obtained in such vast numbers are *mingled* with, and not *imbedded in*, the nodules found in the Phosphate basins; and this mingling of bones and teeth occurred in the POST-PLEIOCENE AGE, after the elevation of the basins above the ocean level. It was in this Post-Pleiocene age" that "the American Elephant, or Mammoth, the Mastodon, Rhinoceros, Megatherium,

* Many-chambered.

Hadrosaurus, and other gigantic quadrupeds roamed the Carolina forests, and repaired periodically to these Salt-lakes or Lagoons, or as they are called in Kentucky, *Salt-licks;* and during a series of indefinite ages, ... they were first sipping brine, then licking salt, and depositing their fecal remains, and ultimately their bones and teeth, in fact their dead bodies, in these great open *crawls* or pens." *

The marl-nodules, over which these land animals thus herded for ages, were mainly composed of carbonate of lime. Now carbonate of lime may be dissolved away and replaced by silicious matter, as in the case of these same Santee marls which are exposed near Aiken, South Carolina, as Buhrstone or Millstone-rock; or it may, when subject to the action of the phosphoric fecal discharges of animals, become changed into phosphate of lime. Many persons have even confounded these phosphate rocks with bones, and some have imagined that the phosphatic qualities of the rock were solely derived from the great numbers of bones found associated with them. But the rock is, as has been said before, the transformed lime of shells, corals and corallines; and so far from owing its phosphatic nature to bones, it has been found that while fresh bones contain only about fifty-two per cent. of phosphate of lime, the bones dug up with the phosphate deposit yield ninety-two per cent. of phosphate of lime, thus showing that the bones have gained from the rock, rather than the rock from the bones. What is known as the great "Charleston Fish-bed" is not the phosphate-bed; it is the Ashley marl and sands underlying the phosphate deposit, and contains more carbonate than phosphate.

Such is the hypothesis of Professor Francis S. Holmes, of Charleston, South Carolina, a gentleman whose name

* THE PHOSPHATE ROCKS OF SOUTH CAROLINA: By Francis S. Holmes. Holmes' Book House, Charleston, 1870.

is intimately connected not only with the first knowledge of these great deposits, but with the utilization which was made of them much later. It appears that in the year 1837 Professor Holmes, then a young student of geology, found "in an old rice-field, about a mile from the west bank of the Ashley, in St. Andrews Parish, . . . a number of rolled or water-worn nodules, of a rocky material filled with the impressions or casts of marine shells. These . . . were scattered over the surface of the land, and in some places had been gathered into heaps, so that they could not interfere materially with the cultivation of the field." He soon gathered for his own cabinet "thousands of remarkable specimens;" and some six years afterwards showed them to Mr. Ruffin, who, as State Geologist, was actively searching out localities where marls could be obtained. At that time, however, the value of phosphate of lime does not seem to have been known even to the agricultural geologist. Mr. Ruffin was looking for *carbonates* of lime, or marls, which were then being earnestly recommended to farmers for fertilizing purposes; and the phosphatic nodules were dismisssd as valueless. Several years afterwards Professor Tuomey made a crude analysis of similar nodules, but found only sixteen per cent. of phosphate of lime in them.

In the year 1867, however, one of these specimens fell into the hands of Dr. N. A. Pratt, who was then residing in Charleston. He discovered upon analysis that it contained sixty per cent. of phosphate of lime; and on consulting Professor Holmes and finding that he had long been acquainted with the nodules, though unaware of their great proportion of phosphatic matter, he resolved to ascertain the extent of the deposits.

. . . "Dr. Pratt left the next day with Mr. Lucas for Ashley Ferry, saw the rock *in situ*, and admitted 'it surpassed his anticipation.

On the very day the doctor and Mr. Lucas were visiting the Ashley we received Ansted's book from London, on the Geology of the Cambridge Beds of Phosphates, giving in detail the analysis of a rock similar to that of the Ashley, and discovered some time during our Confederate War. . . . On the doctor's return from the Ashley (with Mr. Lucas) we had the pleasure of placing the book in his hands and directing his attention to the article. Several persons were present at the time, and all expressed their surprise. After SIX WEEKS OF UNAVAILING EXERTIONS in obtaining means to develop these treasures of the Ashley River, and to convince the good people of Charleston of the value of the discovery, we were obliged to resort to Northern cities for aid. Mr. James T. Welsman, of Charleston, one of the few who fully appreciated the discovery, furnished the necessary funds. Geo. T. Lewis and Fredk. Klett, Esqs., two gentlemen of Philadelphia, immediately took the matter in hand, rewarded us both for our discovery, and furnished the capital for the first Phosphate Mining Association—'The Charleston, South Carolina, Mining and Manufacturing Company.'"

The beginning thus made was soon followed up, and company after company organized. These organizations are of two sorts: those which merely dig up and wash the ore, shipping it to various parts of the world in its crude state, and those which manufacture the ore into commercial fertilizers. Of the former sort are the "Charleston," "Coosaw," "Pacific Guano," "Marine and River Phosphate," and "Oak Point" mining companies, and the mines of Pinckney & Gregg, and of William L. Bradley; of the latter sort are the "Wando," "Etiwan," "Atlantic," "Soluble Pacific," and "Stono" companies, and the works of J. B. Sardy. There are several other smaller mines and works besides those mentioned. Very large amounts of money are invested in the acid-chambers for the manufacture of sulphuric acid, and in the crushing and washing machinery and the like appliances of these works. The process is simple. The ore is dug by the pick, or, when taken from the beds of the

streams, by powerful dredges. It is then dried, washed by machinery and shipped crude, or crushed, treated with sulphuric acid and manipulated into various forms of commercial fertilizers.

This ore is rendered additionally interesting by its association with the age of pre-historic man. In the year 1844 Professor Holmes in opening a marl-pit found among these nodules, directly under the roots of a large oak, a stone hatchet and some stone arrow-heads whose forms seemed to separate them from those usually found in the Indian mounds. Soon afterwards he found a human bone projecting from a bluff and touching the phosphate stratum; but not supposing it to belong to that age he threw it away. About a year afterwards, however, he found a lower jaw-bone with teeth in the same bed and preserved it; and in 1867 Dr. Pratt and Professor Kerr discovered near the same spot parts of a human femur and tibia. There seems now to be no doubt that these remains all point to the same age with that so richly illustrated by the discoveries in the Somme valley in France, and in Switzerland, known as the Stone Age.

During Professor Holmes's investigations into this subject, the circumstance revealed itself that Charleston is situated on the same geological formation with that over which London is built.*

In the year 1662 his Majesty Charles II. granted a charter to Edward, Earl of Clarendon, George, Duke of Albemarle, William, Lord Craven, John, Lord Berkeley, Antony, Lord Ashley, Sir George Carteret, Sir William Berkeley, and Sir John Colleton, conveying to them

* The author desires to acknowledge his obligation to the courtesy of Mr. Thomas D. Dotterer, superintendent of the Wando Company's works, for many of the facts embodied in this brief account of the Charleston phosphate deposits.

a certain vast domain lying between the thirty-first and thirty-sixth parallels of north latitude, and running west to the Pacific Ocean, to be held in free and common socage. A second charter afterwards enlarged the grant so as to make it embrace all the territory lying between 29° and 36° 30′ of north latitude.

For the colony which was to inaugurate a civilization in this new region the Lords Proprietors procured John Locke to draw up that famous Constitution which was the first attempt to construct a clock-work society, warranted, when once set going, to run till the Day of Judgment. Perhaps one could scarcely engage in a more fruitful inquiry than a search for the principles underlying those prodigious contrasts which have revealed themselves between the moral excellences of some of the best men who have ever lived and the practical absurdities of their ideal projections for the benefit of society. The Republic which Plato devised, the Palatinate of John Locke,* and the Utopia of John Ruskin completely invert the qualities of their inventors and seem vicious in the precise degree that those were virtuous. As for Locke's Constitution, it quickly proved itself wholly unsuited to the needs of its people, and was virtually disused long before it was formally abandoned.

The Proprietors located a settlement at Port Royal in 1670. In 1671 the colonists removed to the west bank of the Ashley, not far above its mouth, and instituted "Old Charlestown." In 1679 the project was agitated, and in 1680 carried out, of moving to the present site of Charleston, then Oyster Point—a spot which on account

* See the Constitution itself: probably easiest accessible to most readers in vol. ii. of Carroll's Hist. Coll. of South Carolina. Harper & Bros., 1836.

of its situation between the Cooper and Ashley Rivers afforded better facilities and deeper water for shipping.

"At our being there," says T. A.,* writing in 1682 (supposed to have been Thomas Ashe) "was judged in the country a 1000 or 1200 souls; but the great number of families from England, Ireland, Barbadoes, Jamaica, and the Caribbees have more than doubled that number."

The extravagant descriptions of the beauty of the climate, the fertility of the soil, the grandeur of the forests, and the like, were indeed enough to draw adventurers from many regions. T. A. wrote seductive accounts of even the medicinal productions of Carolina.

"They have," says he, *e.g.*, "three sorts of the Rattle Snake Root which I have seen: the Comous, or Hairy, the Smooth, the Nodous, or Knotted Root; and if I do not very much in my Observations err, the Leaves of all these roots of a Heart had the exact Resemblance; they are all sovereign against the mortal Bites of that Snake too frequent in the West Indies. In all pestilential Distempers, as Plague, Small Pox, and malignant Fevers, it's a noble Specifick; when stung they eat the Root, applying it to the Venemous Wound: or they boyl the Roots in Water, which drunk, fortifies and corroborates the Heart, exciting strong and generous Sweats; by which endangered Nature is relieved; and the Poyson carried off and expelled."

He writes similar accounts of the virtues of the ambergris found on the shores; and, along with some sprightly tales of the Carolinian Turtles,† declares that "the Flesh is commended for a good antiscorbutique Diet, . . . and some that have been far gone in consumption, with the constant use of this Diet have been thoroughly recovered and cured in 3 or 4 months."

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* In "The Compleat Discovery," by T. A., "clerk on board his Majestie's ship The Richmond."

† See the account hereinbefore quoted from him in the "Gulf Coast" chapter of this book.

And so, through ups and downs far too complicated for narration in this place; through harassments from the Stono and Westo Indians, who would possibly have quite eaten up the young colony save for the diversions created by the private wars between the Westoes and the Serannas; through civil seditions; through internal troubles betwixt Cavaliers and Puritans, who along with their goods and household gods had brought also their old quarrels with them over the sea; through prosperities drawn from diverse sources—now from West Indian pirates who would come into town and scatter their gold and silver about with lavish hand, the king permitting them so to do and even knighting one of them (Henry Morgan)—and now from accessions of Huguenots driven here by the revocation of the Edict of Nantes; through wars with the Yemassee and wars with the Spaniard; the Charleston colony fared along. Says Oldmixon (mostly redacting Archdale), describing it in 1708:

"Charles Town, the capital of this province, lies in 30° 40′′ north latitude, two leagues from the sea." . . . It "is a market town, and thither the whole product of the province is brought for sale. Neither is its trade inconsiderable; for it deals near one thousand miles into the continent; however, 'tis unhappy in a bar that admits no ships above two hundred tons. Its situation is very inviting, and the country about it agreeable and fruitful; the highways extremely inviting, especially that called Broadway,* which for three or four miles make a road and walk 'so pleasantly green that,' says my author, 'I believe no prince in Europe by all his art can make so pleasant a sight for the whole year. There are several fair streets in the town, and some handsome buildings. As for public edifices, the church is most remarkable; 'tis large and stately enough; . . . but the auditory begins to want room and another church.† This is dedicated to St. Philip.'"

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* Meeting Street.

† The parish of St. Michael's was afterwards established.

A later writer, in 1763, describes some lighter matters in Charleston; and appears particularly to have fallen, perhaps on some enchanted Charleston night by the water-side, into the sweet hands of certain slender and lissome ladies whom every visitor to modern Charleston will easily recognize as true ancestral types of the lithe and graceful girls that still abound there.

The inhabitants of the Carolina province, he says, "are generally of a good stature and well made, with lively and agreeable countenances, sensible, spirited, and exceed most people in acts of benevolence, hospitality, and charity. . . . The personal qualities of the ladies are much to their credit and advantage; they are generally of a middling stature, genteel and slender; they have fair complexions—without the help of art—and regular features; their air is easy and natural; . . . their eyes sparkling, penetrating and inchantingly sweet; they are fond of dancing, an exercise they perform very gracefully; and many sing well, and play upon the harpsichord and guitar with great skill. . . . In summer . . . riding on horseback or in chaises (which few are without) in the evenings and mornings . . . is much practiced. In the autumn, winter and spring there is variety and plenty of game for the gun or dogs; the gentlemen are not backward in the chase. During the season there is once in two weeks a dancing assembly in Charleston, where is always a brilliant appearance of lovely and well-dressed women; we have likewise a genteel play-house, where a very tolerable set of actors, called the American Company of Comedians, exhibit; and often concerts of instrumental and vocal music, generally performed by gentlemen. Madeira wine and punch are the common drinks of the inhabitants; yet few gentlemen are without claret, port, Lisbon, and other wines of the French, Spanish, or Portugal vintages. The ladies, I mention it to their credit, are extremely temperate, and generally drink water, which, in Charleston, . . . is very unwholesome. . . . The cotton-tree likewise grows naturally in this province, and might be of great use in clothing the poor sort of white inhabitants and the negroes" (what *would* this gentleman think of the degenerate cotton-clothed people of this day who are neither the poor sort of white inhabitants nor negroes?) "if any pains were taken to cultivate it. . . . There are about eleven hundred dwelling houses in the town, built with

wood or brick; many of them have a genteel appearance, though generally incumbered with balconies or piazzas, and are always decently and often elegantly furnished; the apartments are contrived for coolness, a very necessary consideration."

These old glimpses of ancient Charleston reveal many features which the modern visitor will not fail to recognize. Through all its reverses, British occupations as well as terrible disasters of Confederate struggles, it seems to have preserved its individuality in a marvelous degree. One observes with pleasure many signs indicating a return of the commercial importance which the city had gained before the late war. Its old West India trade, which acquired such a lucrative momentum during the Anglo-French wars, is not now so great; but it is being replaced in other ways, notably by increased shipments of lumber and naval stores, due to the new activities in these directions recently inaugurated in South Carolina by the southward movement of lumbermen and distillers who have begun to abandon the worn-out pine-forests of North Carolina for the new and comparatively untouched districts of South Carolina, Georgia and Florida.

Perhaps no city of equal size with Charleston has accumulated so long and brilliant a list of names eminent in diverse departments of activity. Pringle, Legare, Hayne, Simons, Langdon Cheves, Crafts, Petigru, Grimke, Brevard, Johnson, Desaussure, Parker, Lowndes, Gadsden, among the lawyers; Dickson, Ravenel, Geddings, Bruns, Ramsay, Prioleau, Frost, Bellinger, Gaillard, Miles, among the physicians; Yeadon, Pinckney, Morford, Rhett, among the editors; Bachman, Elliott; are names which occur to the hasty recollection of even a stranger, and could be largely supplemented by one familiar with the town's inner history from residence in it. As for the fine old merchants, and the fine old planters,

who are associated with this city, the enumeration of them would fill a volume. Nothing can be pleasanter—in these days which one would feel strongly inclined to call degenerate did not one have unconquerable faith in the necessary continual bettering of times—than to dwell upon the confident and trustful relations existing between these old planters and merchants, the one producing, the other product-handling, and to trace their roots in the honesties and reputable dealings of many unimpeachable years of trade; and nothing can be more pitiable than that at the time when this amiable outcome of the old Southern civilization became known to the world at large, it became so through being laid bare by the sharp spasm of civil war. That was a time when all our eyes and faces were distorted with passion; none of us either saw, or showed, true. Thrice-pitiable, one says again, that the fairer aspects of a social state which though neither perfect as its violent friends preached nor satanic as its violent enemies denounced yet gave rise to so many beautiful relations of honor and fidelity should have now gone into the past, to remain illuminated only by the unfavorable glare of accidentally-associated emotions in which no man can see clearly.

The sojourner in Charleston will find several places of interest to visit. A steamer makes excursions in the winter to the celebrated Middleton Place, where one can see the capacities of this region in the matter of large and brilliant flowers. On Sullivan's Island, the beautiful beach, Fort Moultrie and the grave of heart-broken Osceola are the objective-points. One must drive or stroll through Rutledge Avenue, which is the Fifth Avenue of Charleston; and Magnolia Cemetery must be seen. The quaint interior of St. Michael's, with its high box-pews and antique suggestions; the old French Protestant

Church; the Charleston College museum, an extensive collection, owing its origin to the suggestions of the lamented Agassiz, and intimately associated with the names of Bachman, Audubon, James Hamilton Couper, the Misses Annelly, and Mitchell King; the Charleston Library, a large collection of books which has been maintained by the Charleston Library Society since the year 1748; the antique and often renowned tombs of the old cemeteries of St. Philip's, St. Michael's, the Independent Congregationalist, Unitarian, First and Second Presbyterian, Baptist, German Lutheran, Roman Catholic, Trinity, and Hebrew churches; all offer inducements for the bestowal of one's mornings. Besides these, the historic battle-grounds of Fort Sumter and of James and Morris Islands may be made the objective-points of sailing-excursions; though there is really no reason why a sailing-excursion should have an objective-point, and *me judice* the aimless sort is your only perfect sail. A pleasant strolling-ground and meeting-place is the Battery, which is laid out in walks and adorned with trees, and commands ample water-prospects; where, if you meet a Charleston friend, you should get him to tell you the history of the beautiful chime of bells in the belfry of St. Michael's, as you pace up and down the white walks in the gentle air that comes off the near Gulf Stream.

One fares well in the matter of hostelry at Charleston; the "Charleston Hotel" has long had a delightful reputation among travelers. There are smaller hotels, such as the Victoria, Pavilion, and others. The "Mills House" appears to have been closed for some reason; though I believe rooms are still rented in a portion of the building.

There are two well-arranged street-railways. That called the "Enterprise Railway" is specially notable.

Its tracks, which the visitor will frequently observe curving off towards the water-front, connect the principal wharves directly with the railroad dépôts, so affording extraordinary facilities for the shipment of cotton, rice, naval stores, and the like. Besides these more purely commercial tracks, it has a street-line proper, running *viâ* Meeting, John, Chapel, Washington, and East Bay Streets.

The other street-railway is known as "The City Railway," and runs two lines of cars—the Rutledge Avenue line and King Street line—the former *viâ* Rutledge Avenue, Wentworth, and Meeting Streets, the latter *viâ* King, Calhoun, and Meeting Streets.

Charleston is connected with Savannah by "The Savannah and Charleston" Railway; with Florence, South Carolina—and at that point with the Wilmington, Columbia, and Augusta Railroad, and its northern system of connections—by "The Northeastern" Railway; with Columbia, Augusta (Georgia), and Camden, South Carolina, by "The South Carolina" Railway, which is notable as the first important railroad built in America.

The city has an admirable graded system of public schools, with a curriculum extending from the primary studies through an entire course terminating in the Charleston High School and Charleston College. There is also here an old and well-known medical college. The St. Andrew Society, dating back to 1731; the South Carolina Society, founded in 1737, and originating in the *Two Bit Club*, which used to hold meetings in a house known as *The Old Corner*, on Broad and Church Streets; the St. George, Fellowship, German Friendly, St. Patrick, Hebrew Benevolent, and Société Française organizations; are all charitable associations, of great efficiency in the relief of distress.

One of the very sweetest names connected with Charleston is that of Henry Timrod, its poet, now dead. Few more spontaneous or delicate songs have been sung in these later days than one or two of the briefer lyrics which appear in the published volumes of his poems. It is thoroughly evident from these that he had never had time to learn the mere craft of the poet—the technique of verse; and that a broader association with other poets, and a little of the wine of success and of praise without which no man ever does the very best he might do though many have done amazing things who never tasted it, would have been of inestimable service to his poetic faculty. But he had a dainty artless art withal; as witness, *e.g.*, particularly the last four lines of

BABY'S AGE.

She came with April blooms and showers;
We count her little life by flowers;
As buds the rose upon her cheek
We choose a flower for every week.
A week of hyacinths, we say,
And one of heart's-ease ushered May.
And then because two wishes met
Upon the rose and violet,
—I liked the Beauty, Kate, the Nun—
The violet and the rose count one.
A week the apple marked with white;
A week the lily scored in light;
Red poppies closed May's happy noon
And tulips this blue week in June.
Here end as yet the flowery links;
To-day begins the week of pinks;
But soon—so grave and deep and wise
The meaning grows in Baby's eyes,
So *very* deep for Baby's age—
We think to date a week with sage!

SAVANNAH.

On the first day of February in the year 1733 the city of Savannah, being then but a few hours old, consisted of four tents, which were sufficient for all its inhabitants and were pitched under four pine-trees near the edge of the bluff between Bull and Whitaker Streets.

It appears that for a year or two previous to this date the attention of certain good and charitable gentlemen of England had been called to the fact that many unfortu-

MADISON SQUARE, BULL STREET.

nate persons were languishing in the debtors' prisons of that country, and that some radical means should be adopted in order to afford new avenues of fortune to poor men and younger sons of families. The interest of these gentlemen finally took the direction of procuring a

charter from King George II., granted to them as trustees, authorizing the colonization of a tract lying between the Savannah and Altamaha Rivers; and in pursuance thereof James Oglethorpe set sail from Gravesend on the 17th of November 1732 with thirty-five families, reaching Charleston, South Carolina, on the 13th of February thereafter. Receiving the most cordial assistance from the South Carolinians, the party proceeded to Beaufort, where Oglethorpe left them and went ahead with Colonel William Bull of South Carolina (whose name is perpetuated in Bull Street, one of the most beautiful streets in America, and the present fashionable *promenade* of Savannah) to select a site for the city, which it had been previously determined to locate on the Savannah River.

"I fixed," says Oglethorpe, writing back to the Trustees in England on the 10th February, 1733, "upon a healthy situation, about ten miles from the sea. The river here forms a half-moon, along the south side of which the banks are about forty foot high, and on the top flat, which they call a bluff. . . . Upon the river-side in the centre of this plain I have laid out the town. Opposite to it is an island of very rich pasturage, which I think should be kept for the Trustees' cattle. The river is pretty wide, the water fresh, and from the key (quay) of the town you see its whole course to the sea, with the Island of Tybee, which forms the mouth of the river; and the other way you see the river for about six miles up into the country. . . . The whole people arrived here on the first of February. At night their tents were got up. . . . I marked out the town and common; half of the former is already cleared, and the first house was begun yesterday in the forenoon."

It was not without some difficulty that the site was obtained. The Indian chief Tomochichi had here his village of Yamacraw; and it was only by the intercession of a woman with the Indians that their consent was obtained. This woman was Mary Musgrove, the half-breed wife of a white trader then residing at Yamacraw. She afterwards

acted as interpreter, and played a romantic and varied part in the early history of Savannah.*

The account of the state of Savannah in 1736, by Francis Moore, existing in the collections of the Georgia Historical Society, gives so vivid an idea of the singularly far-seeing and statesman-like principles which appear to have controlled the whole plan of laying out and governing the city, that a brief extract from it cannot be uninteresting. One may fairly call this a unique beginning of a town, as here depicted:

"The town of Savannah is built of wood; all the houses of the first forty freeholders are of the same size with that Mr. Oglethorpe lives in. . . . The houses stand on large lots sixty foot in front by ninety foot in depth; each lot has a fore and back street to it. . . .

"There are several people of good substance in the town who came at their own expense, and also several of those who came over on the Charity are in a very thriving way; but this is observed, that the most substantial people are the most frugal, and make the least show, and live at the least expense. . . . The industrious ones have throve beyond expectation; most of them that have been there three years, and many others, have houses in the town, which those that let have for the worst ten pounds per annum, and the best for thirty pounds. . . . Those who have cleared their five-acre-lots have made a great profit out of them by greens, roots and corn."

From this last item it would appear that the charming market-gardens of Savannah, whose products have such reputation in New York, may claim an antique origin, in these "greens, roots and corn" which brought so much thrift to the early settlers.

. . . "All matters, civil and criminal" (continues Francis Moore), "are decided by grand and petit jurors, as in England; but there are

* Those desirous of pursuing the history of Savannah in its details will find a well-written "Historical Record of Savannah," published by J. H. Estill, of that city, for sale at the book-stores.

no lawyers allowed to plead for him (*sic*): nor no attorneys to take money, but (as in old times in England) every man pleads his own cause. In case it should be an orphan, or one that cannot speak for themselves, there are persons of the best substance in the town appointed by the Trustees to take care of the orphans and to defend the helpless, and that without fee or reward, it being a service that each that is capable must perform in his turn.

"They have some laws and customs that are peculiar to Georgia: *one is, that all brandies and distilled liquors are prohibited under severe penalties; another is, that no slavery is allowed, nor negroes; a third, that all persons who go among the Indians must give security for their good behavior, because the Indians, if any injury is done to them and they cannot kill the man that does it, expect satisfaction from the Government, which, if not procured, they break out into war by killing the first white man they conveniently can. No victualler or alehouse-keeper can give any credit, so consequently cannot recover any debt.*"

But the wise foresight does not stop here. To prevent the town lots from concentrating disadvantageously by inheritance, or by the designing buyings-in of rich speculators,

"The Trustees grant the land in tail-male, that on the expiring of a male line they may regrant it to such man, having no other lot, as shall be married to the next female heir of the deceased as is of good character. . . . Each freeholder has a lot in town sixty foot by ninety foot, besides which he has a lot beyond the common of five acres, for a garden. Every ten houses make a tithing, and to every tithing there is a mile square, which is divided into twelve lots, besides roads; each freeholder of the tithing has a lot or farm of forty-five acres there, and two lots are reserved by the Trustees in order to defray the charge of the public. The town is laid out for two hundred and forty freeholds; the quantity of land necessary for that number is twenty-four square miles; every forty houses in town make a ward, to which four square miles in the country belong; each ward has a constable, and under him four tithing-men.

"Where the town land ends the villages begin; four villages make a ward out, which depends upon one of the wards within the town. The use of this is, in case a war should happen, the villages without may have places in the town to bring their cattles and families into

for refuge, and for that purpose there is a square left in every ward big enough for the outwards to encamp in. There is a ground also kept around about the town ungranted, in order for the fortifications whenever occasion shall require. Beyond the villages commences lots of five hundred acres; these are granted upon terms of keeping the servants, etc. There is near the town to the east a garden belonging to the Trustees consisting of ten acres; the situation is delightful, one-half of it upon the top of the hill, the foot of which the Savannah River washes, and from it you see the woody islands in the sea. The remainder of the garden is the side and some plain low ground at the foot of the hill, where several fine springs break out."

Truly an Arcadian city! It would really seem that these broad and noble ideas which thus came like good fairies to the birth of Savannah and contributed their gifts to it have never withdrawn themselves from watching over the further growth of the city. Perhaps no town of equal age has more clearly preserved the general plans and spirit of its founders. Here the visitor of to-day still sees the wide symmetrical streets, the generous and frequent squares, the lavish adornment of grasses, flowers and magnificent trees, which appear to render into material form the liberal and manly tone of Oglethorpe's inaugural management; and every one acquainted with the modes of Savannah life among its best citizens will recognize the spirit of quiet refinement, the reserve, the absence of ostentation which Francis Moore has commemorated in the opening words of the extract above given. The residences, many of which are very beautiful, appear to withdraw themselves from observation, and to hide behind their wide piazzas and balconies which are inclosed with Venetian blinds; and one may stroll along the pleasant promenade of Bull Street, or through the alleys of Forsyth Park, for a whole afternoon without encountering a lady dressed "loudly."

Savannah is much frequented by Northern and Western people during the winter and spring. The hotel accommodations are excellent; the Pulaski House, the Screven House and the Pavilion are the largest; and there are cheaper establishments, such as McConnell's and Bresnan's, on the European plan.

There are many points of interest to visit. Sailboats are always to be obtained for excursions down the river; and there is a small railway, connecting at Bolton with the street-cars, upon which one can with facility reach Thunderbolt, a noted spot on the river five miles from town where in the warm afternoons the owners of fine teams cluster on the pleasant river-bank under the trees ere turning about for the drive back to the city. A shell-road reaches to Thunderbolt which forms The Drive of Savannah and is a gay enough thoroughfare on pleasant afternoons.

A road turns off to the left from this shell-road and leads to the famous old burying-place called Bonaventure, a spot about a mile from Thunderbolt which no one sojourning at Savannah should fail to visit. It was formerly the seat of the famous old Tatnall family, but passed from their hands, and was finally purchased and converted into a cemetery. It is but sparsely tenanted, however, by the dead; and one entering its noble avenues will scarcely see aught at first besides the arching glories of the oaks and the weird solemnities of the moss. The great boles of the trees lean and their long muscular arms bend in attitudes of profound mournfulness; the gray mosses hang, as beards hang; it is as if all the ancient prophets of the ages had assembled in solemn convocation to meditate silently together upon the passing of time and the piteousness of death.

On the road to Bonaventure one sees the Catholic Ceme-

tery; the main cemetery of the city, Laurel Grove, lies to the northwest of the town, not far from Forsyth Park.

AN AVENUE IN BONAVENTURE.

One of the pleasantest strolls in Savannah, particularly in the early spring—that is, in April—is to Forsyth Park, along Bull Street which leads directly to it; on the way (say, from the Pulaski House) one passes first through

Johnson Square containing the Green Monument; then through Wright Square, Chippewa Square, Madison Square, and Monterey Square which contains the Pulaski Monument.

Or, beginning at Bay Street—the main business thoroughfare, parallel with the river and next to it—and walking westward along Barnard Street, one passes through Ellis, St. James, Orleans, Pulaski, and Chatham Squares.

Or, on the other (south) side of Bull Street, turning into Abercorn Street and walking westward, one passes through Reynolds, Oglethorpe, Lafayette, and Calhoun Squares.

A good road leads to White Bluff, which is a favorite summer resort of the Savannah people, some ten miles out. This road is also much used as a fashionable drive.

JASPER SPRING, on the Augusta road two miles from town, is a spot famous in history. Every one remembers how the brave Jasper and Sergeant Newton, in casting about for a plan to rescue a lot of unhappy patriot prisoners who were being carried by a British guard to Savannah to be hung, foresaw that the guard would likely stop at a certain spring for water, hid themselves in the bushes near the spring, waited until the guard arrived and stacked arms, shot the two sentinels, seized the stack of arms, compelled the discomfited regulars to assume the very manacles which they had placed upon the prisoners, and marched the whole party into the partisan camp.

BETHESDA, about ten miles from Savannah, is a spot consecrated by the nobleness of man in quite a different way from the latter. Here the great George Whitfield procured a grant of five hundred acres from the Trustees for the purpose of founding an orphan-home which had been suggested to him by Charles Wesley, and, with the co-operation of James Habersham and the aid of the

Countess of Huntingdon, erected an institution which through many disasters was maintained for a long time. The buildings were finally destroyed by wind and fire; but a hundred and twenty-five acres of the original grant have been bought by the Union Society, a noted benevolent institution of Savannah, and devoted to the original purposes of the founders of Bethesda.

Savannah is one of the most prosperous cities in the Union, and is a port of growing commercial importance. The great exports are cotton, lumber and rice; and the activities incident to the handling of the large quantities of these staples which are here annually received make it a busy city in the fall and winter. It is the terminus of several railways: the Georgia Central, leading to Macon, and, by a branch running in at Millen, to Augusta; the Atlantic and Gulf, running to Albany, with branch at Dupont Station running to Live Oak, Florida, along which the great bulk of the annual Florida travel is transported; the Savannah and Charleston, running to Charleston, South Carolina; the Port Royal, to Port Royal and Augusta; and the Savannah, Skidaway, and Seaboard, to White Bluff, Isle of Hope, and Skidaway Island. There are also several lines of steamships to New York, one to Philadelphia, and one to Baltimore; a coast-line to Charleston; one to Brunswick and the Satilla River; one to Pilatka, on the St. Johns, Florida; one to Augusta, on the Savannah River; and two to Darien, one of which goes on up the Altamaha and Ocmulgee Rivers as far as to Hawkinsville. An important feeder of the city is the Savannah and Ogeechee Canal, extending between the Savannah and Ogeechee Rivers.

The city has a notable number of benevolent institutions; an admirable public school system; a fine antiquarian association known as the Georgia Historical Society,

which has just erected a very handsome library building, and has recently come into a large bequest from the late Miss Mary Telfair; and a number of well-built churches, particularly the Independent Presbyterian, with the lofty spire, fronting on Bull Street. The city is furnished with water-works, which supply water from the Savannah River.

And lastly, its police headquarters is precisely the police headquarters which one would expect in an Arcadian city: being a plain building in a cool and shady brick court, overhung by trees, covered with climbing vines, and, to the view of the passer-by at least, as clean as a Dutch parlor.

Savannah is the residence of Henry R. Jackson, a poet whose verses have been much admired by those who appreciate the chaste simplicities of a style of poetry which is unfortunately too much obscured by the less substantial though more dazzling productions of later schools. A fair sample of his power is the poem

TO MY FATHER.

As die the embers on the hearth,
  And o'er the floor the shadows fall,
And creeps the chirping cricket forth,
  And ticks the death-watch in the wall,
I see a form in yonder chair
  That grows beneath the waning light;
There are the wan, sad features—there
  The pallid brow and locks of white.

My father! when they laid thee down
  And heaped the clay upon thy breast,
And left thee sleeping all alone
  Upon thy narrow couch of rest,
I know not why I could not weep,
  The soothing drops refused to roll,
And oh! that grief is wild and deep
  Which settles tearless on the soul.

But when I saw thy vacant chair,
Thine idle hat upon the wall,
Thy book—the penciled passage where
Thine eye had rested last of all;
The tree beneath whose friendly shade
Thy trembling feet had wandered forth,
The very prints those feet had made
When last they feebly trod the earth;

And thought while countless ages fled
Thy vacant seat would vacant stand,
Unworn thy hat, thy book unread,
Effaced thy footprints from the sand;
And widowed in this cheerless world
The heart that gave its love to thee—
Torn like the vine whose tendrils curled
More closely round the falling tree;

Then, father! then for her and thee
Gushed madly forth the scorching tears;
And oft, and long, and bitterly
Those tears have gushed in later years;
For as the world grows cold around
And things their real hue take on,
'Tis sad to learn that love is found
With thee above the stars alone!

AUGUSTA.

This beautiful city was laid out at the instance of the Trustees of Georgia in the year 1735, and received its name from General Oglethorpe in honor of the royal Princess Augusta, daughter of George II.

Large warehouses were erected here, and the place quickly became a considerable dépôt for the merchandise employed in the trade with the Creeks and Chickasaws. The county in which it is situated was originally known as the District of Augusta, until 1758 when it was made "St. Paul's Parish"; but in 1777 it was called Richmond County, after the Duke of Richmond.

Doubtless the proximity of the town to the Indians rendered it at first a somewhat uneasy place of residence. For example, one finds in 1756 such communications as these passing to the then Governor, John Reynolds, who had been recently appointed by the English Government, the Trustees having surrendered their charter in 1752.

"AUGUSTA, Saturday, 10 of the
clock in the morning.
12th September, 1756.

"MAY IT PLEASE YOUR EXCELLENCY,—We have, as in duty bound, sent this express on purpose, with the inclosed informations, by which you will understand that Indian blood has been spilt, and consequently an Indian war is almost inevitable; the only thing in all probability that can prevent it is the having of the murderers secured for to make him satisfaction, for which reason we issued hue and crys everywhere to apprehend them; and in case they come by the way of Savannah, we hope care will be taken to secure them. We are afraid we cannot hold this place long without speedy assistance, which we hope your Excellency will take into serious consideration. All the settlements on the Ogeechee are abandoned. The fort cannot contain all the inhabitants, so that we shall be obliged to fortify some other places. We beg your Excellency would send us instructions how to act as you shall think proper. There are some head men of the Creeks, in Charlestown, or on their way thither, on whom we have had great dependence, as we designed to assure them that we will take and do justice on the murderers and give them all the satisfaction they required. We wish we could hear from your Excellency before they went from this place, for which reason we hope your Excellency will dispatch the express with all haste possible. There is no match in the fort. Mr. —— begs if there is any such thing in Savannah that you will send him some. And we are, with the greatest respect, your Excellency's most humble, most obedient servants,

"DA. DOUGLASS,
"JOHN ROE,
"MARTIN CAMPBELL."

Perhaps one of the most spirited contests of the Revolutionary war occurred in the memorable siege of Augusta by General Henry Lee in May 1781 during its occupation by the British.

Having seized the powder, ball, small arms, blankets, etc., which had been recently sent to Fort Galphin as presents to the Indians from the English Government, General Lee sent Major Eggleston to reconnoitre below the city and to summon it to surrender. This was done, but no reply was received.

Augusta was at this time in command of one of those curious personages who float to the surface in times of war, named Thomas Browne. He is described in a Georgia Gazette of 1774 as one of "two young gentlemen lately from England." In that year he suffered great indignities at the hands of the patriots. A number of the "Sons of Liberty" had called upon him to clear himself of the charge of being hostile to the cause of American freedom, and upon being defiantly informed that he did not recognize their right to demand any such account of him had incontinently tarred and feathered him and exposed him to the public view "in a cart from the head of Augusta to Mr. Weatherford's;" insomuch that next day he "consented voluntarily" (as the Georgia Gazette naïvely terms it) to abjure his loyalty to the king and to support the cause of liberty.

Perhaps the "voluntary" feature in this "consent" was not so apparent to Browne as to the hot patriots; at any rate we find him soon engaged in the British army. Already in 1779 he had signalized his desperate obstinacy, fertility of resource and personal bravery. Colonel Elijah Clarke, advancing upon Augusta in that year for the purpose of taking it, was met by Browne—though the attack was an entire surprise to the latter—at the White

House, some mile and a half west of the town, and was held in check for several days through a continuous and destructive fire of artillery and small arms until the advance of Colonel Cruger to whom Browne had sent for assistance disheartened the patriots and caused Clarke to retire from the attempt. During these days Browne was shot through both thighs and his garrison's supply of water was entirely cut off; but he continued to lead his men in spite of his wounds, and devised a supply of water—from what source I will not here detail—in the actual use of which he also led his men, thus carrying them through the siege.

Colonel Clarke retired with the loss of sixty killed and wounded. Twenty-nine of these latter remained in the hands of the enemy and met a dreadful fate. Twelve of them were hung, it is recorded, on the staircase of the White House, while others were either hung or delivered over to the Indians by whom they were roasted to death.

It was against such a commander that General Lee, upon finding that no reply was made to his summons of surrender, proceeded to make his dispositions for attack. The troops of Colonel Clarke (the same who had made the unsuccessful attack here the year before), Eggleston and Pickens had been concentrated to the west of the town.

The first assault was made upon Fort Grierson, which is said to have been located on the present site of the upper market in Broad Street. The fort was taken after a short struggle, and many of its garrison were killed and captured. Colonel Grierson, its commander, was murdered after his capture by some lawless persons among the Americans. Lee now advanced to a brick building on the bank of the river south of Fort Grierson, and proceeded to besiege Fort Cornwallis, of which Thomas Browne was in command. This fort was located very near the present site of St. Paul's Church. The besiegers

immediately commenced to push forward works of offense. On the night of the 28th Browne fell upon them violently, but was repulsed after a hard struggle; and again, on the night of the 29th. Finding no eminence or other vantage-ground on which to place their artillery, the besiegers now commenced the erection of a tower to command Fort Cornwallis, and by the evening of the 31st had brought it nearly to the height of the ramparts. Early in the night Browne was again at work actively attacking. Repulsed at one end of the line, he renewed his assault at the other, and had driven the militia under Pickens from the trenches when Handy's infantry, which had been placed in supporting distance of Pickens, came up and compelled him to retire to his fort. In this engagement both sides suffered heavily.

Browne now endeavored to devise means for burning the tower, and to this end sent over a pretended deserter to Lee who by an artful proposition to aid in directing the fire of Lee's artillery upon the powder-magazine of the fort procured himself to be stationed for the night in the tower. The trick, however, did not succeed; Lee's suspicions became aroused, and he caused the deserter to be removed from the tower during the night. Meantime, Browne had fired several houses which lay within rifle-shot of his position, between the lines.

But his failure to burn the tower seems to have disheartened Browne. To a summons of surrender made on the 31st, calling his attention to the progress of the besieging works, he had pithily replied, "Gentlemen,—What progress you have made in your works I am no stranger to. It is my duty and inclination to defend this place to the last extremity." But to a second summons made on the 3d of June, after first replying as before, he allows twenty-four hours to elapse and then signifies his

desire to surrender. He makes several propositions which the besiegers decline, and finally has to accede to their terms; and so the siege terminates with his formal capitulation on the 5th of June.

This Thomas Browne was afterwards convicted of forging an order from The Lords of the Treasury to Sir Charles Brisbane, Governor of St. Vincent's, requiring him to grant to Browne a large and valuable body of land in that island. The British Government had already rewarded him with thirty thousand pounds in consideration of his Revolutionary services; but, not content with this, he caused the forged order to be presented. It so happened that the lands named in the order had been granted to other parties, who had paid a large sum of money into the treasury for them. Sir Charles Brisbane asked further instructions of the Home Government; and the forgery was immediately detected.

In this same month of May, just ten years afterwards, Augusta exhibited a much more pleasing concourse of sights and sounds than the bloody incidents of Thomas Browne's desperate defense. These were the processions and ceremonies in honor of the arrival of George Washington, President of the United States, at that city. There are some features of these beautiful old testimonials of a people's hearty affection that richly merit frequent recital, for they cannot but present noble ideals to our young men and women. Jean Paul Richter has somewhere declared that the great advantage of Greek and Roman history to young people is that in studying it they enter life as it were through a vestibule set round with large and heroic forms that must of necessity influence the mould of their lives. So much of the majesty of simple and chaste manners, so much of true knightly courtesy, reveals itself incidentally in the narration of the progress

of George Washington among his people that one cannot help reproducing it, if even in briefest form.

"The officers having assembled agreeably to the order of yesterday" —yesterday was the 17th of May, 1791—"at eleven o'clock set forward, accompanied by a numerous train of respectable citizens. At the distance of five miles from town the President of the United States appeared in sight, when the procession halted, at which time he alighted from his coach, mounted his horse, and advanced with Major Jackson and the federal marshal. His Excellency the Governor" (Edward Telfair) "at the same time attended by the Secretary of the State, moved forward, and, after being announced, congratulated the President on his near approach to the residence of Government. This ceremony being ended, the procession was resumed, and the President conducted to the house provided for his reception."

Then there were balls, dinners, toasts, and many festivities. Observe the address of the citizens of Augusta: what beautiful English, what dovetailing clauses, what perfect sentences compose it! and more than this, what large sincerity, what grave manliness, what genuine yet decorous devotion shine out through the lucid fluencies of it, as it were sands of good gold compacted at the bottom of a clear running stream!

"To the President of the United States of America:

"Sir,—Your journey to the southward being extended to the frontier of the Union, affords a fresh proof of your indefatigable zeal in the service of your country, and equal attention and regard to all the people of the United States. With these impressions, the citizens of Augusta present their congratulations upon your arrival here in health, with the assurance that it will be their greatest pleasure, during your stay with them, to testify the sincere affection they have for your person, their sense of obligation for your merits and for your services, and their entire confidence in you as the Chief Magistrate of their country. On your return, and at all times, their best wishes will accompany you, while they retain the hope that a life of virtue, benevolence, and patriotism may be long preserved for the benefit of the age and the example of posterity."

To which the good President replies:

"GENTLEMEN,—I receive your congratulations on my arrival in Augusta with great pleasure. I am much obliged by your assurances of regard, and thank you with unfeigned sincerity for the favorable sentiments you are pleased to express towards me.

"Entreating you to be persuaded of my gratiude, I desire to assure you that it will afford me the most sensible satisfaction to learn the progression of your prosperity. My best wishes for your happiness, collectively and individually, are sincerely offered."

The "progression of your prosperity" advanced in time; until Augusta has at length come to be one of the most important cities of the South.

The visitor here is immediately struck with the breadth and beauty of the streets. Broad Street, the main business thoroughfare of the city, is one hundred and sixty-five feet in width, and nearly two miles and a fifth in length. Both above and below the immediate centre of trade it is planted with rows of magnificent trees.

Greene Street, running parallel with Broad, is famed throughout the United States for its beauty. It is from one hundred and sixty to one hundred and sixty-eight feet wide. Down the centre of it runs a double row of large trees, and along each sidewalk a similar single row: the effect of which is to form a lovely greenwood aisle, passing along between two ample and high-arched avenues. Here in the middle of a cloudless summer-day one can promenade for more than a mile in cool and grateful shade; and the spacious flower-gardens and pleasant dwellings which border the street make it altogether a possession any city might envy.

The granite monument in this street, in front of the City Hall, is about fifty feet in height, and was erected in 1849 to the memory of the signers of the Declaration of Independence in behalf of Georgia.

A pleasant drive at Augusta is to

SUMMERVILLE,

a fair cluster of dwellings, some of them summer residences, others permanent, situated on the high sand-hills about three miles from town. The view from the brow of this eminence commands a wide scope of country in Carolina and Georgia; and the village itself presents many charming evidences of taste in noble trees, flower-gardens and gentle-looking homes.

On this drive to Summerville one crosses the Augusta Canal, an important element in the industrial prosperity of the city. It was begun in 1845, and is fed from the Savannah River. It has a total fall of about forty-one feet, divided into three levels. The large manufacturing buildings which attract one's attention in crossing the canal belong to the Augusta Cotton Factory Company, one of the most prosperous organizations of the sort in America. This factory has been recently much enlarged in capacity. The water-power of the canal is applied to sundry other industrial purposes, notably to a group of flour- and grist-mills, which grind more than four hundred thousand bushels of grain annually.

Some distance beyond the factory, on the Summerville road, one will observe the Augusta Orphan Asylum, a very beautiful structure built mainly upon the benefactions of Mr. Tuttle and of Dr. Newton.

One of the hills cut through by this canal, some four miles above the city, is referred to by Charles C. Jones in a monograph on Indian Mounds as filled with evidences of having been once a much-frequented locality for the manufacture of flint arrow-heads and other stone weapons by the Indians. The same gentleman mentions a very interesting Indian mound on Stalling's Island, one of

the "Thousand Islands" in the Savannah River a short distance above the city.

Augusta is now, and has been in times past, the residence of several persons eminent in letters. At Berzelia on the Georgia railroad a short distance from the city is the home of Paul H. Hayne, the poet. The peculiar loveliness of the yellow jessamine which covers the spring woods of this region, as well as the grace and musical flow of Mr. Hayne's own poetry, are pleasantly formulated in this sonnet of his to

THE MOCKING-BIRD.

Of all the woodland flowers of early spring,
  These golden jasmines, each an air-hung bower
  Meet for the Queen of Faery's tiring-hour,
Seem loveliest and most fair in blossoming.
How yonder mock-bird thrills his fervid wing
  And long lithe throat, where twinkling flower on flower
  Rains the globed dew-drops down, a diamond shower,
O'er his brown head, poised as in act to sing!
Lo the swift sunshine floods the flowery urns
Girding their delicate gold with matchless light
Till the blent life of bough, leaf, blossom, burns;
Then, then outbursts the mock-bird clear and loud,
Half-drunk with perfume, veiled by radiance bright,
A star of music in a fiery cloud!

Augusta is also the residence of the poet James R. Randall, at present editor of the Augusta Constitutionalist. Perhaps the fervent spirit of his poems has never found better expression than in

EIDOLON.

Ah, sweet-eyed Christ! Thy image smiles
  In its Cathedral cell,
Shrined in the Heaven-enamored arms
  Of her who never fell;

And if my phantom eyes implore
A more benignant beam,
'Tis a nepenthe I would crave
For a memorial dream!

Dear Leonie! here didst thou kneel
That musky summer noon,
As the zephyrs kissed in ecstasy
The dimpled cheeks of June—
As the sunlight drifted o'er thy brow
A golden wave of grace,
Bright-blending with the miracles
Of that angelic face.

Adorably Madonna-like,
By this communion rail,
Thy raptured face, though rich with youth,
Was spirit-lit and pale;
And oh, those opulent blue eyes,
Those Meccas of despair—
They, they were glorious Eden-isles
Lost in a lake of prayer!

Saint Leonie! I saw thee flit
Gazelle-like to the street,
And pure, melodious angels led
Thy dainty, tinkling feet.
My rebel thoughts were petrel-winged,
Attendant upon thee,
Chasing thy loved and lissome shape
As Arabs of the sea.

Long did I love thee, *belle Creole*,
As Gebirs love the sun,
And in the temple of my soul
Thou wast the eidolon;
Long did I love thee, *belle Creole*,
Where corsair billows rise,
And where the silver planets soar
In unfamiliar skies!

Dark Corcovado! did I not,
With heart and soul aflame,
Carve on thy broad, monarchal brow
Her wildly-worshiped name—
Watching the homeward ships scud by
Before the nimble breeze,
Till memory with them wept away
Beyond the tropic seas!

Years, years had died and once again
I saw the spires of home;
Then, armed with an undying hope,
I stood beneath this dome.
But not within the pillared aisle,
Nor by the sacred sign,
Could my bewildered eyes behold
The loveliness of thine.

The sad November days had come,
And eagerly I fled
To find thee where the maidens deck
The kingdoms of the dead;
I found thee—yes, I found thee, love,
Beneath the willow-tree—
With marble cross and immortelle
And one word——"Leonie!"

Here lives also, engaged in the practice of law, Mr. Salem Dutcher, a writer whose strong and brilliant articles in the columns of the New York World a few years ago were often admired and quoted by those to whom his name, lost in the anonymous oblivion of the current journalistic habit, was by no means so familiar as it deserved to be.

The Hon. Richard Henry Wilde, author of the celebrated poem "My Life is like the Summer Rose," and Judge Longstreet, author of "Georgia Scenes," were once residents of Augusta. The "Gander-pulling," in "Georgia Scenes," is said to have occurred at the spot

where now stands that same upper market which was the site of Fort Grierson and the scene of the bloody events enacted there, as hereinbefore detailed.

The honorable and venerable Charles J. Jenkins, one of the fast-departing "old school" of statesmen and gentlemen, now lives here.

Augusta is the terminus of several important railway lines. The "Charlotte, Columbia and Augusta," and "Wilmington, Columbia and Augusta," belong to the great organization known as the "Atlantic Coast Line," which, in co-operation with the Bay Line steamers from Baltimore to Portsmouth, and the fast railway line from Portsmouth to Weldon, as also with the all-rail routes north of Weldon, transports the crowds of Florida travelers every winter, *viâ* Wilmington, North Carolina, and Columbia, South Carolina, or *viâ* Charlotte, North Carolina, and Columbia, South Carolina, to Augusta, whence the route lies by either the "Georgia Central" or "Port Royal" roads to Savannah, and thence by rail or water to Jacksonville, Florida.

The "Georgia Central" connects Augusta with Macon, and with Savannah, the Augusta branch uniting with the main line from Macon to Savannah at Millen.

The "Macon and Augusta" offers direct connection with Macon.

The "Georgia" railroad is a trunk line from Augusta to Atlanta, with branches to Washington, Warrenton, and Athens.

The "South Carolina" railroad runs to Columbia, Charleston, and Camden, South Carolina. At Graniteville, South Carolina, ten miles from Augusta—where every traveler's attention will be attracted by the romantic nature of the surrounding country, the fine water-power, and the prosperous manufacturing appearances—the

tracks of the South Carolina railroad and of the Wilmington, Columbia and Augusta come together, and run nearly side by side until they diverge just before reaching their respective bridges across the Savannah River immediately at Augusta.

The street railway, which one notices running along Broad Street, extends to the village of Summerville, named above, and affords a pleasant and cheap method of transportation to that point.

The city has excellent hotel accommodations at the "Planters'," the "Augusta," the "Globe," and the "Central" Hotels; and there are numerous private boarding houses.

Sixteen miles from Augusta, on the line of the South Carolina Railway, is

AIKEN, SOUTH CAROLINA.

This is a town of about two thousand inhabitants, situated on a high plateau of fine sand, at an elevation of near seven hundred feet above the sea. It is noted for the dryness and purity of its atmosphere. Probably this arises in great measure from the peculiar soils of the vicinity. Hereabouts are found, besides the sand, exceedingly fine qualities of kaolin (or porcelain clay), and these pulverized soils appear to absorb both the moisture and the impurities of the atmosphere, rendering it wholesome much in the same way that wounds are cured and foul gases absorbed by the "dry earth" process. These fine clays are of infinitely various hues, some of which are very brilliant; and quite a little industry is carried on by the small "darkies" of the region, who collect them in glass tubes and sell them to the visitors.

The air of Aiken is also filled with balsamic exhalations from the great pine-forests of that region, and many are

disposed to attribute much value to the effect of this atmospheric constituent upon the lungs.

There can be no doubt of the happy results which have been secured by consumptives from visits to Aiken. A considerable number of persons from the North have found the climate so grateful that they have purchased lands here and fitted up charming residences for permanent occupation.

The process of change which goes on in the minds as well as bodies of visitors to this singular spot is at once uniform and remarkable. At first one is greatly disappointed. Except to the west of the town—a locality whose beauties one does not learn till several days after one's arrival—nothing is to be seen except vague aspects of a main street two hundred and fifty feet wide, a great hotel all piazza and windows, a flat surface of whitish soil, pleasant-looking Southern homes with flower-gardens, some oaks, and many pines. Most persons, particularly those who come from romantic hill-regions, are strongly inclined to pack up their traps and flee out of the flat lands.

But presently the vast tranquillities which here brood about the world (for one hears no sounds of vehicle in this soft earth); the delicious balms which come on the air out of the pines, or out of the heavens; the perfect strolls along the aimless paths that wander whitely about among unending aisles of the pines; the reverie-places and dreamy haunts in among the trickling rivulets and glens of the broken country to the west of the town; the charming gallops over level roads; the rose-gardens; the light-wood fires on cool evenings; the sense of superiority over those unhappy persons whom one has left in the Northern winter and of whom one reads in the morning telegrams as shivering in fabulous depressions of the thermometer; the healing of the lungs, the easing away of the cough,

the returning elasticity of the limbs, the new brightness of countenance;—presently all these things have their influence, and the spots which to an invalid's first impatience were disgusting become even dear and hard to part with.

Rheumatics and gouty patients resort to Aiken, as well as consumptives, and probably the number of people visiting here in the winter who are not invalids exceeds considerably that of the sick, many persons fleeing to this milder climate merely to escape the rigors of the Northern winter. The hotel accommodations are excellent; the Highland Park Hotel is under the management of the same parties who keep the Planters' Hotel in Augusta; and there are numerous opportunities for private board.

A story called "Spring Days in Aiken," by Mr. Albert F. Webster, which recently appeared in Appletons' Journal, is so evidently based upon the actual experiences of an invalid, and is withal so captivating a piece of writing, by virtue of a certain gracious, bright, tender, and graceful spirit which pervades it, that, in closing this brief notice of Aiken, one cannot help extracting a dainty bit from "Helena's diary." Helena is the invalid who has been brought to Aiken to win back her roses; and she is recording a journey to the home of one of the invalids who have settled near Aiken.

"Day bright. No clouds. Sunlight everywhere, even in the shadows. Long, winding sand-road through forest. Mighty trees. Horse goes with what they call down here the Mexican lope. Modification of gallop. Jack abreast filling his mighty lungs with the piny air.

"Came to B——'s place very unexpectedly. Turn in road. Saw the house before us on the right. Land quite high, because all the surrounding land is quite low. Grove of pines outside of paling. Very cool and very like a Moorish court-yard. Green gate with bell-pull. Terrible clang that started up some dogs. Cream-colored

house, two wings, Doric façade, pillars, long windows, piazzas, etc. Oaks, pines, rose-bushes, Spanish bayonet, and so on. Clouds of leaves of splendid green rise everywhere.

"Pretty mulatto-girl comes in a leisurely way around the corner, and lets us into the garden. B—— and wife at door. Rapturous meeting. Biscuit and Scuppernong wine in cool, lofty parlor, and then plenty of talk. Then into garden proper. A rose-garden. Fifty kinds of roses. Circles, terraces, and bowers of roses, of all shapes, colors, and perfumes—though the perfume is not as rich as I could have wished. We look off upon a red and-yellow valley. Brown reds and pale yellows. All sand. Beyond are masses of trees, and yet they are not so massed as to be dense. The sunlight creeps down behind each one, and throws it in relief. Thus the whole wood is light and brilliant. How shall I speak of the air? How shall I describe its effect upon me? I neither laughed nor cried, yet I willingly would have done both at the same time. It was cool, and yet it was warm. It came from the west, and yet it seemed to come from the east and from overhead and from either hand. And yet it did not seem to come at all. Still, the flowers moved, and turned upon their stems, and now and then a handful of leaves tossed upward with a rustle, and showed their white nether sides. The air seemed to be the sunlight, and the sunlight the air. Everything appeared to pause, and to say, half awake, 'God be praised for this happy moment!' I stood still for quite half an hour. Jack was down below me in the distance looking at the vegetables. I fear Jack has very little soul—very little! He went and looked over a fence with B——, and then he called up to me, 'Six acres in asparagus—think of that!' We had to pay fifty cents a bunch for some the other day. My appetite is capital.

"B—— lives here in safety. He has searched all over the world—at Isle of Pines, Santa Barbara, Nice, Cannes, Mentone—and has finally settled in Aiken after some fifteen years of travel. He keeps a cellar of wine, some capital horses, and he has become an agriculturist. He has a half-dozen neighbors who are conducting their lives in the same way, and altogether they make a very queer neighborhood of it. I don't think there is a pair of sound lungs among them. They seem to be barons, all ill, to be sure, but still barons. I carried back quite a *ton* of buds in a sort of saddle-bag. Roses bloom eleven months in the year. Home, through the pine-woods at sunset. Glorious!"

APPENDIX.

GRAPE-CULTURE.

BY A. J. BIDWELL.

From a paper read before the Florida Fruit-Growers' Convention.

GENTLEMEN OF THE CONVENTION,—Every one who has read or studied any of the numerous works on vine-culture is aware that the grape has been cultivated and esteemed as one of the choicest of fruits from the earliest ages. In America, from its very first settlement, the cultivation of the grape attracted the attention of the colonists. In Florida, previous to 1860, several vineyards had been established on the St. Johns River, but during the war they were neglected or abandoned, and up to 1866 their cultivation had not been resumed, with the exception of a few vines of Scuppernong and Augustine grapes, which grew mostly untrimmed and uncared for. Grape culture was receiving but little attention.

When I came to the State, in the fall of 1867, and planted out a small vineyard, it was with some misgivings that the results would prove a failure, although the abundance of wild vines growing in the hammocks was proof conclusive that the vines at least would grow luxuriantly; but from the fact that they would ripen in the rainy season, I had fears that they would mildew and rot; but now, after an experience of seven years, I can say that my endeavors have been successful, and the abundance of grapes in the markets of Jacksonville the past season is also abundant proof that others have been equally so; and what is more surprising, I find an entire absence of mildew on either leaf or fruit and, with the exception of a few varieties, a remarkable freedom from rot. It is true we have in some locations a poor soil to contend with, but the rivers, woods, and swamps abound in an abundance of material for fertilizing, consisting of muck, leaves, shell, fish, etc. Although the culture of the vine is yet in its infancy, we may congratulate ourselves that the time is not far distant when thousands of acres will be devoted to its culture, and the grape will form an important article of commerce. Not only is it one of the most delicious and easily-raised fruits, but it also gives quick returns; and in conjunction with orange-culture, planted in rows intermediate between the orange-trees, would form an important auxiliary, and give speedy returns while the orange-trees were

arriving at maturity; and the advantages Florida possesses over all other States, in point of early ripening, places us beyond competition. While the Northern grape-grower is content with three to ten cents per pound, we can safely expect to realize from twenty to forty.

The increasing interest manifested in its culture induces a corresponding desire for information with regard to details of the various operations connected with it. It is not my purpose in this paper to give an exhaustive or lengthy account of the operations necessary for the formation of a vineyard, but a few general directions, which may be a guide to the planter or amateur grape-grower.

In selecting a situation for a vineyard, the main point should be to avoid as far as possible low situations. If the roots be exposed to stagnant water, the vines are liable to become diseased and the grapes rot. All of the higher lands, both hammock and pine, are suitable. New hammock lands are to be preferred to either pine or those that have been in cultivation. After having selected a proper location for a vineyard, the next step will be the preparation of the soil for the reception of the young vines. In all sandy soils there is usually a want of organic materials, and that want should be supplied by applying a compost of leaves, muck, rushes, and marsh-grass, or stable manure. If the soil is not naturally good, or has been cropped for some considerable time, a compost of the above-named materials should be spread upon the land and plowed in. On new hammock lands it is not necessary for the first year or two. If the soil is not dry it should be made so by drainage, but it is better to avoid all such locations.

The distance apart at which vines should be planted depends much on the varieties and circumstances. As a general rule, I should prefer to set them eight feet apart in the row, running north and south, and the rows ten feet apart. This distance gives plenty of room to cultivate, and is sufficiently far apart to allow room to pass through with mule and cart for the purpose of fertilizing the land, etc.

In regard to choice of varieties much depends, although a large proportion of Northern varieties succeed well here. After testing some forty varieties in the past seven years on my grounds, I would recommend Hartford, Delaware, Creveling, Ives' Seedling, Concord, Rogers' 4, 15, 19, and Telegraph for early, and Salem and Rogers' No. 1 for late. Of the above Hartford is the earliest. Bunch large, compact; berries large, black; vines vigorous, productive, and healthy; ripe June 16 the past season.

Delaware—Bunch small to medium; berries rose-color; flesh juicy, very sweet; fruit of best quality for both table and wine; healthy; ripe June 25.

Creveling—Bunch loose; berries medium, black, sweet, and juicy; quality good; ripe June 25.

Ives' Seedling—Bunch medium to large; berries medium, black; vines vigorous and healthy; a good wine-grape; ripe June 25.

Concord—Bunch large; berries black; good bearer; but ripens somewhat unevenly; ripe July 1.

Rogers' No. 4 (Wilder)—Bunch large; berries large, black, first quality; good grower; ripe ——.

Rogers' No. 15 (Agawam)—Bunch large; berries large; red or amber; strong grower; ripe July 1.

Rogers' No. 19 (Merrimac)—Bunch large; berries very large; black; vigorous grower; first quality; ripe July 1.

Telegraph—Bunch medium; compact, black, very vigorous; early and productive; ripe June 25.

Salem—Bunch large; berries large; nearly round; red; first quality; ripe July 8.

Rogers No. 1 (Goethe)—Bunch usually large; berries large, oval; color, green tinged with red; vigorous; best quality; ripe July 8.

The season for planting in this climate is from November 15 to March 1, as the vine, although inactive for the formation of new wood and leaves in the winter months, is never so as to new roots. For that reason a vine planted previous to January 1 will become established before the ensuing spring, and make a much more vigorous growth than one planted later in the season. It is also better able to withstand the dry weather that we are sure to have in April and May.

Before planting, cut back all of the longer roots to at least eighteen inches, and the stem to about eight inches. Dig the holes at the required distances, which should be three feet in diameter, and from six to eight inches deep, according to the size of the vines. Put a few shovelfuls of the compost previously mentioned in the hole, and incorporate it well with the subsoil. Spread the roots out carefully, and place the vines at such a depth that the crown of the roots will be three inches below the surface; the ends of the roots should be a few inches lower. Use the surface soil to fill up. A few handfuls of bone-flour, or some thoroughly decomposed manure, will not come amiss if mixed with the soil in filling up, and will give the vines a vigorous start in the spring. When planting vines the first time in Florida, my instructions from the nurseryman were to plant so that the crown of the root would be eight inches below the surface of the ground; but from a press of other work I was somewhat neglectful of his instructions, and planted a portion shallower. The result was, that those planted shallow made much the best growth. And a few years after, having occasion to remove some of the vines, I found that those planted deep had thrown out new roots near the surface, and that the old roots were in much the same condition as when planted out.

Before or after planting, a good, stout lightwood stake, seven feet long, should be driven down twelve inches from the vine. Having endeavored to give the necessary details for laying the foundation of our vineyard, the next important step is training. The first season only one cane should be allowed to grow,—all of the other shoots should be rubbed off. The after-culture the first season consists in keeping the ground free from weeds and the vines tied to the stakes. In December following, the cane that was allowed to grow the past season should be cut back to one foot, and two canes allowed to grow

the following season,—all other shoots being rubbed off; also any bunches of fruit should they make their appearance. The after-treatment for the second season being the same as in the previous year. You can now decide how you will train your future vines, whether to stakes or trellis. The method I have adopted is to train to stakes, both for economy and because I deem that the best results can be obtained in that way on our light, sandy soils. Also, when trained in that manner, nearly all the fruit is shaded by the overhanging leaves, and ripens more evenly than when exposed to the direct rays of the sun. Should you decide to train to stakes, cut back each of the canes grown the previous season to two or three eyes; if to trellis, cut each cane to about four feet in length, and bend down in opposite directions, and tie to the lower bar of the trellis to form arms. You may expect this, the third season, a few pounds of grapes to each vine, but it is well not to allow them to bear too much,—a judicious thinning out of the smaller bunches is advisable. It is better not to overload the vine while young, as it will often seriously injure its future growth. Each succeeding season cut back the growth of the preceding year to two buds, not forgetting in the mean time that a judicious application of fertilizers is necessary to maintain a healthy and vigorous growth.

BANANA-CULTURE.

BY A. L. EICHELBERGER.

From a paper read before the Florida Fruit-Growers' Convention.

GENTLEMEN,—I have been requested by the committee of arrangements to give my experience and views in regard to the cultivation of the banana-plant. Undoubtedly the banana and plantain are of the same value and importance to the human race as our grain-bearing fruits, and form, in tropical climates, the staff of life, or the bread for millions of human beings. The plantain and banana belong to the genus *Musa;* of which there are a great many varieties, to enumerate which would require the scholarship of a student of botany. The classification of these varieties depends principally upon the size of the plant, the size, shape, and color of the fruit, and especially upon the chemical constituents of the fruit, which are perceptible to our organs of taste.

The plantain (botanically, *Musa Paradisaica*) is a native of the East Indies, but grows now in all tropical and semi-tropical countries of the globe. This valuable plant was most probably imported into America soon after the discovery of our continent by Christopher Columbus. The specific name *Paradisaica* alludes to either a fancy that the plantain was the forbidden fruit of Eden, or to a legend

that the aprons which our first parents wove for themselves were of plantain-leaves. The banana (botanically, *Musa sapientum*) is also a native of the East Indies, and is at present, like the plantain, spread over the whole globe. The specific name *Sapientum* signifies "of the wise men," as it was believed in the East that the wise men lived upon the fruit of the banana-plant. The banana-plant is only a variety of the plantain-plant, and has numerous sub-varieties. The banana-plants have generally dark purple spots and stripes on their stems; the fruit is smaller, less curved, and of a more delicate taste than the fruit of the plantain-plant. It is from two to five inches long. The banana is to be considered more as a condiment than as food; then, in a narrow point of view, the word food means more the nourishment a body receives for its sustainment, and not only for the gratification of the palate. In that sense only the plantain is used for food. The ripe banana-fruit cut lengthwise into thin slices, fried in butter, and sprinkled over with sugar, is a delicious dish. The plantain-plant is properly called the staff of life, as it is used as a substitute for bread. It is both farinaceous and saccharine. It is of a sweetish taste. Some varieties are mealy, and others possess a subacid and austere taste. The natives of tropical countries roast the not-quite ripe plantains in an oven or in hot ashes, and use them in that way for bread. The ripe fruit dried in the sun or in an oven, and pressed into masses, will keep for years. Every part of this important plant can be used; the fruit as food, the dry leaves as packing, the fibres of the stalk for textile purposes and for cordage. The banana-plants require a rich and moist soil, as they are great feeders. They should never be planted on a wet soil without thorough drainage.

They should be planted from eight to ten feet apart. In tropical climates they mature in from eight to twelve months after planting. In our climate the plant requires from eighteen months to two years. The young suckers which freely come up around the mother plant should all be removed, except three or four. A banana-grove should be sheltered not only on the north by trees, but from all strong winds, as the wind tears up the tender leaves, and destroys in that way the breathing-organs of the plants. The ragged leaf gradually dries and dies, and the plant has not only a respiratory organ less, but it is also bereaved of one channel that conducts the nourishment which the plant receives from the atmospheric air to the stems and to the fruits. The protection of a banana-grove from the winds can be established by a line of dense forest-trees, and where they do not exist I would recommend the cultivation of the Australian *Eucalyptus globulus*, which is of the most rapid growth, and if planted in sufficient breadth around such groves will soon break the force of the winds. The greater part of my own banana-grove is situated upon the southern exposure of a hill, and is protected on all sides by high forest-trees, which break the winds. The leaves of the plants in that locality are not ragged, and the plants look healthier. In this same grove I left a number of forest-trees standing, and I found by experience that I have protected in that way my banana-plants from severe frosts, which

had severely injured the banana-plants in other localities where they were destitute of the protection of forest-trees. In said grove I have planted alternately one row of banana-plants and one row of orange-trees. Founded upon my own experience, I would recommend the southern exposure of a hill with moderate forest culture for the formation of a banana- or orange-grove, as the cool north wind, with its icy blast, sweeps in a horizontal line above the grove, and the caloric which is exhaled from the soil forms a lower and a warmer strata of air, as the expansion of the warmer air is prevented by the swiftness of the upper strata. I commenced growing banana-plants in this State in the year 1852. The first few years I protected the plants by building rail pens filled with shucks and covered with boards, and by all my care and other experiments to protect the plants from frost, I never succeeded in raising one single blossom-bud. In despair I gave up the cultivation of the banana-plant. Twelve years afterwards I found the banana-plants commenced blooming and bearing fruit. I again commenced the culture of these plants. I wrapped them during the winter with green moss and raised fruit, and by this time I have seen that the plants have become acclimated, and now give them no protection. The stems of the banana-plants are only a succession of leaves, which grow gradually from the centre of the plant; consequently, the upper or top leaves are the younger and more tender parts of the plant, and are the first which are killed by the frost. After the decay of these top leaves the process of decomposition commences and fermentation of the sap ensues, which, by its natural gravity, descends downwards the plant and prevents the growth of the new-forming centre leaf, and, if permitted to descend, will destroy the whole plant. By experience I have found that when the top part of the plant is cut off down to the living centre leaf, about the first day of February the centre leaf will soon shoot out anew, and, if the plant is sufficiently matured, will bear fruit the same year, and no subsequent frost will be able to injure the plant. The top of the tender leaf may be killed, but its lower part is protected by the outside bark, so that the frost cannot enter to a sufficient depth to cause fermentation.

I have in my grove about twelve acres cultivated with banana-plants of this variety, which, in this country, is called "Florida Banana." The fruit is slightly curved, about five inches long, and from one to two inches in diameter. The diametrical section is an irregular pentagon. The flesh of the fruit is soft and of sweet and pleasant taste, and I am under the firm impression that the more tender varieties may be cultivated with facility after the plants are acclimated.

The cultivation of the banana in this State is still now only in its infancy, but I am firmly convinced that its extensive cultivation will be the most profitable enterprise in horticultural pursuits, as we, in a very short time, will be able to partially supply the markets of the United States with this delicious fruit, and after we have succeeded with the introduction and acclimatization of the finer and more tender varieties of the banana tribe; and the plantain may, in a few years,

supplant partially the grain and potato, and become in our State the cheapest bread for the laboring classes.

In our climate the cool nights, and sometimes light frosts, occur early in the autumn, for which reason I find it advisable to cut the bunches for home consumption from the stocks when the fruits are perfectly developed; then suspend them upon poles in a sheltered and shady place where they will soon mature. If, at the commencement of cool and frosty nights, the fruits are not yet perfectly developed, I envelop the bunches on their trunks with a few, say five or six, of the surrounding leaves, which I tie with a dead banana-leaf at the lower extremity of the fruit-stem, and encase the bunch in a sack, which is kept distended by the ribs of the banana-leaves which surround the bunch of fruit. Such sacks should be of sufficient length to be able to be tied to the trunk of the plant about two feet below the top. In that way the fruit will be protected from the frost without suffering a hindrance to the process of maturation.

The greatest difficulty we still now have is the shipping of the banana-fruit, and I found, by information derived, and by my own experience, that the best and cheapest method to ship them to any distance is to cut the bunches for shipment from the stock when the fruit is perfectly developed, then cut the different tiers which form the bunch from the fruit-stem, and pack them closely with straw or moss in perforated barrels or in slated boxes. If so packed, they will mature during the passage, and arrive at their destination in a golden-yellow color and perfectly matured.

THE subjoined matter is extracted from the "Proceedings of the Florida Fruit-Growers' Association," at their annual meeting in January, 1875.

Ex-Chief-Justice C. H. Du Pont was introduced, and read the following paper upon the

HISTORY OF THE INTRODUCTION AND CULTURE OF CUBA TOBACCO IN FLORIDA.

The seed of the Cuba tobacco was introduced into the State about the year 1828, by Governor William P. Duval, one of the early civil governors of the then territory. The product of this seed was a short, narrow leaf, possessing in an extraordinary degree the delightful aroma of the best Havana cigar. It for a long time bore the name of its distinguished introducer, and was currently known as the "Little Duval," to distinguish it from a larger variety, afterwards introduced, and known as the "Florida Wrapper."

The first reliable experiment that was made with the Cuba tobacco

as a market crop was inaugurated about the year 1830, by Mr. John Smith, a citizen of Gadsden County, who had recently immigrated from the State of Virginia, and was well acquainted with the culture of the Virginia chewing-tobacco. His first experiment was with the "Little Duval," but the demand for the "Wrapper" leaf becoming urgent, and the product per acre being much larger, he abandoned the former and confined his attention exclusively to the latter. His extraordinary success attracted the attention of the non-slaveholders and other small planters, and with them it soon became a *staple* market crop, and with the large cotton-planters an *extra* crop, which, without curtailing the amount of cotton produced, usually paid all the expenses of the plantation.

STATISTICS OF PRODUCTION.

By reference to the census report of 1850, it will be seen that the total amount of tobacco produced in the State at that date is set down at (998,614 lbs.) nine hundred and ninety-eight thousand six hundred and fourteen pounds, and that the amount credited to Gadsden County is (776,177) seven hundred and seventy-six thousand one hundred and seventy-seven pounds, being over three times as much as was produced in all the other counties of the State combined. I have had no access to the census report of 1860, and if I had, I doubt if the statistics of Southern products could be relied on as perfectly accurate, owing to the sectional difficulties occurring in the latter part of that year. But from information obtained from intelligent and reliable merchants of Quincy, I feel authorized to place the crop of Gadsden County for that year at over (1,200,000) twelve hundred thousand pounds. It will thus be seen that from the single crop of tobacco, independent of the cotton and other market crops, the planters and farmers of Gadsden County realized (estimating the price at twenty-five cents per pound) the comfortable sum of three hundred thousand dollars. It was this accession to the value of her products that enabled her people to make such rapid advancement in the accumulation of wealth, and its attendant comforts and benefits, in the decade reaching from 1850 to 1860; and it teaches a lesson which should not go unheeded, viz., the importance of diversifying the products of the farm.

Down to the year 1865 tobacco continued to engage the attention of the farmers and planters, but with the proclamation of emancipation it ceased almost entirely to be cultivated, it being found that the labor was too unreliable to risk it as a market crop. It has only been within the last few years that its cultivation has been resumed, and it now bids fair to occupy its former status in the programme of our agricultural products. The crop of the county in 1873 was less than one hundred thousand pounds; the crop of 1874 is estimated at not less than two hundred thousand pounds, and, from present indications, this latter amount will be fully doubled the present year.

ADAPTATION OF SOIL.

Observation and experience, so far as they have extended to the production in this county, attest the fact that in the same sections of country there are particular localities or neighborhoods more or less favorable to the production of the finest quality of tobacco. This but verifies the current statement with regard to the island of Cuba, viz., that the proportion of the island adapted to the raising of the finest quality of tobacco is of very limited extent. If these statements be correct, then it follows as a natural deduction that the quality of the article depends essentially upon the nature and character of the soil. What particular element of soil is necessary to impart this coveted superiority I am not advised, but the well-attested fact is of sufficient importance to demand the investigation of the chemist. As a clue to that investigation, I simply remark that, so far as my observation has extended, no county in the State is so entirely exempt from the presence of the *rotten limestone* as Gadsden County, where the production of the tobacco has met with its greatest success.

There is an error of opinion very current in the country which I desire to correct. It is that the product of seed procured in Cuba tends to deterioration in the soil and climate of Florida. This opinion I unhesitatingly pronounce to be unfounded in fact, and in proof of the assertion I state of my own knowledge that the variety known as the "Little Duval," after twenty years or more of successive reproduction, was found to have lost nothing of that peculiar aroma and delicate fragrance which it exhibited upon its first introduction.

The next point that claims attention is the selection of

THE SOIL BEST ADAPTED TO THE RAISING OF TOBACCO.

Under this head much is to be said. At the inauguration of tobacco-planting in Gadsden County, the prevailing taste with the purchasers was for a very light, silky leaf, suitable only for wrappers, and the greater the number of white specks on the leaf the higher was it prized. To produce that quality of tobacco it was found that the light gray or sandy hammock, largely interspersed with the growth of beech, was the best adapted. Subsequently, when the German purchasers entered the market, the taste changed to a heavier article; and to accommodate them resort was had to the better quality of hammock and oak and hickory ridges, based upon a good subsoil of strong red clay. That character of soil produced the quality demanded, and holds the preference to the present day. On these lands no fertilizers are needed, their natural fertility being found adequate to the production of a large growth of the plant. At first it was the prevailing opinion of planters that the production of one crop of tobacco rendered the land unfit for the production of a second crop, and hence all the tobacco produced was grown on freshly-cleared lands. However, in the course of time this opinion was found to be erroneous, for frequently the second year's crop was found to be equal

to, and sometimes better than, the product of the first year, both in quality and yield. My own opinion is, that if care be taken to keep the land from becoming fouled with weeds and grass, and the fertility is kept up by artificial means to the original standard, there will be no deterioration either in quality or quantity of production for any successive crops. What is here said in regard to the character of lands best adapted to the cultivation of tobacco, must be taken to apply chiefly to *ante bellum* times. It has been demonstrated within the last two years that any good, high pine-land, based upon a subsoil of clay (as is generally the case in this county), will, by a moderate application of fertilizers in the hill, give as good a return, both in quality and quantity, as the best hammock or oak and hickory.

PREPARATION OF LAND.

Lands designed for tobacco should be perfectly cleared of all standing timber. Limbs, pieces of bark, and even fine straw falling on the plants is attended with serious injury to the crop. After the land has been cleared and prepared for the plow, it should be thoroughly broken up both ways with a jumping scooter. Let it be then laid off with the scooter plow in rows three and a half feet apart, and crossed at right angles by furrows three feet apart, so as to form checks or crosses three and a half by three feet. This distance is designed for first-quality land, where the plants will grow large; on an inferior quality of land the checks may be drawn closer together, in proportion to the fertility of the soil. The soil in each check should then be well pulverized with the hoe, and raised very slightly above the common level, so as to form a flat hill—care being taken to remove all roots, large or small. Thus manipulated, the field is then prepared for

PLANTING.

At the first good shower of rain occurring after the middle of April the larger plants should be removed from the plant-bed, and the work of setting out be commenced. A round stick should be used to make holes for the reception of the roots of the plants. In setting out, take hold of the plants by the leaves, gathering them together, and then insert the plant sufficiently deep, so that the surrounding soil may act as a support to keep them in that position. This is done to protect the tender bud from the effects of the sun. At this season of the year the plant will live without any other protection. Later in the season they should be protected by setting up on the south side a large chip. A piece of bark, or even a magnolia leaf, will afford sufficient shade to insure life. At least one-fourth of the crop should be set out at this first planting, and the remainder can be set out as the season progresses. It is found, however, that the plantings from the first to the middle of May give the best results, both as to quality and yield. If the season is favorable a good crop may be realized from plantings made as late as the middle of June, but it is hazardous to postpone to that date.

CULTIVATION.

As soon as the plants have become well set and begin to grow, the soil around the roots should be lightly stirred with the hoe, and all grass and sprouts chopped up. When the plant is about knee-high run two or three furrows with a jumping scooter in the alleys the narrow way, and then with the hoe draw up a good flat hill to the plants. In the course of ten or twelve days run two or three furrows with the same plow in the alleys the wide way, taking especial care to avoid breaking or bruising the leaves. This is all the cultivation that is needed, other than keeping down the grass and sprouts, to make the heavy character of tobacco now in demand. If a lighter quality is desired, cultivation with the plow may be entirely dispensed with.

WORMING, TOPPING, AND SUCCORING.

After the plants are set out the field should be examined every morning, to see if the cut-worms have committed any inroads. If a plant is found cut down, its place should be immediately supplied by another, and be watered and shaded so as to bring it forward rapidly, and thus preserve a full stand and uniformity of size. As soon as the plants begin to grow, a close examination should be made every day or two for the *bud-worm*. These will be found in the bud of the plant, frequently not more than a half-inch in length, and as fine as a cambric needle, and if not promptly removed will work irreparable injury to the crop. At a more advanced stage the "horned-worm" will put in its appearance, but being much larger than the former is easily discovered and readily destroyed. By carefully crushing the eggs which produce this worm the labor of worming is greatly lessened. These eggs will be found on the leaf, and are deposited by a moth almost identical in appearance with the common caterpillar moth. To destroy the moth resort is frequently had to poison, and the application is thus made: Late in the afternoon, or about sunset, the fresh blooms of the Jamestown weed are gathered and set upon little stands erected in different parts of the field. In each bloom is deposited a drop or two of dissolved cobalt. The moth being very fond of this flower will resort to it for an evening's meal, and one sip at this treacherous fountain gives her her quietus. Unless the worms are unusually numerous, as they sometimes are, two wormings a week will preserve the crop from any material injury. All the children of the family over six years of age may participate in this portion of the labor.

Ordinarily, when the plant is about hip-high, the bud forms a *button*, which ultimately develops into the seed-stem. If a thick, heavy leaf is desired, this button is pinched out when there are ten or twelve well-developed leaves; if a lighter article is desired, the plant is permitted to run up until it begins to throw out seed-branches, when it is broken off, leaving from fifteen to twenty leaves to mature.

Shortly after the topping has been effected the plant will begin to throw out *succors* from the roots and from every leaf. These must

be promptly rubbed or broken off, in order to concentrate the entire substance of the stalk in the leaf; otherwise they will detract greatly from the quality and yield of the crop.

HOUSING AND PREPARING FOR MARKET.

To be prepared to save the crop in good order ample house-room is essential. There ought to be a large open shed and an inclosed barn, located near each other—the former to accommodate the handling of the crop in its green state, and the latter as it approximates the cured state. Both should be arranged with joist or smooth poles reaching across the building, and placed at a sufficient distance apart, both horizontally and perpendicularly, to accommodate the length of the sticks used for hanging and the length of the leaves, so that the tails of the upper tier may not overlap the one below it.

There should also be an ample supply of sticks, previously prepared, to be used in hanging the leaves. These sticks are split out of pine, are four and a half feet in length and about five-eighths of an inch square, being smoothed with the drawing-knife, and a little tapering to one end.

The ripening of the tobacco may be known by a peculiar transparency of its leaf and its brittleness when doubled together. The plant begins to ripen from the bottom, and as the leaves successively exhibit the foregoing indications, they are broken off and laid in little piles, to be ultimately hauled to the open shed. In taking the leaf from the stalk, the operation should never be performed while the night dew is on, nor immediately after a shower of rain. It is essential to the quality of the article that the natural gum of the leaf should be retained, which will not be the case unless the foregoing precaution be strictly observed. It is also essential that the leaf as it is taken from the stalk should be protected from the rays of the sun, as in its green state it is easily sunburnt and becomes valueless. In hauling it to the shed the load should be protected by a piece of cotton-bagging or some similar material.

After arriving at the shed the first operation is to split the large central stem of the leaf, making a slit about four inches in length, beginning about one inch from the butt. While a part of the hands are engaged in this operation, others are employed in inserting the sticks through these slits, which is called stringing. A stick will hold, in its green state, from twelve to twenty, dependent upon the size, and they must be so adjusted as not to crowd each other. Where a stick is filled it is immediately lifted to one of the tiers of poles, and there allowed to hang. As the leaves shrink, the tobacco on two or three sticks is crowded on one, and that is lifted to a higher tier, until all of the upper tiers are occupied. When it is better than half cured it may be removed to the close barn and hung up as before, care being taken not to crowd it too closely. At this stage should a damp spell of weather occur, causing a tendency to mould, a charcoal fire built in a pot or other iron vessel, or a small stove, kept at a moderate heat sufficient to dry the atmosphere, will be found of great benefit.

When the large stem of the leaf is thoroughly cured, advantage should be taken of the first damp spell, when it is in proper case for handling without breaking, to take down a portion and bulk it down on the sticks, and have the bulk covered with a sheet or hay, so as to exclude the air and prevent drying-out. The leaves are now assorted into three qualities: the first is composed of the longest of those which are of approved color and free from holes, some approximation in regard to uniformity of length being observed. The color now most in repute is a rich dark-brown. In making up the second quality, uniformity of color should still be observed, but it is not so important in regard to length of leaf, or freeness from holes, as in the first. However, no ragged leaves should go into this quality. The third quality is composed of the refuse of the crop, and each quality must be kept separate, both in handling and packing.

As the leaves are assorted they are immediately bound into hands containing about twenty leaves each, and for the band a leaf of the like quality is to be used. The neater the handling is accomplished the better will the crop show in sampling. As each hand is completed it is laid in bulk. The bulk is formed by laying the hands in opposite directions, the tails lapping over each other and the butts showing on each side. These bulks may be built in a straight line of any length and about three feet in height. The purpose of bulking is to carry the tobacco through a sweat, which greatly benefits the color and texture of the leaf, and is absolutely indispensable to the perfect evolvement of that rich aroma so highly prized in a good cigar. The bulk after being built up to the required height should be kept well covered with sheets, and be lightly weighted, which will expedite the process of sweating.

When the sweating process has been accomplished and the bulk has become cool, the tobacco should immediately be transferred to boxes made of light three-fourth pine boards that have been well seasoned. In packing, lay the hands in the box with the tails overlapping as directed for bulking. The boxes should be of the following dimensions: Thirty-eight inches long, thirty inches wide, and thirty inches deep. A box of this dimension should hold from three hundred and fifty to four hundred pounds. A small screw or temporary lever will be necessary to facilitate the packing. After the packing has been completed and the top of the box nailed on, the two ends should be secured with hoops made of white-oak strips or hickory withes. Be particular before packing to weigh the empty boxes and hoops, and note the weight in pencil on each box, so that it may be deducted when the crop is sold.

My task would be incomplete were I to omit to note the

AVERAGE PRODUCT AND PRICE.

On average lands eight hundred pounds per acre is considered an average crop. On lands of a superior quality, from ten to fifteen hundred (with exceptional cases of eighteen hundred) may be realized.

For a series of years the average price of the crop round may be

put at from twenty-five to thirty cents per pound. I have known it to sell as high as eighty and as low as twelve and a half cents. The small quantities made in Gadsden County in the years 1872 and 1873 brought from thirty-eight to forty cents.

I conclude with the remark that if the cultivation of the Cuba tobacco has been attended with such satisfactory results to the grower, the establishment upon a large scale, in the midst of the tobacco region, of a cigar factory, could not fail to bring large profits to the manufacturers.

A. J. HARRIS, of Marion County, was next introduced, and read the following paper on

THE WILD ORANGE GROVES OF FLORIDA.

Mr. President and Gentlemen of the Florida Fruit-Growers' Association:

I have been selected by the Executive Committee of this Association to read an article on the "Wild Orange Groves of Florida," not, as I suppose, on account of my ability to prepare such a paper, but from the fact that I am largely engaged in developing such groves by converting them into sweet ones.

Allow me to beg the indulgence of the Association, while I digress a little here, and speak generally of the orange. I do so, because so little has been written about and is known of the history and peculiarities of the orange.

We learn, by reading the history of the orange, that it is the name of one or more species of citrus, the fruit of which is much prized. Botanists generally regard all the oranges as of one species,—*Citrus aurantium*,—but some follow Risso in making the common or sweet orange, the Bergamot orange, the Mandarin orange, the Bitter Bigarade or Seville orange, etc., distinct species. The common or sweet orange is an evergreen with a greenish-brown bark; the leaves oblong, acute, sometimes minutely serrated; the flowers white, the fruit roundish, the oil-cysts of the rind convex, the juice sweet and acid. It is cultivated in almost every part of the world of which the climate is warm enough, but succeeds best in the warmer, temperate, or subtropical climates, as in the south of Europe and the peninsular portion of this State. The orange does not seem to have been known to the Greeks and Romans, but was probably brought to Europe by the Moors, and is supposed to have been introduced into Italy so recently as the fourteenth century,—fully one thousand years after the citron. The orange loves and flourishes best in a rich, light soil. There are many varieties in cultivation which are perpetuated from seeds, and by budding or grafting upon seedlings, stocks, etc., and by layers or cuttings.

Of the varieties of the sweet orange, perhaps the most deserving of notice are the Portugal or Lisbon orange, the most common of all, having the fruit generally round, or nearly so, and a thick rind; the China orange, said to have been brought by the Portuguese from China, and now much cultivated in the south of Europe, having a smooth, thin rind and very abundant juice; the Maltese or Blood orange, remarkable for the blood-red color of its pulp; the Egg orange, having fruit of an oval shape; and the Tangerine orange, having a small, flat fruit, with a pleasant odor and finely-flavored pulp. The St. Michael's orange appears to be a sub-variety of the China. The Majorca orange is seedless.

The Bergamot orange is regarded by some botanists as a variety of the lime. Of its native country or origin nothing can be told, except that it was probably derived from the East. From the rind of its fruit the well-known Bergamot oil is obtained, which is extensively used in making pomades, fragrant essences, *Eau-de-Cologne*, etc., etc. The fruit is pear-shaped, smooth, of a pale-yellow color, and has a green, subacid, firm, and fragrant pulp. The essential oil is obtained by distillation or by grating down the rinds, and then subjecting them to pressure, which is the best method. It is of a pale-yellow color, or almost colorless. One hundred Bergamot oranges are said to yield two and one-half ounces of oil.

The Mandarin or Clove orange, recently introduced from China, has fruit much broader than long, with a thick rind very loosely attached to the flesh, so that there is often a space between them. The leaves are smaller than those of any other kind of orange.

The Bitter Bigarade or Seville orange (called Seville on account of the large groves the Moors planted round the city of Seville, in Spain) is distinguished from the sweet orange by the more truly elliptical leaves, the acid and bitter juice of the fruit, and the concave oil-cysts of its rind. They were at one time extensively cultivated by the Moors, probably for medicinal purposes. The rind is more bitter than that of the sweet orange, and is used as a stomachic and tonic. Its chief use, however, was for flavoring puddings, cakes, etc., etc., and for making the well-known orange marmalade, etc.

The "wild orange" found in this State are of two kinds, the sour and the bitter-sweet, the former predominating, and, from what I can ascertain from reading, both are properly classed and known as the Bigarade or Seville orange. The wild state of the orange is not certainly known, nor is its native country more certain, although there is much reason to believe that all the kinds have spread over the world from the warmer central and eastern part of Asia. It has been alleged that it is a native of North America, near the Gulf of Mexico, but the probabilities rather seem to be that it has been introduced and has become naturalized. Therefore, it is not definitely known whether the wild orange is indigenous to the soil and climate of this State, or whether they were introduced here several hundred years ago by the Europeans. There are many ideas and theories advanced on both sides; but from the fact that signs of Indian habitation are generally

seen near these wild groves, and we nowhere find it mentioned that the Spaniards found the orange growing in Florida when they first settled it (although the Bigarade or Seville orange was at that time the most common of all fruit growing in Spain), has led me to believe that the Spaniards brought the fruit over to their settlements on the sea-coast, and the Indians got them and carried them out through the interior; and a few seeds dropped here and there, in the course of several centuries have grown to be (in some instances) large groves, having all the appearance of being indigenous. But, however, it does not matter to us how they came here; we know that we have them, and the next thing to be done is to utilize them, in order that they may be a source of revenue to our people and State. The wild orange groves are generally found along the margins of the lakes and rivers, but sometimes we see scattering trees growing in the high hammocks of the interior, away from either river or lake. They do not grow to any extent south of the twenty-eighth or north of the thirtieth degree of latitude.

The most extensive groves are on Orange Lake, in the northern part of Marion County. There it seems that Nature has done all that man could desire to make it truly the home of the orange. The soil is a rich, sandy hammock loam, full of marl and lime pebbles, with a rich subsoil of marl and lime from two to four feet below the surface, not affected by dry or wet weather, and, on account of the large body of water, is almost, if not entirely, secure against injury from cold; and then there are several hundred acres of the finest wild orange grove around this lake that can be found anywhere, besides hundreds of thousands of nice trees that can easily be transplanted to the rich hammock lands lying in close proximity to these groves. The next largest groves are on Lakes Griffin and Harris, in Sumter County. There are also fine wild groves on Lakes Ware, Bryant, Pansofka, Jessup, George, and Ahapopka, and on the Ocklawaha, Withlacoochee, St. Johns, Indian, and Halifax Rivers, and also west of the Apalachicola River, and in many parts of this belt of country mentioned above there are wild oranges in groves of from a few trees to several acres.

The juice of the sour orange is very acid, like that of the lime and lemon, and a drink can be made from it that is an excellent substitute for lemonade. It can either be used fresh from the fruit, or filter it well, seal air-tight, and it will keep for months and even years, and can be shipped to any part of the world for use. With a common cider-press and a copper boiler the juice can be pressed out, boiled down to one-sixth; ship to Powers & Weightman, of Philadelphia, who will pay about one dollar and a half per gallon for the condensed juice for the purpose of manufacturing citric acid. Several persons are engaged in this business now; but a much larger profit can be realized by making it into wine. With an expense of fifty cents per gallon, a wine can be made that will sell for from two to three dollars per gallon. The best recipe that I know of for making it is, take one part orange-juice, strain or filter well, to four parts of pure water

(rain-water preferred), add three pounds of good, pure sugar to each gallon of the mixture, put the whole into a vessel and let it undergo fermentation; in about three months rack it off several times, allowing it to settle after each racking; then bottle and set away in a dark, cool place for future use. An excellent preserve or marmalade can be made from the rind and fruit; many people eat the fruit like they would the sweet orange. By taking the necessary care in eating the fruit of the bitter-sweet orange, in removing all the white, bitter skin and pulp, we get a passable fruit.

The wood of the orange-tree is of a yellowish-white color, very fine, smooth, hard, close-grained, strong, and durable, and is used for inlaying and turnery; many useful and ornamental articles could be made of it, and the day is not far distant when cabinet-makers, manufacturers of toys, pianos, and other musical instruments will appreciate its value and make a demand for it; it is much sought after now for walking-canes, etc. The leaves of the orange are a little bitter, and contain a fragrant volatile oil, which is obtained by distilling them with water; the flowers, when distilled in like manner, yield a much more fragrant and volatile oil, and is preferred to the leaf oil. This essential oil is used for making *Eau-de-Cologne*, and many other perfumes, etc. Dried orange-blossoms, to be distilled for this oil, are an article of export from the south of Europe. Those of the Seville are preferred to those of the sweet; they are mixed with salt, and packed in boxes or barrels. There are persons who have been largely engaged in distilling the essential oil from the leaves and flowers of the wild orange on Orange Lake for the past five years. The peel also contains essential oil, which can be obtained by a similar process to that described above for procuring the Bergamot oil from the Bergamot orange. The dried flowers are of a yellowish color, while the fresh flowers are white and very fragrant; the use of them as ornaments in the head-dress of brides is common throughout a great part of the world.

In former times, when our people's whole time and attention was engrossed in cotton- and sugar-culture, fruit-growing was looked upon rather with contempt, and the wild orange groves were not valued any higher than the same quality of other timbered lands. Many of the finest wild groves were cut down and destroyed, to make room for cotton- and sugar-culture, etc.; but of late years a new era has dawned upon our people, and they have been awakened to the importance and profits of tropical fruit culture, and now these wild groves are highly prized, and many of them have been and are being converted into sweet groves. I shall only give the plan we have adopted on Orange Lake, and so far as I can ascertain it is the plan generally adopted. We first carefully cut off with a chopping-axe all the orange-trees from three to four feet above the ground, and all the underbrush and smaller forest timber, and pile everything in close, compact piles. We then cut down the other forest timber and pile in like manner, and let the whole remain on the ground until it is decayed, which will only take a few years, thus enriching the soil and

taking care of part of the ground. In about a month after the orange-trees are cut off they are in good condition for spring-budding or side-grafting. We put one or more buds in each stump, then in two or three weeks' time we go over the grove, and from all the trees that have green, living buds in them we carefully take off all sour sprouts or shoots, leaving only the sweet bud to grow, and keep off all the sour sprouts that attempt to grow until the sweet bud is large enough to consume all the sap of the stump, when the wild shoots will stop growing. As the roots of the wild tree are not disturbed, it is obliged to make a large, fine, sweet top in a short time to replace the wild top that has been cut off. I have a great many trees that bore fruit the past year, and some of them bore over a hundred oranges that were not budded until late in the summer and fall of 1871, making the trees a little over two years old from the bud when they first began to blossom for fruit. Trees can be found in my grove that are now only three years old from the bud that have sweet tops as large as any well-grown eight-year-old sweet-seedling tree, and will bear as much fruit this year. Messrs. Bishop, Hoyt & Co. (of which firm our worthy president is a member), adjoining me on Orange Lake, commenced budding their grove in the spring of 1873, and their trees have grown much faster than mine; one of their trees bore two oranges the past year. Cultivate the trees well, keep the grove clear of all weeds, bushes, grasses, etc. Do not plant any kind of crop among the trees that will exhaust the soil; peas, pumpkins, garden vegetables, etc., may be grown in a grove without injuring the trees; the amount realized from other kind of crops will not compensate one for the injury done the trees. Mr. Stockwell, on the St. Johns near Pilatka, had a few acres of wild grove that he cleared up and budded about six years ago, and last season many of his trees bore over a thousand oranges. Mr. Chadwick has a small grove in the same vicinity that has done equally as well.

I may place too high value on wild orange grove lands, but I firmly believe that I would advise one who wished to engage in the culture of that and other kindred fruits, and had the means to do so, to give five hundred dollars per acre, if it could not be had for a less price, for good wild orange grove land well situated as to transportation and a good water protection against the cold from the north and northwest, and with a good rich (but not a low, wet, heavy) soil, rather than take the same kind of land without the wild orange trees for nothing. And now let us see why I make such a difference. Take a wild grove and improve it like I describe above; in three years it will begin to bring in an income, and say we only leave one hundred trees on the acre (and for the first ten years they may be allowed to grow much thicker without injuring each other) and that each tree will only net one dollar per year for the first five years (which every one well knows is very far short of what will be realized from such a grove). Thus the grove will net a hundred dollars per acre per year, and in five years we have the original cost of the land back, and the trees will then have large fine tops eight years old from the bud, and

will bear on an average at least a thousand oranges apiece. Now take the same kind of land and plant it out in sweet seedlings. We will have to wait until they are at least eight years old, and many of them will be ten before they will begin to bear the first time; therefore the budded tree has from five to seven years the start of the seedlings in point of bearing-time. The wild orange trees in their native state generally grow in thick dense groves and in heavy-timbered hammocks, the dense shade thus excluding all sun and air, and therefore they only bear a small quantity of fruit. Whenever they grow where the sun and air can get to them, they bear very full. Colonel Martin, of Marion County, had the fruit pulled and counted from a tree that grew out in his plantation, exposed to the sun and air, a few weeks since, and it had ten thousand five hundred oranges on it. There is another species of the citrus family called the Kune-quat (*Citrus Japonica*), which is much cultivated in a large area of China, but more particularly in the more temperate parts. In winter it must be kept cold and dry. In summer, which is its season of growth, it ought to have a liberal supply of water, and a temperature of from eighty to one hundred degrees, and this heat should be well kept up in autumn, in order that the young wood may get well matured. In many parts of the United States this fine species would thrive and do well. A Mr. Fortune introduced this plant into Europe from China in 1842, and says that the *Citrus trifoliata*, which is very hardy in Paris, is used in China as a stock for the Kune-quat, and also that in countries where it is found in the highest perfection the common orange will not survive the winters, and, on the other hand, it will not do so well in the warm semi-tropical climates where the orange succeeds best. Both require warm summers, and as the summer is frequently warmer North than South, the Kune-quat appears to thrive best in a northern latitude. It requires a summer temperature, varying from eighty to one hundred degrees Fahrenheit, to enable it to form its growth and mature its new wood, and in winter will bear the cold as low as ten degrees Fahrenheit. The plant is very attractive, both in foliage and flower, and the fruits are much relished, particularly when preserved.

ON "THE DIEBACK" IN ORANGE-TREES.

BY J. H. FOWLER.

THE symptoms of this disease, expressed in order of their development in the young twigs or shoots, are large size, angular form, twisting and turning downwards, bark wrinkled and blistered, often splitting, sap exuding, and resinous gum collecting on the surface, leaves

somewhat curling, ends of twigs turning pale and dying, buds failing to develop into leaves or twigs, and forming large diseased clusters, and finally the whole top dying.

The earliest symptoms of the disease can only be recognized by one who has carefully studied all its phases. Frequently the large angular stems and broad leaves, with exceedingly rapid growth, which accompany the first stages of the disease, appear very flattering to the owner of the tree. But in my judgment, small, round young twigs, with medium-sized leaves of rich green color, the larger stems preserving their cylindrical form, with a grayish-green bark, are the best signs of health and vigor. These are the never-failing characteristics of healthy, growing, undisturbed wild trees and sweet seedlings. But wherever the trees have been cut down or severely put back by whatever cause, we frequently see extraordinary size of young shoots and leaves, which shows a great pressure of sap and an abnormal demand for leaf. It is not, however, by any means certain that this condition will result in any serious stage of dieback or other disease. But it should be borne in mind that this plethora of sap and abnormally rapid production of wood and leaf are signs of physical debility and peculiar sensitiveness to frost and other external enemies. Whatever may be the *direct* agency in the production of dieback, we are prepared to give with unhesitating certainty some of the conditions which will inevitably lead to it.

The most frequent conditions or causes of dieback may be summed up under the general head of *bad treatment.* The most prominent features of bad treatment are the use of injurious fertilizers, and more frequently the very bad use of good fertilizers. Of course the kinds of fertilizers demanded by any plant depend upon the elements of nutrition which enter into its constituent parts, and upon the want or supply of those elements in the soil in which it grows.

Some plants, as, for example, many of our wild weeds and forest-trees, are so constituted that almost any overplus of nutritious elements in the soil produces no injury, while other plants, as many of those more useful and frequently cultivated by man, will suffer greatly by an over-supply of those elements which, mixed with the soil in smaller proportions, greatly facilitate their growth. This last is especially true of the orange-tree, which surpasses most plants or trees in its power to multiply fibrous roots and feeding spongioles,* as well as in power

* If we examine the roots of any common plant with a branching woody stem, such as the rose, we shall find that they subdivide and spread beneath the ground very much upon the same plan with the branches above, and if the extremities of these be carefully examined they will be found to be much softer than the rest of the structure. Now these fibrils are the true roots, and their soft succulent extremities, which are called *spongioles*, are the parts by which alone they absorb or suck up fluid. . . . The fact is, that this absorption takes place with the greatest rapidity through soft newly-forming tissue, and this is what gives the spongioles their peculiar power. They are, in fact, the *growing-points* of the rootlets, which are constantly increasing in length, and which in this manner go in search, as it were, of food. . . . They seem to have a certain power of *selection*, some of the substances dissolved in the fluid which surrounds the roots being absorbed and others being

to multiply leaves or breathing-organs, and in the delicate and sensitive character of both root and leaf.*

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rejected. Thus, if a grain of wheat and a pea be grown in the same soil, the former will obtain for itself all the silex or flinty matter which the water can dissolve; . . . on the other hand the pea will reject this, and will take up whatever *calcareous* (living) substances the water of the soil contains, these being rejected by the wheat.

Again, if the roots be placed in water colored by any substance of which the particles are very minute, the finest of these will be absorbed with the fluid, and will be carried to the leaves. . . . It is easy to say whence every particle of which a living body consists is obtained by it, for by placing it in a variety of circumstances, and observing the changes in its mode of life which these produce, we can determine the influence of each. Thus an animal may be fed exclusively on one kind of aliment, as for instance sugar or grain, and it is found that however nutritious, when combined with others, such an article may be, it has not the power of supporting life for any length of time by itself, unless it contain *all* the substances required by the animal for the right maintenance of its structure. So, also, on the food of plants we may experiment by placing them in different soils and in different kinds of air, and supplying them with variable quantities of water, until we have discovered what is absolutely necessary to their growth, what favors it, and what is superfluous or injurious. . . .

Nitrogen has not been commonly regarded as an important element of vegetable structure, but it has lately been shown to exist largely in the growing parts of plants; and there seems reason to believe its presence to be essential to the increase of their fibre by the formation of new parts. . . . Nitrogen constitutes four-fifths of the atmosphere, but it does not seem to be taken in by the plant in its simple form. This gas with hydrogen forms ammonia, of which a minute quantity always exists in the atmosphere, being chiefly supplied to it by the decomposition of animal matter; and this is absorbed by the soil and taken up by the roots. . . . It is in the supply of ammonia which they yield that the principal benefit of animal manures seems to consist.—*Popular Vegetable Physiology.*

If one will place a quantity of strong ammonial manure in a hole near an orange-tree and keep it moist a short time, then examine it, he will be surprised to see how completely it will be filled with new absorbing fibrous roots or spongioles. These are all voracious feeders, and if the manure is too strong of ammonia, or too abundant, the tree will be liable to suffer from the effect, though the first symptoms may be a very remarkably rapid growth. The spongioles do not know when to stop any more than many of our young animals know when they have eaten enough green clover or dry corn.

* Botanists represent that the green bark of plants is furnished with breathing-pores, as well as the under surface of the leaves, and in some cases the upper surface. In this case I determined to ascertain their relative number on the green bark and leaves of the orange-plant. With this object in view a portion of the bark was removed with a sharp knife and treated with hot caustic potash, after which the epidermis was easily removed. When mounted and viewed with a power of about one hundred diameters, the numerous pores were seen and could be easily counted. A portion of the skin, no larger than a fly-spot, contained about twelve of these breathing-pores. I next experimented with the orange-leaf to ascertain the true character of its upper and under surfaces. A leaf was placed in a strong solution of nitro-muriatic acid, which bleached it slightly, and rendered it somewhat transparent by oxidation, without softening the albuminoids which bind the surfaces together. The next step was to wash the leaf in water to free it from excess of acids. With a circular steel punch a portion of the leaf was cut out and placed for a few minutes in a capsule containing a strong solution of chlorinated soda, after which it was placed in pure water, when the epidermis of the under surface of the leaf floated off. The object of placing the prepared portion of the leaf in the soda compound was to soften the albuminoids and bleach more perfectly the chlorophyl. On being immersed in the solution its upper surface assumed a well defined brown color, while the under remained transparent, thus showing that the upper epidermis differs chemically from that of the under surface. This fact may explain why some forms of fungi are found on the upper surfaces of some leaves, while others are found principally on the under.

I next floated the disk thus removed on to a microscopic slide, using a camel-

It might be of interest and some service to give here the analysis of the orange-tree, as showing what elements are demanded as food, but we are unable at the present time to furnish this analysis, neither is it indispensable to the discussion of this subject. The plants themselves are the best practical analysis, and if we will carefully listen to what they have to say, we shall know for a certainty what manures are demanded, and how best to apply those manures. Our greatest difficulty is a want of careful observation, patient comparison, and correct deduction. We see a few facts, and fail to comprehend their relations to each other and to other facts which we do not readily see, hence erroneous conclusions. I shall try to state clearly those facts which I have carefully observed, and conclusions which seem to me beyond question; *e.g.*, I transplanted several thousand young seedlings into trenches filled with soil taken from beneath and about a dwelling-house, soil naturally rich and gradually manured by slops and other refuse from the kitchen. These trees all flourished well. Some five hundred other trees from the same seed-bed, transplanted at the same time into two rows adjoining these, took the dieback and made little or no growth for several years, most of them finally dying out. These two rows were planted into soil mixed with a large quantity of old cow-manure. Some of these diseased trees were subsequently removed to soil containing no manure, where they gradually recovered and became good healthy trees.

I put cow-manure to the amount of about two bushels, with other substances, into the holes and among the soil in which I set some very fine wild stumps, nearly every one of which suffered severely, and some actually perished, with dieback.

I put four heaping shovelfuls of very strong ox-manure about nearly one thousand sweet seedlings which I had transplanted into a grove. These all soon began to suffer, mostly from dieback.

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hair brush to assist in the manipulation, and mounted it with gum and disk in the usual way. The surface was found to be almost destitute of cellular structure. The stomates are best seen under a power of about six hundred diameters. The green bark and under surface of the leaves contain about sixty-four thousand of these pores to the square inch of surface. The thick disk should be floated on to glass as above, and its superfluous moisture be removed with clean blotting-paper. Its exposed surface should be placed face downwards. With a point the epidermis may be removed, which place in water and float on to a glass slide, as before described. It will represent the upper surface of the leaf. On examination with the microscope it exhibits cellular structure only, and seems to be destitute of stomates. The fleshy portion on the third slide should have a drop of thick gum placed on it, and be covered with a glass disk. When viewed under a high power it becomes an object of much interest. The branching, vascular bundles will be distinctly seen, resembling in some respects the arteries and veins of the human body. A careful examination will show that these are also covered with a fine lacework of cells under and over them, and interspersed among the latter will be seen a vast assemblage of translucent dottings, each having an opening across it corresponding to those of the stomates, under which they were situated before dissection. The structure of the leaf, taken as a whole, indicates the great necessity of cleanliness and high culture, for the more complicated the organic structure the greater will be the number of its economic products, and the more apt are abortions in the form of fruit to be produced in the case of neglected culture or unfavorable climatic conditions.

I put from one to four wheelbarrow loads of stable-manure about some flourishing trees. All took the dieback and suffered severely.

Another time I put several bushels of very strong horse-manure about some very flourishing trees, all of which took dieback. Last year I planted several thousand sweet seeds in some pig-pens from which I had removed a large portion of the manure. These seeds came up finely, but in all those parts of the pens where the manure had been most abundant the young trees soon began to exhibit signs of dieback, and most of them perished from this disease before the close of the summer. Some died in four weeks after they came up. I removed some of the diseased trees to unmanured soils, and those not too far gone completely recovered.

I have used night-soil, hen-manure, fish and flesh composted and raw, all with similar results. I have carefully observed the effects of all these manures as used by others, and have frequently seen the same results, while frequently those who have used them had observed no injurious effects from them, effects plainly visible by me. As I have already observed, the symptoms of the first stages of this disease are not apparent to one who is unacquainted with its different phases. I have seen many groves already suffering severely from it, when the owners flattered themselves that their trees were in a remarkably healthy and growing state.

I know a man, whose name I prefer not to mention, who has some very remarkably fine bearing orange-trees, about several of which he has penned hogs until they have made a complete bed of manure, inducing in all serious symptoms of dieback, though he is very positive that his trees have received great benefit from this process of manuring. This same man has nearly ruined his young grove by putting about each tree half a bushel or more of green cotton-seed, causing very severe dieback in every tree, yet he does not see that anything is the matter with them. I know another man, who, at considerable expense, put muck in considerable quantity into the hole where he set out his trees, then piled up two or three bushels of muck about his trees, all of which are suffering severely from dieback. Another instance, where green pea-vines were piled up about the trees, the same effects are produced. I could go on to an almost indefinite extent with the statement of these facts, from all of which I am forced to the conclusion that *dieback* may be induced by an over-supply of almost any kind of manure, and that the danger is proportional to the amount of ammonia contained in the manure and the amount applied at any one time, and in inverse proportion to the size of the tree and the distance from the tree to the applied manure. I believe every kind of manure named is good for orange-trees; but that no kind of animal or vegetable manure should be applied in a crude state. All organic substances, vegetable or animal, should be composted, and the compost should be thoroughly rotted down and be applied to the trees on or near the surface of the soil, sparingly, and at considerable distance from the trees. In a grove where the trees stand fifteen to twenty feet apart, the manure should be applied to the spaces between the

trees; most heavily in the centre, gradually thinning towards the trees, and never coming nearer than three feet, leaving about each tree an unmanured space at least six feet in diameter. Muck or marly soil, or rich loam with clay is a good base for a compost heap. With this any kind of organic substance, the stronger in ammonia the better, may be used; ashes and lime may be added to great advantage; a small quantity of salt is beneficial; bone-dust or raw bones is excellent; guano, or any of the commercial fertilizers, may be added. Slops from the kitchen and chamber are excellent. The heap should be frequently shoveled over and thoroughly decomposed before being used, and when used, the quantity applied should be inversely as the intensity of strength, and directly as the size and age of the trees. The manure should be applied always on a wet day, and broadcast; then *lightly*, very lightly, turned or harrowed in, and, if practicable, covered with a light mulch. I consider the best season to manure to be between the middle of February and the middle of March, and from the middle of June to the middle of July; never later than July or earlier than February, on account of danger from frost. It is better to manure twice lightly than once heavily. In fact, it is far better to not manure at all than to manure too heavily. Ten times more injury has been done by too heavy and otherwise improper manuring than by neglecting to manure.

Another prolific cause of dieback is piling up too much heating substance, of whatever kind, about the stem and on the roots of the tree. Instances of this are very common, and the connection between the disease and these facts is too palpable to admit of question. Many people practice piling up pea-vines and other mulching substances very heavily about their trees, and do not observe the injurious effects until they have become very serious. I protest against heaping up any substance whatever about the stems of our orange-trees, no matter if it does not come in contact with the tree. The injury comes to the fibrous feeding-roots near the surface of the ground.

Another cause of dieback, analogous to this, is setting the tree too deeply in the ground. It is indispensable to the healthy growth of an orange-tree that the fibrous or feeding-roots should run very near the surface, where the soil is loose and thoroughly aerated.* All plants require this aeration of soil to a greater or less degree. To

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*"The decomposition of the vegetable matter of the soil requires the free access of air to every part of it. Every particle of the soil needs to be surrounded with oxygen, for the production from it of carbonic acid. It is from the decay of vegetable and animal matter that plants (at least under ordinary circumstances) derive whatever supply of carbonic acid they obtain in addition to that afforded by the atmosphere. This is dissolved by the fluid of the soil, and is taken up by the roots. The supply of carbonic acid thus obtained seems chiefly important to the plant when its leaves are undeveloped, as is the case in the early stages of its growth (and with trees whose tops have been cut away). . . . The necessity of unimpeded access of air to the part of the ground through which the roots are distributed is shown in an interesting manner when trees are planted too deep in the soil, or when their roots have been covered with an additional quantity of earth. If the tree be old or sickly it gradually dies." (See Popular Vegetable Physiology.)

the orange-tree this is an absolute necessity. Hence this tree flourishes best in a loose, porous soil, or in a soil upon which there is kept up a large supply of loose vegetable mould upon the surface.

Frequent deep plowing, by which the surface-roots are cut away, has a great tendency to produce dieback. I have often observed this and am sure that many groves are suffering greatly from this cause. It is supposed by some that the surface soil in an old grove often becomes matted with old and useless fibrous roots, and that if these be cut away with a plow, new roots with active spongioles will grow out. This theory may be true, but to deeply plow up all the soil at one time produces more injury than benefit. I would, therefore, suggest plowing only one side of the tree in one season, leaving the other side to be plowed the following year. Better than either would be light manuring and thin mulching. This would loosen the soil and cause a new growth of fibrous roots near the surface.

It is frequently supposed that in a young grove the ground may be plowed very near to the trees without disturbing the roots. This is a very serious mistake. I have known the roots of a newly-set tree to extend six feet of new growth in three months, and have no doubt they often meet in a light, rich soil in one year. Nothing can be worse for the young tree than to continually cut off these new roots by deep plowing.

Imperfect drainage in damp soils, where the overhanging forest-trees are cut off, is a sure cause of this disease.

I planted a nursery of two thousand two-year-old healthy seedling-trees in such a soil, and every one of them took the dieback the first year. Some have died, others have stood there six years making no growth. I have removed some to a dry soil, and they have recovered from the disease. Sour stumps set in this soil suffer from dieback equally with the sweet seedlings. Other plants, as cane and corn, suffer from the same disease in this soil. Probably the cause of suffering in damp soils is want of proper aeration, it being impossible for the air to find free circulation in such soils. When these damp grounds are shaded by overhanging forest-trees, from the falling and decaying foliage of which a loose vegetable mould is kept up on the surface, the fibrous roots flourish in this mould, and the trees frequently make a healthy and vigorous growth. Many of our rich, though low hammock soils, may be be treated in this way, and, without drainage, produce fine groves. But thorough clearing of such soils, whether for wild groves or transplanted trees, is very liable to produce dieback.

To cut off the whole top of a large tree, and then prune closely, leaving only the sweet bud to grow, when the tree itself has not been transplanted, produces a tendency to dieback. Many persons do not see this, but think the large leaves and remarkably rapid-growing sweet shoots are signs of health and vigor, when, in fact, they are symptoms of disease. I have seen these large, angular stems twisting and turning downwards, and even the growing extremities commencing to dieback, when the owners would insist that the trees were

perfectly healthy. The truth is, the equilibrium between the two vital systems—spongioles and leaves—had been destroyed, the latter being entirely removed, the former being left active to fill the vascular system with imperfectly-aerated sap almost to bursting, thus forcing into rapid development new buds, stems, and leaves by the organization of new cellular tissue from sickly or imperfectly-prepared substances.* This condition is peculiarly favorable to the dieback, as we shall shortly see. It may be entirely avoided by adopting two processes—first, by cutting away only a portion of the existing leaf-bearing branches at a time, or by cutting the trunk partly, not wholly off, and leaving the tree lopped over, the top resting on the ground, while the stem is still partially attached to the stump; second, by leaving several sour or wild sprouts to grow out of the stump in connection with the sweet bud, until the latter shall have produced a top and foliage sufficiently large to perform all the required functions. In either case the sweet growth may not be quite so rapid, but it will be rapid enough to satisfy any reasonable mind, and be healthy, producing a bearing-tree fully as soon as by the ordinary method of close pruning.

We will now say a few words upon what we consider the *direct* and *immediate* cause of dieback. We *believe*, though we do not make the *positive* assertion, that the disease is fungoid. The grounds of this belief are not facts of direct observation of fungoid growth in the

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* "The force with which roots absorb fluids is very considerable. If a vine be wounded in the stem when the sap is rising in the spring, a large quantity of sap will flow out, and will continue to do so for some time. If a piece of bladder be tied over the lower part, this is soon distended with a fluid, and in a few hours will burst. . . . But if the rise of the sap is due to the action of *endosmose* (inward flowing through a porous membrane, as that of the spongioles), there ought also to be an *exosmose* (or outward flowing principally by exhalation through the leaves). . . . As fast as the fluid is got rid of by exhalation through the leaves, the endosmose below will keep up the supply. When the upper part of the stem is cut off, the sap will continue to rise by the force of endosmose in the roots, so long as the fluid within is of greater density than the fluid without. But that will soon cease to be the case, the action of the leaves being destroyed, and no descending sap being intermixed to keep up the force. . . . It is in the leaves, as already stated more than once, that those changes are effected which convert the crude fluid absorbed by the roots into the proper juice or nutritious sap, capable not only of supplying to the different parts of the structure the materials necessary for the maintenance of their healthfulness, the repairs of injuries, and the production of entirely new parts. . . .

"The concentration of the crude sap by the loss of its superfluous fluid, and the occasional absorption of what may be necessary to supply the amount insufficiently afforded by the roots, are by no means the only functions of the leaves; nor can they be regarded as the most important. These organs supply also the means of getting rid of a certain superfluous product, to retain which within the system (at least in the form in which it is set free) would be injurious and even destructive, and they serve the equally important purpose of introducing, from the air, the element which chiefly gives firmness and solidity to vegetable tissue. . . . The process of respiration, then, in plants as in animals, appears essential to the life and health of the system, and though more energetic at some periods than at others, it is constantly performed. . . . It is in the performance of this function (absorption of carbon, and setting free oxygen) that the leaves, from the extent of the green surface they present, are chiefly energetic. . . . If the absorption of carbon from the atmosphere is checked, the fluids have a much more watery character, and do not contain their peculiar principles in nearly so much abundance." (See Popular Vegetable Physiology.)

diseased parts, though we believe these will yet be discovered, but upon analogous facts. First, I know that conditions of soil which produce or occasion the growth of fungi in sugar-cane, corn, Irish potato, pumpkin-vines, and other plants, occasion blight or dieback in orange-trees. Second, many diseases of plants, similar to dieback in orange-trees, have been traced to fungoid growths, viz.: grape-rot, potato-rot, hawthorne-blight, blackberry-blight, black knot in plums, apple-speck, pear-tree blight, yellows in peach-trees, etc.* Third, applications of ashes and lime frequently help to remove the dieback, and these are in some instances known remedies for fungoid diseases. Fourth, fungoid diseases are frequently more severe on undrained, wet soils, than on dry, sandy soils, and this is the case with the dieback. Fifth, these diseases also more severely affect those plants, and parts of plants, which, from whatever other causes, produce immature, sickly and dropsical wood. Such is the case with dieback. Whether we are right or not in our opinion as to fungi in this disease, we are certain that the disease, though quite common, and in some cases doing very serious damage, is mostly caused or occasioned by bad management, and may be remedied by substituting good management; and to this end we will state a few simple rules, some of which we have already suggested.

First. Always avoid low, wet, undrainable flat lands, especially when there is near the surface a hard, black, iron-rusted subsoil, such as underlies most of our "gallberry flats." The only exceptions of low, wet lands which we know of are those rich hammocks where the overhanging forest-trees may be left for shade and supply of surface mould.

Second. Never set the tree deeper in the ground than it originally grew, and never allow any substance whatever to be piled up above the roots.

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* In Agricultural Reports of 1872, the microscopist, Thomas Taylor, says: "My present experience leads me to suppose that pear-tree blight is a local fungus fermentation of the genus torula, and which may be developed under any one of a number of causes. Every condition that will prevent the bark and shoots from ripening will foster, under high temperatures, in the presence of organic acid (which is always present in green or unripe wood) and vegetable nitrogenous matter, one or more species of torulacei fungi. Stagnant water in the ground containing the drainings of decomposing organic matter is always charged with torulacei budding spores and germinal matter, which if absorbed by the roots will certainly contaminate the sap of the tree." Again, the same writer says: "It is not simply to the conditions of high or low temperatures, or to the hygrometric state of the weather, that blight, rust, mould, etc., owe their origin, but to a combination of many conditions."

In Reports of 1873, the microscopist says: "A certain amount of moisture is always necessary to the growth of fungi. The presence of an excess of water is highly favorable to the growth of the common moulds and some other forms of fungi plants." Again, the same writer says: "All moulds and blights are plants of a very low organization, and live in this predaceous way."

We might multiply quotations from mycologists without number to show analogies justifying our opinion that the immediate cause of dieback is fungoid growth, but we prefer to let this opinion stand on record for what it is worth, until the facts shall be ascertained by actual observation, since to know the conditions and remedies are the matters of most practical importance to orange-growers.

Third. Put nothing whatever into the holes or among the roots, when the tree is set out, except ordinary soil.

Fourth. Compost and thoroughly decompose all manurial substances to be used as fertilizers, then apply this compost sparingly and broadcast, most heavily in the centre of the spaces between the trees.

Fifth. Cultivate lightly, and mulch the whole ground if practicable very thinly.

Sixth. If the trees have become diseased, remove the cause as far as practicable, and apply to the surface a moderate quantity of ashes and lime, watering when dry.

Seventh. In case of improving wild groves where the trees stood, leave the tops partially attached to the stumps, or leave wild sprouts to grow until the sweet tops have attained a size sufficient to furnish a healthful supply of foliage.

Let these rules be observed, and we are confident that this now most serious and extensive disease will in a great measure disappear, and we shall see in our tame sweet groves as healthy a growth as we see in our wild groves, where rust and dieback never appear.

THE following paper on "The Strawberry," by Mr. George Burnside, was, in the absence of the author, read by Mr. Adams:

THE STRAWBERRY: HOW TO GROW AND HOW TO SEND IT TO MARKET.

I do not propose to say anything about the natural history of this fruit, nor to dwell upon the merits of the numerous members of the family, any further than to call attention to such of them as, in my judgment, are likely to prove of value to those who may wish to grow it for market. Therefore, I shall treat the subject from an utilitarian rather than from an æsthetic or scientific point of observation; for I believe most of us desire, at this time, to know how to make the most money from its production.

VARIETIES.

There are very few varieties—perhaps not more than two or three—that can be profitably grown when they have to be sent a long distance to market. This being the case, the choice of those best calculated to answer our purposes is the first thing to be considered.

Having spent a number of years in growing this fruit in Southern Illinois, and in the course of that time tried the Agriculturalist, the Monitor, the Wilson's Albany Seedling, and one or two others, the names of which I cannot recall, and all of which had more or less

popularity in other sections of the country, I finally came to the conclusion that, so far as I had tried, or had observed the experiments of my neighbors, only two were possessed of the qualities needed where the market was a long distance from the grower; these were the Wilson's Albany Seedling and the Triomphe de Gand, and perhaps I might add the Jucunda, or Knox's Seven Hundred. Of the two first I can speak from experience; the latter was not popular in the West, and very few cared to risk time and money on it, particularly when they had two others which filled all the requisites so satisfactorily.

The choice of variety being thus reduced to its smallest limit, I will briefly describe the qualities of the two which I shall recommend for trial in this section.

The Wilson's Albany Seedling is my first choice, because it is hardy, vigorous, and productive. Some object to it because it is too acid. In fact President Wilder, of Massachusetts Horticultural Society, is reported to have said that he would as soon eat a turnip as a Wilson strawberry. It *may* be that in Massachusetts the turnip is entitled to the preference declared above; but for my part, as this noble berry grows in the West, I think it is entitled to take a much higher place than has been hitherto conceded to it by our New England friends. We know that all fruits improve or deteriorate in proportion to the adaptability of the soil in which they are grown, and there is a very marked difference between the strawberry and the cherry (to say nothing of other fruits) when grown upon the black soil of the Illinois prairie, or upon the light yellow loam of the hill-country of the south end of that State. And I have no doubt the same difference will be found to exist here when we come to pay more attention to this subject. The Wilson is a very firm, solid berry; bears transportation beyond any other with which I have had experience; ripens somewhat after picking, and, if carefully handled and honestly packed, will keep from four to five days. Its productiveness outstrips all others. In Southern Illinois it yields, in field culture, from one hundred and fifty to three hundred bushels per acre; and, in one instance, I know of two hundred bushels being grown upon one half-acre. What may be done in this State is yet to be seen, but I do not think it would be wide of the mark for me to predict that on the clay soil of Leon, Gadsden, and adjoining counties, one hundred and fifty bushels per acre might be grown under favorable conditions and with fair treatment. The Triomphe de Gand is a pistillate, bearing a large fruit, averaging, perhaps, larger than the Wilson; is a sweeter but not a better-flavored berry; is not so firm, and generally not quite so prolific a bearer. Both are about equally sturdy, and produce runners in about equal proportion. Both bear large, dark-red fruit when fully ripe, and when very thrifty both are inclined to produce distorted or cockscomb berries.

PLANTING.

The strawberry-plant is very hardy and tenacious of life. I know of but few cultivated plants that will survive a greater amount of

neglect, but there are none which will more liberally reward generous and intelligent culture. In preparing the soil for the reception of this plant, I used to plow and harrow it at least twice, and then lay off in rows three feet apart, setting the plants about twelve inches apart in the row. I prefer setting the plants in a furrow, so that they may be a little below the mean level of the surface. The plants should be trimmed, which consists in clipping off most of the leaves and cutting out all the fruit stems; for the object is to secure vigorous stools, which you cannot do if the plant is permitted to bear fruit the first season. Having properly trimmed and puddled the plants, let one hand drop them while others follow and set them. The more carefully this work is done the better you will be pleased with the results. After-treatment is simply to keep the grass and weeds down and the surface mellow until the runners have covered the space between the rows. This can be done at first with a small five-toothed cultivator and the hoe, gradually drawing the soil to the plant as it increases in size. By the time you are ready to lay them by for the season, you will have a ridge instead of a trench, and your vines will be in a condition full of promise for the coming crop.

MULCH.

A great help to the plant, and as a means of increasing the yield, is to mulch the vines late in the fall. For this purpose forest-leaves, straw and spent tan bark have been used. The best mulch, however, that I ever saw used was the bagasse from the sugar-mill. This, spread evenly over the field in the fall, was loose enough to permit the growth of the plants, and yet kept the ground moist and prevented the berries from becoming coated with sand every time there was a shower.

HARVESTING.

I shall not say much in regard to harvesting, as there will be ample time in the future to treat upon this subject. I will simply say that the picking is the most important feature, as the berry will not bear rough handling. The stem should be pinched off near the fruit, leaving the hull or calyx and about half an inch of the stem attached. This is absolutely necessary when the crop has to find a distant market. The picking should be so done as to obviate the necessity of any further handling. In order to insure the necessary care in this respect, I was in the habit of requiring the pickers to carry along two boxes, one for perfect fruit, and the other for the over-ripe and imperfect. This insured me a better price than if the berries had all been put into one box, and more than paid for the extra work and cost.

We, in Southern Illinois, found the twenty-four-quart package the most convenient in the long run of any that we tried. The berries are picked in quart boxes, and carefully packed in crates of suitable size to take twenty-four of these boxes. I have had my berries arrive in good condition in Boston, when so handled.

I think a great deal might be done in Florida by proper attention

being given to the production of this delicious berry. Our season is so much ahead of the region to the north of us, that the large towns of Georgia, Alabama, South Carolina, and Tennessee might be made to contribute largely to our incomes, to say nothing of what might be sent to New York by the steamers.

THE PREPARATION OF FRUITS FOR MARKET.

THE discussion of the subject of the preparation of fruits for market was taken up, and Mr. A. J. Beach, of the "Rolleston Nurseries," being called upon, in answer to queries by various members, said that in gathering oranges he cuts the stem, instead of picking them. For this purpose, prefers a slim, short, thin-bladed pair of shears. Is careful not to touch the orange, as it injures them. After picking, stores them away from two to four deep, in a cool room, leaving them, say a week, or until the stem will brush off. Then the surface-moisture or oil has become dry, and the fruit is practically hermetically sealed. Picks only in dry weather. Would wait a week or ten days, or even longer, rather than attempt to pick in wet weather. As to packing, he uses barrels, without air-holes; wraps the oranges in newspapers; heaps the barrel full and rounded up, and presses them down, two men standing on the head of the barrel to effect this object. By this method, the fruit is pressed somewhat out of shape, and is not quite so handsome in appearance, but he has yet to lose an orange by this method. Has shipped oranges packed in this way to Auburn, New York, when the thermometer there stood at eight degrees below zero, and never had an orange frozen. Thinks shippers generally have yet to learn how to ship oranges.

Solon Robinson said he saw the reasonableness of Mr. Beach's method of packing, and thought he had brought out an important fact. This method was somewhat similar to that of packing apples at the North, and effected the same result—that of sealing up the fruit in the skin.

Colonel H. L. Hart, of Pilatka, being asked to give his experience in shipping oranges, said that he agreed with Mr. Beach in the main. He had packed in moss, with paper, and with no packing at all, and they arrived in good condition as a general thing. Had shipped to the Northern and Northwestern States. Thinks that the trouble, where the fruit is lost, is in the picking. Had tried rice chaff, packing the oranges in barrels, in layers. Had never pressed them. Had made a shipment to Philadelphia, packed in this way, and immediately the order came back to ship *all* oranges in this way. The rice chaff can be got in Savannah or Charleston without charge, the chaff there having to be carted away. The steamers bring the chaff free, on condition that shipments are made by their line. In the section of

country above Pilatka, the fruit shipped has been in bad order, shippers having been careless in picking, handling, packing, etc., but they are improving in this respect. Oranges must be picked in dry weather. In his grove he begins to pick about the last of October, and the picking goes on through the winter, and some fruit is picked up to May. From one tree, grown on pine land, he had made one shipment of forty-three hundred oranges, which he sold at Pilatka at three dollars and a half per hundred, making the proceeds of one tree one hundred and fifty dollars and fifty cents. He thought the orange business yet in its infancy.

THE following essay upon "The Fig," by Dr. Z. H. Mason, was read:

THE FIG: ITS CULTURE AND PREPARATION FOR MARKET.

For several years past I have endeavored to direct the attention of the people of Florida to fig-culture, and have given such information as I possessed, founded upon experiment; and the experience thus gained, as I thought, would tend to develop this important product of the South, believing that the profits to be derived from the fruit when properly prepared for market would prove to be nearly as great as that from orange-culture, and when it is understood that but little more skill is required in preparing this fruit than is possessed by those who dry peaches, many persons will be induced to engage in this occupation, which must prove lucrative.

The fig can be raised successfully upon a great variety of lands, resembling in this respect the orange-tree. A soil rich in vegetable matter, slightly moist, but not wet, seems to suit it best, and produces a luxuriant growth. The largest and most productive trees I have seen grew near springs of water, from which fact I have been led to think that irrigation might prove beneficial.

The fig-tree, producing large crops of fruit (in favorable years yielding three crops), must, necessarily, be a hearty feeder, and should, therefore, receive each year a liberal application of manure, made by composting good muck with ashes and lime, thus furnishing the necessary mineral and vegetable food. Some persons advocate the plan of planting the fig among their orange-trees. My objection is this: The fig sends its roots a long distance in search of food (I have found them forty feet from the tree), which robs the orange of the manure that has been applied to it; the leaves of the orange turn yellow and the growth is arrested; therefore I would advise the planting of the orchard separate from other trees.

There is no distinct and definite nomenclature of figs; a few va-

rieties are described and named, while the larger number are designated as the blue, black, or yellow fig. Many are too small for drying purposes, though valuable for the table. In making a selection for drying purposes, I prefer those of large size and of a rather dry texture, though any of the larger varieties will do; the color makes no difference. Those I have prepared were the large yellow fig, and could not be distinguished either in appearance or flavor from the imported article.

The fig can be readily propagated, both in the spring and fall, from cuttings. When the terminal bud begins to swell, in the spring, is the best time to put out cuttings; have them eight or ten inches long, cut the lower part close below a bud, as that is the point from which the first roots put out. In planting, choose a rich spot of ground, place them in a shallow trench, in a slanting position, leaving one or two buds out; press the soil close about the cuttings, water, and mulch with grass or pine straw, shade with a palmetto-leaf, and continue this shade after they begin to grow, especially throughout the rainy season, as there is danger of their sun-scalding. When practicable, I prefer obtaining my trees by layering the limbs or shoots early in the fall; by planting-time in the spring they will have formed a large mass of roots, and when transplanted grow off rapidly. Cuttings when a year old will be fit to set out; but layers and cuttings should have a partial shade the first year after transplanting.

The proper distance to place the rooted plants in the orchard will depend upon the richness of the soil and kind of fig; on common land fifteen feet will do. The second year some of the plants will fruit, and a fair average yield at five years old will be about one bushel. I have a tree which annually produces from ten to twelve bushels. Avoid much pruning, unless you wish tall trees. The more you prune the less will be the quantity of fruit you obtain.

It is often the case that all the powers of the plant are concentrated in the formation of wood, and no fruit is produced; it then becomes necessary to stop the excessive growth of wood, which is done by root-pruning, viz., by cutting all the roots in a circle half the length of the branches; this should be done in the winter.

The preparation of the fig for market is so simple that any family having the trees may succeed. They require no sugar or syrup—as the fruit dries it forms its own sugar. The greatest amount of labor and trouble is in gathering; if picked by hand it will be found a tedious process. The best plan is to hold a sheet under the trees, then shake the limbs hard enough to make the ripe fruit fall. Do not place the sheet upon the ground, as the ripe figs will burst open and be ruined for drying. Prepare a bath of strong lye, made from potash, such as will swim an egg; have this boiling hot; put the figs in a basket and dip in the lye for *two* minutes, then dip them in clear water; let them drip a short time and they are ready for drying. The reason why they are placed in the boiling lye is to destroy the acrid gum in the skin, and to destroy the color of the purple fig. If dried in the open air, hurdles should be made with narrow slats, upon which to place the

fruit. Keep them in the sunshine as much as possible to facilitate rapid drying. The second day you can flatten the figs by pressing them with the hand. The hurdles with the fruit on them must be placed under shelter at night, or when it rains. The objection to drying in the open air is, that a fly lays its eggs in the fruit, and in a short time they become wormy; this can be obviated by heating them in an oven or stove, just hot enough to destroy the vitality of the egg, but not hot enough to candy the fruit. It requires a little practice to know when the fruit is dry enough; they should be soft enough to pack close in a box with moderate pressure; keep better when packed close and are freer from the attack of insects.

The boxes should contain from ten to fifteen pounds, as in masses of this size they are not likely to become dry and insipid. In making the boxes use oak, cypress, or gum, but do not use pine, as it will impart a turpentine taste to the fig.

The best and most expeditious plan is to erect a drying-house, the size of which will depend upon the extent of the orchard. The drying-house described in the May number of the Rural Carolinian, 1870, is a good one. Where plank is scarce a house can be built of logs. One five feet by ten feet, and six feet high, will hold a large quantity of fruit. In cutting the logs face both sides of the ten-feet logs, so as to leave a space of three inches between each when they are put in place. Let these spaces begin two feet six inches from the bottom. Make an arched clay or brick flue through the house lengthwise, having it smoke-tight, and have the chimney at the end, outside. A thick stove-pipe can be used for a flue, but the heat will not be so uniform. Put slats across the ends and centre of the house to support the drying frames. Make frames half the width of the house, to fit the openings in the logs. Across the bottoms of these frames or drawers make a lattice of palmetto stems. Upon this place the figs, and slip the drawers in their place; keep up a moderate fire, and in twenty-four to thirty-six hours the fruit will be dry enough. Be careful not to have too great a heat, for it will darken the fig, give it a syrupy taste, and lessen its market value. In building the house put on a light roof, and daub all the lower cracks with clay.

Solon Robinson thought Dr. Mason's process of drying the fig too antiquated. The Alden process will dry the fig in four hours.

Mr. Beach would rather plant figs on high ground, than on low, moist ground. Figs can be raised here to any extent, and cheaply.

Judge DuPont gave his experience with one tree, which, when four inches in circumference, he removed, and planted on ground where had formerly stood his smoke-house. It grew enormously, and was very productive. It was a tree something between the sugar and the Ischia fig. He deduced from this experience that the tree should be fed with ashes, with stable-manure, and also liberally with salt.

THE President introduced to the audience Mr. A. J. Curtis, of Pilatka, who read the following essay upon

SUGAR-CULTURE.

MR. PRESIDENT AND GENTLEMEN,—I preface my remarks on this subject by speaking of what I saw in Cuba. A visit to the sugar-plantations of Cuba would convince the most casual observer that the planters of that island are very far behind the age. Their agricultural implements are of the rudest kind and of ancient pattern: plows of the old bull-tongue pattern, all wood save the point, and carts of the ancient Egyptian style, with wheels made of three pieces of wood joined together without bolt or tire. Their sugar-mills are also of ancient make, driven by horse-power, except here and there the iron horse has been brought into requisition. The land is rich and productive, about twenty-five hundred pounds being the average yield per acre. But if the sugar was equal in quality to that made in this country the average yield would be much less. The island of Cuba being thoroughly tropical, and the home of the sugar-cane, the question may be asked why such a low grade of sugar is produced, the great bulk of which is shipped to the refiners to be refined before it is placed in the market? The answer may be found in the facts—First, That it is grown in very rich soil, for the richer the soil the darker the sugar; Second. The grinding season, as we would term it, extends all the year round, and, consequently, flies and other insects add to the filth of the untidy mode of manufacture, and the result is, raw Cuba sugar brings only about half the price of that raised in this country, made in open kettle by the "old process."

I shall next consider Louisiana as a sugar-producing country. It was my misfortune for several years to have been a sugar-planter in Louisiana, and my experience was, the longer I planted the poorer I became. Louisiana claims to be the sugar-bowl of the United States. Let us see if she is justly entitled to this appellation. No one doubts their ability to "raise cane" in Louisiana (especially in New Orleans), but it is not the home of the sugar-cane; it is at best a forced crop. In proof of this I would state that an old planter told me that he had never known but once, in an experience of thirty years, cane to tassel, while here in our own State, particularly in the southern part, this is of yearly occurrence. In Louisiana, frosts frequently occur as early as October, which necessitates the early saving of seed and early grinding,—in fact, so early that the cane does not mature, thereby largely decreasing the yield. Here in Florida the cane-growing season is from one to two months longer than in Louisiana, giving us not only a maturer stalk, but one from two to three feet longer; in this we have a decided advantage. Another fact worthy of mention is that the severe cold in the winter season injures the stubble so that the crop of ratoon cane is often very light, and requires to be renewed every two or three years. In this State, on

the hammock land, seven and eight good crops may be made before replanting is necessary. This is a very important consideration when we consider the amount of cane required every year to replant. The soil of Louisiana is a dark loam, largely mixed with clay, very much like the low hammock land of this State. In some localities the clay so largely predominates, that four mules are required to break up the land, which is done by plowing it into beds for each row, leaving a deep water furrow between; this is necessary for drainage to carry off the surface-water, which is conducted into a large canal through sectional ditches, and thrown over an embankment or "levee" by a steam-drawing machine; but few plantations are found on the lower Mississippi where a steam-drawing machine is not necessary. The crop is cultivated very much the same as it is here, except two animals are necessary (for reasons before mentioned), which largely increases the expense of cultivation. The soil, however, is rich, and does not require fertilizing, except with an occasional crop of cow-peas plowed in while green to lighten up the soil.

They have two processes of manufacturing their sugar—the old or open-kettle process, the new or "centrifugal." The first mentioned it is considered will produce the best results, as the difference in the price obtained will not pay the cost of machinery and extra expense incurred—an expense which only the largest planters can afford. As the new process, so called, is not much in use in this State, if at all, I will briefly describe it. It consists of iron or copper vats, for the reception of the cane-juice as it comes from the mill, which is driven by steam-power. When the juice is boiled down to a certain point, which is done by means of a steam-train in the bottom of the vats, it is conducted into a cylinder covered with wire screen or sieve, which, when set in motion, makes several hundred revolutions per minute, and by this means the molasses is thrown out by the velocity, and the sugar left dry and ready for shipment. While this is expensive, it is expeditious; the cane of to-day is sugar, and ready for shipment to-morrow. The quality of the sugar made by this process is one grade lighter in color than that made by the "old process," and commands about one cent per pound more in market; but the molasses is very much inferior to the drippings of the open-kettle process. It must be admitted that Louisiana is far in advance of Florida as a sugar-producing State, and that, too, in the face of obstacles and discouragements with which we do not have to contend.

In conclusion, let us consider the peculiar advantages of Florida as a sugar-producing State, as compared with Louisiana: First, our climate. As before stated, we have nearly or quite two months longer to mature our cane, thereby largely increasing the yield. In Louisiana the average yield under favorable circumstances is about one thousand pounds per acre, while on our common pine lands (when fertilized) fifteen hundred pounds may be stated as the average, and on hammock land a still higher average is obtained. On my place, in San Mateo, common pine land, fourteen barrels, or twenty-eight hundred

pounds, have been realized from a single acre. Judge DuPont informs me that he has raised from pine land nineteen barrels of syrup per acre on his plantation in Gadsden County, which, he says, he has never sold for less than seventy-five cents per gallon, bringing him the handsome sum of four hundred and fifty dollars per acre. Ordinarily the molasses drained from the sugar will pay the cost of cultivation in this State. In Louisiana the cost of cultivation is largely augmented by the expensive system of drainage necessary to be kept up. Ditches and canals have to be cut and a steam-drainage machine kept in repair ready for use. In this State very little, if any, drainage is necessary, and one man with one mule will cultivate as much cane as two men and two mules in Louisiana, with better returns. With these facts before us, do we wonder that Louisiana sugar-planters are settling in Florida? and we believe that had half the capital which has been invested in the cultivation of sugar-cane in Louisiana been invested in this State in the same direction, what has been possible in Louisiana would be possible in this State with grander results, and our beloved Florida would to-day be the "sugar-bowl" of our country.

W. K. Cessna wished to substantiate the statements made by Mr. Curtis. He said that Mr. Grissom, of Alachua County, had made ninety-six gallons of syrup from an eighth of an acre, which he sold for ninety-six dollars. He had also sold three hundred dollars' worth of seed-cane from one acre. This was on pine land.

Mr. Adams said that some years ago he sold forty acres of land to a colored man for fifty cents an acre. He planted some of it in cane, cultivating it with a hoe, and the next year he (Adams) paid the colored man ten dollars more for seed-cane for his garden than the land cost him. To illustrate the yield, he said that Mr. Burnam had told him he had got one gallon and one pint of juice from one cane. The cane grows here to an average height—in the northern portion of the State, five feet; in the middle portion, seven feet; and in the southern portion, from nine to twelve feet. Hon. D. L. Yulee, when Senator, had taken to Washington a cane seventeen feet in length; and on Lake Worth, where only hunters go now, a cane had been cut twenty-two feet in length. The most puzzling question to answer about this subject was: If these things be so, why don't people take hold of it? The sugar made on our Gulf Coast sells in New Orleans for two cents more a pound than their own. More than half of the land in this State will produce more, and twenty per cent. better, than the lands of Louisiana.

Judge White said he would corroborate the statements of Messrs. Adams and Curtis. One thing in planting—three times more is planted than is necessary. The eyes should be planted one foot apart, not more than two eyes to a piece. If they were cut into single eyes it would be better still. As to the profits, you can make three hundred dollars an acre sure. Sandy land produces a brighter, clearer, and better sugar than clay soil. In Polk County, and south of it, the cane grows through the winter, but it should be cut before it tassels.

THE CULTURE OF CANE.

To the Secretary of the Florida Fruit-Growers' Association:

SIR,—I see that I have been appointed chairman of the Committee on Cane and Cotton. As I have not had the opportunity of conferring and consulting with the other members of the committee, I have concluded to give my last year's experience, in a small way, on the culture of cane.

In January last I laid off and planted two acres of good hammock land. I had my cane rows ten feet apart and a row of corn between the rows of cane. I cultivated in the usual way. (The land had been thoroughly plowed before planting.) About the last of June I cut my corn down and shocked it until cured. I then took a turning plow and plowed out the blank corn-rows, throwing the dirt to the cane. I afterwards ran the sweeps through the cane twice. The late plowings were of great advantage to the cane, as it made it grow larger and mature better. I commenced grinding the cane in November and finished in December. The yield was four hundred gallons of thick, heavy syrup, and one thousand pounds of sugar, and thirty-five bushels of corn. The corn was not very good, as the cut-worm and then the bud-worm both injured it. I am satisfied from experience that our planters are not giving distance enough between cane-rows; we can crowd it in the drill, but it should have distance between rows.

In regard to the culture of cane in Florida, I think it the most profitable crop we can raise as a field crop. Fully seventy-five per cent. of the sugar consumed in the United States is now imported, and the present disturbed condition of Cuba will, to some extent, diminish the crop from that source for several years to come.

I think the State Society should memorialize the Commissioner of Agriculture to introduce fresh cane-seed into the United States. We plant mostly the ribbon-cane, as we consider it better than the other varieties.

Respectfully,

THOMAS C. LANIER.

Extract from the Sixth Annual Report of the Commissioner of Lands and Immigration.

OFFICE OF THE
COMMISSIONER OF LANDS AND IMMIGRATION,
Tallahassee, Florida, January 1, 1875.

To his Excellency M. L. STEARNS, *Governor of Florida:*

SIR,—In obedience to the requirements of the Constitution and Laws, I have the honor to submit herewith my Second Annual Report of the operations of this department.

STATEMENT CONCERNING LANDS.

The lands owned by the State are classified and known as School, Seminary, Internal Improvement, and Swamp and Overflowed Lands.

School Lands.—These lands were made up from the sixteenth sections of the various townships, and were granted by act of Congress to the State for general educational purposes. This grant amounted originally to 704,692 acres. On the 1st of January, 1874, 112,182 acres had been disposed of, and during the past year 3102 acres were sold; which, added to the sales of previous years, makes a total of 115,184 acres, and leaves yet unsold 589,508. These lands are under the control of the State Board of Education, and are in no way connected with the other lands of the State.

Seminary Lands.—The lands known by this name originally comprised 85,714 acres, and were granted by act of Congress to the State for the support of two seminaries, one to be located in East and the other in West Florida. Of these lands only 200 acres have been sold during the past year, and this, added to the sales of previous years, makes a total of 47,000 acres disposed of up to date, from which the sum of $97,204.58 has been realized. There remains yet unsold 38,714 acres, the estimated value of which is $76,000. Like the School Lands, they are under the control of the Board of Education, and equally distinct from the other lands of the State.

Internal Improvement Lands.—By act of Congress of 1845 the State secured a grant of 500,000 acres of land, to be set apart for purposes of internal improvement. Of this class of lands 446,115 acres have been selected and patented to the State, leaving over 50,000 that have not yet been approved and certified by the General Land Office at Washington. Of the 446,115 acres patented, 230,000 have been disposed of, thus leaving 216,000 at present in the hands and under the control of the Board of Trustees.

Swamp and Overflowed Lands.—These lands inured to the State by virtue of an act of Congress of September 28, 1850, but only after actual survey and selection by the agents of the State, and approval by the General Land Office, do they pass into the possession of the State. Of these lands 11,790,637 acres were selected and reported, according to law, prior to 1860; but only 10,676,919 were patented to

the State. Since 1868 the agents of the State have selected and reported 3,212,007 acres, which have not yet been patented, and which, added to the balance unpatented of the selection made prior to 1860, of 1,115,718 acres, would entitle the State to 4,326,007, which have not yet passed into its possession. This amount, added to 6,565,545 acres already patented but unsold, would make a total of 10,891,552 acres of Swamp and Overflowed Lands yet at the disposal of the State. These unadjusted land-grants have been allowed to remain so long in this condition that the officers of the National Land Department dislike to touch them, and will not do so until an agent is sent there by the State who is capable of performing the necessary clerical work, and who is familiar with all the details of entering and adjusting such claims. This is the manner in which other States secure their claims, and until this is done on our part we are deprived of the privilege of selling over four millions of acres already reported and selected. I hope, therefore, that you will see fit to call the attention of the Legislature to this matter, and recommend the making of an appropriation sufficient to pay the expenses of a competent person to look after this matter in Washington during the next six months, in which time, I am confident, all our unsettled land-claims can be adjusted.

From the Appendix to the foregoing Report.

AREA AND DISPOSITION OF LANDS.

Florida is a much larger State than Iowa or Illinois. It contains an area of 59,268 square miles, or 37,931,520 acres. Very large concessions of these lands have been made to the State by Congress for works of internal improvement. According to the record of the Land Office, there have been sold 1,832,431 acres; entered under the homestead law, 389,147; granted for military services, 465,942; officially approved under railroad grants, 1,760.468; approved as swamp lands given to the State, 10,901,207; granted for internal improvements, 500,000; granted for schools and universities, 1,000,663; granted to individuals and companies, 52,114; granted for deaf and dumb asylums, 20,924; and confirmed private land claims, 3,784,303. The quantity of land remaining unsold June 30, 1871, was 17,262,459 acres.

POPULATION.

The population of the State has increased rapidly during the last few years. Governor Reed, in his annual message to the Legislature in 1872, estimated the increase the three years previous at 40,000. This estimate is perhaps a little too high, but the ratio of increase in the future will be much higher, for a knowledge of the inducements which the State offers to settlers is being widely diffused, and the work of colonization is going on rapidly. According to the last census the population in 1870 was 187,748. Since 1860 the colored population has increased from 62,777 to 91,689, and the white from

77,746 to 96,059. Of the total population, only 4067 are foreigners; 109,534 are natives of the State; 28,058 are Georgians; and 7334 are Alabamians. The remainder, or less than one-fourth of the whole, are immigrants from every State in the Union (except Nevada and Oregon) and all parts of Europe. New England has given 1259 settlers to the State; New York 1050; New Jersey, 192; and Pennsylvania, 312. The great bulk of the population is embraced in the counties of Duval, Nassau, Madison, Jefferson, Alachua, Marion, Leon, Gadsden, and Jackson.

The bulk of the lands in the State are what is denominated "pine lands," and are divided into first, second, and third rate. The soil of the first-rate pine land rests upon a substratum of clay or marl, overtopped by a dark mould of decomposed vegetable matter. This land is exceedingly fertile, producing splendid yields of the most exhausting crops for several years in succession without any need of fertilization. There are large bodies of these scattered throughout the northern tier of counties and along the Gulf Coast.

The second class of pine lands are only a trifle less productive than those of the first class. Generally speaking, these lands are high and rolling, and are characterized by a heavy growth of pitch- and yellow-pine timber. They rest upon a basis similar to that of the first class, but the mould is lighter, and they show signs of exhaustion after a few years. A little fertilization, however, restores their vigor. Cow-penning is the favorite mode of restoration, and treated in this manner they will yield a bale of cotton of three hundred pounds to the acre.

The third class of pine lands are distinguished by being covered with a growth of saw-palmetto, black-jack, and a shrub called the gall-berry. The presence of the latter is a certain test of poor soil. Another feature of this land is the presence of "hard" or "slush" pine, the roots of which are to be found running very near the surface. These lands are not worthless, but can only be made to yield remuneratively after much labor and heavy fertilization. Sisal hemp can can be grown very successfully on them, and with proper machinery to crush and prepare the fibre for market, their value would be equal to that of any other class of pine land.

There is another species of pine land called by the natives "flat-woods." About four feet from the surface of this land a stratum of what is called sand-rock is found. This is composed of common fine sand, and cemented by sulphate of iron and aluminium; and a sub-soil thus formed is almost impenetrable to moisture. As a consequence, it holds up all the rain-fall, so that the land becomes packed, and is known to the natives as "sobbed land." Such soil is of very inferior quality, and is scarcely fit for profitable agriculture.

But by far the finest lands in the State are known as "swamp," "low hammock," and "high hammock" lands.

The swamp lands are the richest in the State. They are formed entirely of humus or decayed vegetable matter, of an extraordinary depth, and when rendered fit for cultivation by ditching, give evidence

of an inexhaustible fertility. It has been demonstrated that these lands will yield four hogsheads of sugar to the acre—a most convincing proof of their value, especially when it is borne in mind that sugar-cane is one of the most exhausting crops known. Immense bodies of these lands are located in Central and Southern Florida. Drainage is necessary, however, to render the greater portion available for purposes of agriculture. There are, perhaps, over a million acres of these lands in the State which can be purchased at from seventy-five cents to a dollar and a quarter an acre.

The lands denominated "low hammock" rank next to the swamp lands in fertility. They are generally moist, and some ditching is required for successful cultivation. They will sustain a succession of the most exhausting crops for several years with as much apparent vigor as the swamp lands, but are not so durably rich, and need fertilization after some time.

High hammocks are the most desirable lands in the State for purposes of agriculture. They are covered with a growth of live-oak, hickory and magnolia; and the surface is for the most part high and gently undulating. The soil is exceedingly rich, and will produce all the crops of the country in a highly remunerative degree. Their productiveness is apparent from the fact that three hogsheads of sugar per acre have been made from them. The chief labor connected with their cultivation is the clearing. The timber is generally very heavy, and the cost of clearing is greater than that of any other quality of land in the State. Once cleared, however, they are free from pernicious weeds and grasses, and but little labor is required in working them. These lands are very abundant. In Levy County alone there are perhaps over one hundred thousand acres of first-class hammock land, while in Leon, Gadsden, Jefferson, Jackson, Marion, and Alachua counties, they form the great bulk of the land, and can be purchased at from two to ten dollars per acre.

EXTRACT FROM THE MESSAGE OF GOVERNOR M. B. STEARNS TO THE LEGISLATURE, JANUARY 16, 1875.

The following is a carefully-prepared statement of the indebtedness of the State on the first day of January inst.:

Bonds outstanding	$1,394,867.58
Add one year's interest on $312,522.50, old bonds yet to be exchanged	20,626.48
Add six months' interest on old bonds held by School and Seminary Funds	9,960.01
Add interest due on bonds of 1871	27,286.00
Add interest due on bonds of 1873	16,833 12
	$1,469,573.19

Brought forward		$1,469,573.19
Deduct amount in treasury applicable to this debt		52,871 68
Total bonded debt and interest, less funds in the treasury applicable to its reduction		$1,416,701.51
Warrants outstanding	$185,646.14	
Deduct funds in treasury applicable thereto	2,868.93	
Total floating debt, less funds in treasury applicable thereto		182,777.21
Total bonded and floating debt outstanding		$1,599,478.72
The total bonded and floating debt January 1, 1874, was		1,620,809.27
Showing a reduction of the State debt during past year		$21,330.55

It is thus highly gratifying and encouraging that, while for many years the interest remained unpaid, and the volume of the debt was annually increased, during the last two years we have not only paid all our interest promptly, but have made an actual reduction of the principal. But while the wise provisions of the law of 1873, providing for the consolidation of all the bonded debt, except the seven per cent. bonds of 1871 and those belonging to the school and Seminary Funds, are being carried faithfully into execution, and have created an interest and sinking fund sufficient to secure the prompt payment of the interest and the gradual liquidation of the principal, and while the floating debt has been reduced during the past year from $190,585.79 to $185,646.14, yet the outstanding warrants on the treasury still remain at a large discount.

The total valuation of real and personal estate in the State of Florida for the year 1874, appears by the Comptroller's Report of January 1, 1875, to be	$31,991,717.00
Total taxes for State purposes for 1874, assessed on above	428,289.27
" " " County " " " " " "	367,326.89

OFFICERS OF THE STATE GOVERNMENT.

Governor.—MARCELLUS B. STEARNS.
Comptroller.—C. A. COWGILL.
Treasurer.—CHARLES H. FOSTER.
Secretary of State.—SAMUEL B. MCLIN.
Superintendent of Public Instruction.—SAMUEL B. MCLIN (acting *vice* Hon. J. C. Gibbs, Superintendent elect, recently deceased).
Attorney-General.—WILLIAM ARCHER COCKE.
Adjutant-General.—MAJOR-GENERAL JOHN VARNUM.
Warden State Prison.—M. MARTIN.

GENERAL ITINERARY.

THE following tables embrace the outlines of thirty-four different routes from New York to Jacksonville, Florida. These are not all that are available to the traveler, and are only selected to be detailed here for the reason that they lead through those places of winter-resort on the route to Florida which have been described in this book. Instead of pursuing these the traveler may curve farther inland and go from New York to Jacksonville *viâ* Cincinnati, Louisville, Nashville, Chattanooga, Atlanta, Macon, Jessup; or, after reaching Louisville by this route, he may proceed thence *viâ* Montgomery (Ala.) and Columbus (Ga.) to Macon, or *viâ* Montgomery and Atlanta to Macon, and thence *viâ* Jessup to Jacksonville.

Again, having reached Lynchburg as indicated in the following tables, the route may be varied thence *viâ* Bristol (Tenn.), Knoxville, Dalton (Ga.), Atlanta, Macon, and Jessup to Jacksonville.

Or, from Weldon, one may go to Charlotte, and thence to Atlanta by the "Air Line;" thence to Jacksonville, as already indicated.

If a water route is desired, instead of that by the Old Dominion Steamship Line (represented in the tables by O. D. S. S. Co.) from New York to Norfolk (or Portsmouth), one may take steamer from New York to Charleston, or from New York to Savannah, or from New York to Fernandina (Fla.) direct; and from either of those places proceed to Jacksonville by the routes indicated.

The railway and steamboat systems of Florida, from Jacksonville as a centre, have been generally described in Chapter IV. of this book; and a *résumé* thereof is given at the end of the following tables, under the head of Connections of the J. P. and M. (Jacksonville, Pensacola and Mobile) Railroad.

The time through from New York to Jacksonville by rail is sixty-six and a quarter hours: and the price of a through ticket thirty-six dollars and seventy-five cents. Tickets from New York to Aiken are twenty-six dollars and seventy-five cents; to Charleston twenty-five dollars; and to Augusta twenty-six dollars. From Philadelphia the price is two dollars less, and from Baltimore four dollars less, than the amounts above named.

EXPLANATION OF ABBREVIATIONS USED IN THE TABLES OF ROUTES.

A. and F.—Alexandria and Fredericksburg Railroad.

A. and G.—Atlantic and Gulf Railroad.

A. G. and W. I. T. Co.—Atlantic, Gulf and West India Transit Company's Railroad.

B. and O.—Baltimore and Ohio Railroad.
B. and P.—Baltimore and Potomac Railroad.
C. C. and A.—Charlotte, Columbia and Augusta Railroad.
Ga.—Georgia Railroad.
Ga. Cent.—Georgia Central Railroad.
J. P. and M.—Jacksonville, Pensacola and Mobile Railroad.
M. and A.—Macon and Augusta Railroad.
M. and B.—Macon and Brunswick Railroad.
N. E.—North-Eastern Railroad.
O. D. S. S. Co.—Old Dominion Steamship Company.
P.—Petersburg Railroad.
P. W. and B.—Philadelphia, Wilmington and Baltimore Railroad.
Penna.—Pennsylvania Railroad.
R. and D.—Richmond and Danville Railroad.
R. F. and P.—Richmond, Fredericksburg and Potomac Railroad.
R. and P.—Richmond and Petersburg Railroad.
S. C.—South Carolina Railroad.
S. and C.—Savannah and Charleston Railroad.
S. and R.—Seaboard and Roanoke Railroad.
V. M.—Virginia Midland Railroad.
W. C. and A.—Wilmington, Columbia and Augusta Railroad.
W. and W.—Wilmington and Weldon Railroad.

ROUTE No. 1.

Via Penna., P. W. and B., B. and P., A. and F., R. F. and P., R. and P., P., W. and W., W. C. and A., N. E., S. and C., A. and G., and J. P. and M. Railroads.

Distance from New York.		*Distance from city to city.*
89	Philadelphia	89
188	Baltimore	99
228	Washington	40
344	Richmond	116
367	Petersburg	23
429	Weldon	62
591	Wilmington	162
699	Florence	108
801	Charleston	102
905	Savannah	104
1084	Live Oak	179
1167	Jacksonville	83

Auxiliary to Route No. 1.

Same as Route No. 1 to Charleston, S. C. From thence by Steamer Dictator or City Point, via Savannah to Jacksonville; or to Savannah by Rail, thence by Steamer Lizzie Baker to Jacksonville.

ROUTE No. 2.

Via Penna., P. W. and B., A. and F., R. F. and P., R. and P., P., W. and W., W. C. and A., C. C. and A., Ga. Cent., A. and G., and J. P. and M. Railroads.

Distance from New York.		*Distance from city to city.*
89	Philadelphia	89
188	Baltimore	99
228	Washington	40
344	Richmond	116
367	Petersburg	23
429	Weldon	62
591	Wilmington	162
780	Columbia	189
865	Augusta	85
997	Savannah	132
1176	Live Oak	179
1259	Jacksonville	83

ROUTE No. 2 A.

Same as Route No. 2 to Augusta. Thence by Port Royal, S. and C., A. and G., and J. P. and M. Railroads.

Distance from New York.		*Distance from city to city.*
865	Augusta	
951	Yemassee	86
1002	Savannah	51
1181	Live Oak	179
1264	Jacksonville	83

ROUTE No. 2 B.

Same as No. 2 to Augusta. Thence

by Ga , M. and A., M. and B., A. and G , and J. P. and M. Railroads.

Distance from New York.		*Distance from city to city.*
865	Augusta	
990	Macon	125
1136	Jessup	146
1258	Live Oak	122
1341	Jacksonville	83

ROUTE No. 3.

Via Penna., P. W. and B., B. and O., A. and F., R. F. and P., R. and P., P., W. and W., W. C. and A., N. E., S. and C., A. and G., and J. P. and M. Railroads.

Distance from New York.		*Distance from city to city.*
89	Philadelphia	89
188	Baltimore	99
238	Washington	40
344	Richmond	116
367	Petersburg	23
429	Weldon	62
591	Wilmington	162
699	Florence	108
801	Charleston	102
905	Savannah	104
1084	Live Oak	179
1167	Jacksonville	83

Auxiliary to Route No. 3.

Same as Route No. 3 to Charleston, S. C. From thence by Steamer Dictator or City Point, via Savannah to Jacksonville; or to Savannah by Rail, thence by Steamer Lizzie Baker to Jacksonville.

ROUTE No. 4.

Via Penna., P. W. and B., B. and O., A. and F., R. F. and P., R. and P., P., W. and W., W. C. and A., C. C. and A., Ga. Cent., A. and G., and J. P. and M. Railroads.

Distance from New York.		*Distance from city to city.*
89	Philadelphia	89
188	Baltimore	99
228	Washington	40
344	Richmond	116
367	Petersburg	23
429	Weldon	62
591	Wilmington	162
780	Columbia	189
865	Augusta	85
997	Savannah	132
1176	Live Oak	179
1209	Jacksonville	83

ROUTE No. 4 A.

Same as Route No. 4 to Augusta. Thenceby Port Royal, S and C., A. and G., and J. P. and M. Railroads.

Distance from New York.		*Distance from city to city.*
865	Augusta	
971	Yemassee	86
1002	Savannah	51
1181	Live Oak	179
1264	Jacksonville	83

ROUTE No. 4 B.

Same as Route No. 4 to Augusta. Thence by Ga., M. and A., M. and B., A. and G., and J. P. and M. Railroads.

Distance from New York.		*Distance from city to city.*
£65	Augusta	
990	Macon	125
1136	Jessup	146
1258	Live Oak	122
1341	Jacksonville	83

ROUTE No. 5.

Via Penna., P. W. and B., B. and P. Railroads. Bay Line Steamers, S. and R , W. and W., W. C. and A., N. E., S. and C., A. and G., and J. P. and M. Railroads.

Distance from New York.		*Distance from city to city.*
89	Philadelphia	89
188	Baltimore	99
348	Portsmouth	160
428	Weldon	80
590	Wilmington	162
698	Florence	108
800	Charleston	102
904	Savannah	104
1083	Live Oak	179
1166	Jacksonville	83

Auxiliary to Route No. 5.

Same as Route No. 5 to Charleston, S. C. From thence by Steamer Dictator or City Point, via Savannah to Jacksonville; or to Savannah by Rail, thence by Steamer Lizzie Baker to Jacksonville.

ROUTE No. 6.

Via Penna., P. W. and B. Railroads, Bay Line Steamers, S. and R., W. and W., W. C. and A., C. C. and A., Ga. Cent., A. and G., J. P. and M. Railroads.

Distance from New York.		*Distance from city to city.*
89	Philadelphia	89
188	Baltimore	99
348	Portsmouth	160
428	Weldon	80
590	Wilmington	162
779	Columbia	189
864	Augusta	85
996	Savannah	132
1175	Live Oak	179
1258	Jacksonville	83

ROUTE No. 6 A.

Same as Route No. 6 to Augusta. Thence by Port Royal, S. and C., A. and G., and J. P. and M. Railroads.

Distance from New York.		*Distance from city to city.*
864	Augusta	
950	Yemassee	86
1001	Savannah	51
1180	Live Oak	179
1263	Jacksonville	83

ROUTE No. 6 B.

Same as Route No. 6 to Augusta. Thence by Ga., M. and A., M. and B., A. and G., and J. P. and M. Railroads.

Distance from New York.		*Distance from city to city.*
864	Augusta	
989	Macon	125
1135	Jessup	146
1257	Live Oak	122
1340	Jacksonville	83

ROUTE No. 7.

Via O. D. S. S. Co., S and R., W. and W., W. C. and A., N. E., S. and C., A. and G., and J. P. and M. Railroads. Leave New York, Tuesdays, Thursdays, and Saturdays, at 3 P. M.

Distance from New York.		*Distance from city to city.*
360	Portsmouth	360
440	Weldon	80
602	Wilmington	162
710	Florence	108
812	Charleston	102
916	Savannah	104
1095	Live Oak	179
1178	Jacksonville	83

Auxiliary to Route No. 7.

Same as Route No. 7 to Charleston, S. C. Thence by Steamer Dictator or City Point, via Savannah to Jacksonville; or to Savannah by Rail, thence by Steamer Lizzie Baker to Jacksonville.

ROUTE No. 8.

Via O. D. S. S. Co., S. and R., W. and W., W. C. and A., C. C. and A., Ga. Cent., A. and G., and J. P. and M. Railroads. Leave New York Tuesdays, Thursdays, and Saturdays, at 3 P.M.

Distance from New York.		*Distance from city to city.*
360	Portsmouth	360
440	Weldon	80
602	Wilmington	162
791	Columbia	189
876	Augusta	85
1008	Savannah	132
1187	Live Oak	179
1270	Jacksonville	83

ROUTE No. 8 A.

Same as Route No. 8 to Augusta. Thence by Port Royal, S. and C., A. and G., and J. P. and M. Railroads.

Distance from New York.		*Distance from city to city.*
876	Augusta	
962	Yemassee	86
1013	Savannah	51
1192	Live Oak	179
1275	Jacksonville	83

ROUTE No. 8 B.

Same as Route No. 8 to Augusta. Thence by Ga., M. and A , M. and B., A. and G., and J. P. and M. Railroads.

Distance from New York.		*Distance from city to city.*
876	Augusta	
1101	Macon	125
1147	Jessup	146
1269	Live Oak	122
1352	Jacksonville	83

ROUTE No. 9.

Via Penna., P. W. and B., B. and P., R. F. and P., R. and D., C. C. and A., Ga. Cent., A. and G., and J. P. and M. Railroads.

Distance from New York.		*Distance from city to city.*
89	Philadelphia	89
188	Baltimore	99
228	Washington	40
344	Richmond	116
533	Greensboro	189
626	Charlotte	93

Distance from New York.		Distance from city to city.
822	Augusta	196
954	Savannah	132
1133	Live Oak	179
1216	Jacksonville	83

ROUTE No. 9 A.

Same as Route No. 9, to Augusta. Thence by Port Royal, S. and C., A. and G., and J. P. and M. Railroads.

Distance from New York.		Distance from city to city.
822	Augusta	
908	Yemassee	86
959	Savannah	51
1138	Live Oak	179
1229	Jacksonville	83

ROUTE No. 9 B.

Same as Route No. 9 to Augusta. Thence by Ga., M. and A., M. and B., A. and G., and J. P. and M. Railroads.

Distance from New York.		Distance from city to city.
822	Augusta	
947	Macon	125
1093	Jessup	146
1215	Live Oak	122
1298	Jacksonville	83

ROUTE No. 9 C.

Same as Route No. 9 to Charlotte. Thence by C. C. and A., S. C., S. and C., A. and G., and J. P. and M. Railroads.

Distance from New York.		Distance from city to city.
626	Charlotte	
736	Columbia	110
866	Charleston	130
970	Savannah	104
1149	Live Oak	179
1232	Jacksonville	83

ROUTE No. 10.

Via Penna., P. W. and B., B. and O., A. and F., R. F. and P., R. and D., C. C. and A., Ga. Cent., A. and G., and J. P. and M. Railroads.

Distance from New York.		Distance from city to city.
89	Philadelphia	89
188	Baltimore	99
228	Washington	40
344	Richmond	116
533	Greensboro	189
626	Charlotte	93
822	Augusta	196
954	Savannah	132
1133	Live Oak	179
1216	Jacksonville	83

ROUTE No. 10 A.

Same as Route No. 10 to Augusta. Thence by Port Royal, S. and C., A. and G., and J. P. and M. Railroads.

Distance from New York.		Distance from city to city.
822	Augusta	
908	Yemassee	86
959	Savannah	51
1138	Live Oak	179
1221	Jacksonville	83

ROUTE No. 10 B.

Same as Route No. 10 to Augusta. Thence by Ga., M. and A., M. and B., A. and G., and J. P. and M. Railroads.

Distance from New York.		Distance from city to city.
822	Augusta	
947	Macon	125
1093	Jessup	146
1215	Live Oak	122
1298	Jacksonville	83

ROUTE No. 11.

Via Penna., P. W. and B., B. and P., V. M., R. and D., C. C. and A., Ga. Cent., A. and G., and J. P. and M. Railroads.

Distance from New York.		Distance from city to city.
89	Philadelphia	89
188	Baltimore	99
228	Washington	40
405	Lynchburg	177
471	Danville	66
612	Charlotte	141
808	Augusta	196
940	Savannah	132
1119	Live Oak	179
1202	Jacksonville	83

ROUTE No. 11 A.

Same as Route No. 11 to Augusta. Thence by Port Royal, S. and C., A. and G., and J. P. and M. Railroads.

Distance from New York.		Distance from city to city.
808	Augusta	
894	Yemassee	86
945	Savannah	51
1124	Live Oak	179
1207	Jacksonville	83

ROUTE No. 11 B.

Same as Route No. 11 to Augusta. Thence by Ga., M. and A., M. and B., A. and G., and J. P. and M. Railroads.

Distance from New York.		*Distance from city to city.*
808	Augusta	
933	Macon	125
1079	Jessup	146
1201	Live Oak	122
1284	Jacksonville	83

ROUTE No. 12.

Via Penna., P. W. and B., B. and O., V. M., R. and D., C. C. and A., Ga. Cent., A. and G., and J. P. and M. Railroads.

Distance from New York.		*Distance from city to city.*
89	Philadelphia	89
188	Baltimore	99
229	Washington	40
405	Lynchburg	177
471	Danville	66
612	Charlotte	141
808	Augusta	196
940	Savannah	132
1119	Live Oak	179
1202	Jacksonville	83

ROUTE No. 12 A.

Same as Route No. 12 to Augusta. Thence by Port Royal, S. and C., A. and G., J. P. and M. Railroads.

Distance from New York.		*Distance from city to city.*
808	Augusta	
894	Yemassee	86
945	Savannah	51
1124	Live Oak	179
1207	Jacksonville	83

ROUTE No. 12 B.

Same as Route No. 12 to Augusta. Thence by Ga., M. and A., M. and B., A. and G., and J. P. and M. Railroads.

Distance from New York.		*Distance from city to city.*
808	Augusta	
933	Macon	125
1079	Jessup	146
1201	Live Oak	122
1284	Jacksonville	83

ROUTE No. 12 C.

Same as Route No. 12 to Charlotte. Thence by C. C. and A., S. C., S. and C., A. and G., and J. P. and M. Railroads.

Distance from New York.		*Distance from city to city.*
612	Charlotte	
722	Columbia	110
852	Charleston	130
956	Savannah	179
1135	Live Oak	122
1218	Jacksonville	83

CONNECTIONS OF J. P. AND M. RAILROAD.

At Jacksonville.

Steamers on the St. Johns connect daily with the trains of the J. P. and M. Railroad to and from Green Cove Springs, Hibernia, Tocoi, Pilatka, Mellonville, Enterprise, and intermediate landings. At Tocoi, steamers connect with the St. Johns Railway for St. Augustine; at Pilatka with line of Ocklawaha Steamers for Silver Springs, Ocala, and Okahumkee; also with line of stages for Ocala and Orange Springs.

At Baldwin.

The A. G. and W. I. T. Company's Railroad makes close connections for Fernandina, Gainesville, and Cedar Keys. At Gainesville the A. G. and W. I. T. Company's Railroad connect with line of stages for Ocala, Brooksville, and Tampa, and at Cedar Keys with the New Orleans, Florida, and Havana Steamship Line, which leaves Cedar Keys for Tampa, Manatee, Key West, Havana, and New Orleans.

At Live Oak.

The Atlantic and Gulf Railroad makes close connections for all points North and West.

At Monticello.

Stage Line connects for Thomasville, Georgia.

At Tallahassee.

A branch road of J. P. and M. Railroad connects for St. Marks.

At Quincy.

J. P. and M. R. R. connects with line of stages for Bainbridge, Georgia.

At Chattahoochee.

Line of river steamers connects for Apalachicola, Eufala, Fort Gaines, and Columbus.

GAZETTEER OF TOWNS, RIVERS, AND COUNTIES.

ABE SPRING, or ABE SPRING BLUFF.—County-site of Calhoun County, near Apalachicola River and Chipola River. Post-office. Small settlement. Calhoun County is in West Florida. See Chap. IX.

ADAMSVILLE.—A post-office and small settlement in Sumter County, about five miles west of Leesburg. Leesburg is on Lakes Harris and Griffin, the head of navigation on the Ocklawaha River. Sumter County is described in Chap. VIII., "The Lake City and Gainesville Country."

ALACHUA (*pron.* A-la'sh-wah) COUNTY.—County-site, Gainesville. See Chap. VIII.

ALAFIA (*pron.* Al-a-fee'-ah).—Post-office and small settlement on Alafia River, in Hillsboro' County. See Chap. V., "Gulf Coast;" also Chap. VIII., "Lake City and Gainesville Country."

ALAFIA (*pron.* Al-a-fee'-ah) RIVER.—Runs from Polk County—about the centre of Peninsular Florida—westward across Hillsboro' County, and empties into Hillsboro' Bay. Hillsboro' Bay is a name given to the easternmost bight of the great Tampa Bay, on the Gulf Coast. See Chap. V.

ALAPAHA (*pron.* Al'-a-pa-ha'h) RIVER.—Runs from Georgia southwest across Hamilton County, Florida, and empties into the Suwannee River.

ALAQUA (*pron.* Al'-a-quah).—A small Scotch and Irish settlement on Alaqua Creek, in Walton County, West Florida. See Chap. IX.

ALAQUA (*pron.* Al'-a-quah) CREEK.—Rises in Walton County, West Florida, and runs south into Choctawhatchee Bay, which communicates by Santa Rosa Inlet with the Gulf of Mexico. See Chap. IX.

ALMIRANTE (*pron.* Al-mi-ran'-teh).—Small settlement in Walton County, West Florida, near the Alabama line. See Chap. IX.

ANCLOTE (*pron.* An'-clote) RIVER.—A short stream in Hillsboro' County. Runs west, and empties into Clear Water Harbor, on the Gulf Coast. See Chap. V.

ANDERSON.—Small settlement on Santa Rosa Sound, in Santa Rosa County, West Florida. See Chap. IX.

APOPKA.—Post-office. Small settlement in Orange County, near

Lake Apopka, about fifteen miles southwest from Mellonville, on the St. Johns. See Chap. VII.

APALACHICOLA (*pron.* Ap-a-latch-i-co'-lah).—Post-office. Small town, county-site of Franklin County, West Florida. See Chap. IX.

APALACHICOLA (*pron.* as above) RIVER.—Formed by confluence of the Flint and the Chattahoochee. Runs south, beginning from Georgia line, between Jackson, Calhoun, and part of Franklin Counties, on the west, and Gadsden, Liberty, and part of Franklin Counties on the east; and empties into Apalachicola Bay, Gulf Coast. See Chap. V. and Chap. IX.

ARCHER.—Post-office. Small village, station on the Atlantic, Gulf and West India Transit Company's (formerly "The Florida") Railway, running from Fernandina to Cedar Keys, 113 miles from Fernandina, 41 miles from Cedar Keys; in Alachua County. See Chap. VIII.

ARLINGTON.—Small settlement in Duval County, on the east bank of the St. Johns, immediately opposite Jacksonville. See Chap. IV.

ARREDONDO (*pron.* Ar-re-don'do).—Post-office. Station and small settlement on the Atlantic, Gulf and West India Transit Company's (formerly "The Florida") Railway, 100 miles from Fernandina, 54 miles from Cedar Keys, in Alachua County. See Chap. VIII.

ASPALAGA (*pron.* As-pa-la'h-gah).—Small settlement on Apalachicola River, in Gadsden County. See Chap. VI.

AUCILLA, or OCILLA.—Jefferson County. Station on the Jacksonville, Pensacola and Mobile Railroad, 131 miles from Jacksonville, 34 miles from Tallahassee. See Chap. VI.

AUCILLA, or OCILLA RIVER.—Runs from northern part of Madison County, southwest between Taylor on the east and Jefferson on the west, and empties into the Gulf of Mexico. See Chap. VI.

AUGUSTA.—Small settlement in Hernando County, a short distance north of Brooksville, which latter is a relay-station on the back-line from Gainesville to Tampa. See Chap VI.; also Chap. VIII.

BAGDAD.—A lumber-manufacturing and shipping-point, on Pensacola Bay near the mouth of the Blackwater River, in Santa Rosa County, West Florida. It is two miles from Milton, the principal town of the county. See Chap. IX.

BAKER COUNTY.—County-site, Sanderson. Adjoins Charlton and Ware Counties, in Georgia, and Nassau (Fernandina) and Duval (Jacksonville), in Florida. Timber, turpentine, and agricultural products. Much the same sort of land with that described under head of "Fernandina," in latter part of Chap. IV.

BALDWIN.—Duval County. Station on both the Jacksonville, Pensacola and Mobile Railroad (a name used generally to include the "Florida Central," see Chap. IV.) and the Atlantic, Gulf and West India Transit Company's (formerly "The Florida") Railroad. Baldwin is 20 miles from Jacksonville, 47 miles from Fernandina. Has sleeping and eating accommodations for travelers.

BARRSVILLE.—Post-office. Small settlement in Columbia County, a few miles south of Lake City. See Chap. VIII.

BARTOW.—Small town, county-site of Polk County, South Florida. Polk is an interior peninsular county and mostly a cattle-region. See Chap. V. and Chap. X. Bartow is near the upper waters of Peace Creek, a navigable stream which runs through a famous cattle-range. It is on the line of the Cuban Telegraph, and has an office.

BATTON.—Station on Atlantic, Gulf and West India Transit Company's (formerly "The Florida") Railroad, 106 miles from Fernandina, 48 from Cedar Keys. In Alachua County. See Chap. VIII.

BAYPORT.—Post-office. Small settlement in Hernando County, at mouth of Wekaiwoochee River. See Chap. V.

BEASLEY'S.—Small settlement, on Aucilla River, in Jefferson County. See Chap. VI.

BEECHER.—Small settlement and steamboat-landing in Putnam County, on the east bank of the St. Johns, 101 miles above Jacksonville. See Chap. VII.

BELLVILLE.—Post-office. Small settlement in northwestern part of Hamilton County, near Georgia line.

BENELLA.—Steamboat-landing on the St. Johns River, 120 miles above Jacksonville.

BENTON.—Post-office. Small settlement on upper waters of Suwannee River, in Columbia County, near the Georgia line.

BISCAYNE.—See KEY BISCAYNE.

BLACK CREEK.—A considerably-used timber-stream, running east through Clay County and emptying into the St. Johns River at Magnolia Point, near Magnolia. See Chap. VII.

BLACK POINT.—Steamboat-landing on St. Johns River, 10 miles above Jacksonville.

BLACKWATER RIVER.—In Santa Rosa County, West Florida. Flows south and empties into Pensacola Bay. See Chap. IX.

BLOUNT'S FERRY.—On upper waters of Suwannee River, in Columbia County, near Georgia line. Post-office. Small settlement.

BLUE CREEK.—Small settlement on the Tologie River, in Liberty County, near Gadsden.

BLUE SPRING.—There are two places, besides a spring, by this name. Blue Spring, Jackson County, is a small settlement a short distance west of Marianna, and not far from the point where the Flint and Chattahoochee Rivers unite to form the Apalachicola. See Chap. VI. See for other "Blue Spring" next below this.

BLUE SPRING.—Volusia County. Post-office. Small settlement and steamboat-landing on the east bank of the St. Johns, 172 miles above Jacksonville, and about 30 miles (by the river) from Enterprise. Takes its name from the Blue Spring here, which is one of the largest in the State, very transparent, and impregnated with sulphur. See Chap. VII.

BLUNT'S TOWN.—Small settlement on west bank of Apalachicola River, in Calhoun County, West Florida. See Chap. IX.

BRADFORD COUNTY.—County-site, Lake Butler. Is crossed by the

Atlantic, Gulf and West India Transit Company's (formerly "The Florida") Railroad, and lies in the region described in Chap. VIII., which see.

BREVARD COUNTY.—County-site, Fort Pierce. Its eastern portion lies on both sides of Indian River, see under INDIAN RIVER in Chap. VIII.; its western portion is mainly cattle country, see Chap. X. *passim.*

BRISTOL.—Post-office. County-site of Liberty County. Small settlement on west bank of Apalachicola River.

BRONSON.—Post-office. County-site of Levy County. Station on Atlantic, Gulf and West India Transit Company's (formerly "The Florida") Railroad, 122 miles from Fernandina, 32 miles from Cedar Keys. Near the Gulf Hammock (see Chap. VIII.). About twelve miles from here is a bed of iron ore, said to be of good quality and great quantity. Population of village about 100.

BROOKSVILLE.—Post-office. County-site of Hernando County. Lies about 50 miles north of Tampa, and is a relay-station on the hack-line from Gainesville to Tampa. Is near the Gulf Coast (see Chap. V.), and in the region described in Chap. VIII.

BROTHERS RIVER.—Small stream in Calhoun County, West Florida, running south into the Apalachicola near its mouth. See Chap. IX.

BUFFALO BLUFF.—Post-office. Small settlement in Putnam County, on the west bank of the St. Johns River. It is a steamboat-landing, and is 88 miles above Jacksonville. See Chap. VII.

BUNKER HILL.—Small settlement in Leon County, near Lake Miccosukee. See Chap. VI.

BURRIN.—Bradford County, near line of Clay County. Station and small settlement on the Atlantic, Gulf and West India Transit Company's (formerly "The Florida") Railroad, 67 miles from Fernandina, 87 miles from Cedar Keys.

CABBAGE BLUFF.—Post-office. Steamboat-landing on east bank of St. Johns, 162 miles above Jacksonville. See Chap. VII.

CALHOUN COUNTY.—County-site, Abe Spring, or Abe Spring Bluff. West Florida. See Chap. IX.

CALLAHAN.—Post-office. Station and small settlement on the Atlantic, Gulf and West India Company's (formerly "The Florida") Railroad, 27 miles from Fernandina, 127 miles from Cedar Keys.

CALOOSAHATCHEE RIVER.—Flows from near Lake Okeechobee westward between Monroe and Manatee Counties, and empties into Charlotte Harbor, Gulf Coast. The important cattle-shipping point of Punta Rassa is near its mouth. It is navigable for river-steamboats to within ten miles of Lake Okeechobee. See Chap. V.

CAMP IZARD.—Post-office. Small settlement in the extreme southwest of Marion County, on the Withlacoochee River, and near Lake Charlo Apopka. See Chap. V.; also Chap. VIII.

CEDAR KEYS.—Post-office. In Levy County. Terminus of Atlantic, Gulf and West India Transit Company's (formerly "The Florida") Railroad, 154 miles from Fernandina. For full description, see Chap. V.

CEDAR TREE.—Small settlement in Hernando County, a short distance south of Brooksville. Brooksville is a relay-station on the hack-line from Gainesville to Tampa. See Chap. VIII.

CENTREVILLE.—Post-office. Small settlement in Leon County, a few miles north of Tallahassee. See Chap. VI.

CERRO GORDO.—Post-office. County-site of Holmes County. Small settlement. See "West Florida," Chap. IX.

CHALK SPRING.—Post-office. Santa Rosa County, near Alabama line. See "West Florida," Chap. IX.

CHARLES FERRY.—Small settlement, on east bank of Suwannee River, in Suwannee County.

CHATTAHOOCHEE.—Post-office. Small town in Gadsden County, at the confluence of the Flint and Chattahoochee Rivers, where they form the Apalachicola. Present terminus of the Jacksonville, Pensacola and Mobile Railroad. See description of railway system of Florida in Chap. IV.; also Chap. VI.

CHESSAWHEESKA RIVER.—A short, wide stream in Hernando County, flowing west into the Gulf of Mexico. See Chap. V.

CHIPOLA RIVER.—Flows from the northern part of Jackson County south through Jackson and part of Calhoun County, and empties into the Apalachicola River. Jackson County belongs mainly to the hill-country described in Chap. VI; Calhoun to West Florida, described in Chap. IX.

CHOCTAWHATCHEE RIVER.—In West Florida. Runs south between Holmes and Jackson, thence across northern portion of Washington, thence between Washington and Walton Counties, and empties into Choctawhatchee Bay. West Florida is described in Chap. IX.

CIRCLE HILL.—Post-office. In Jackson County, near Marianna. Small settlement. Jackson County described in Chap. VI.

CLAY COUNTY.—Is the next county south of Duval (Jacksonville), lying along the St. Johns west of it. County-site, Green Cove Spring. See Chap. VII.

CLAY LANDING.—On the eastern bank of the Suwannee River, not far from its mouth. In Levy County.

CLEAR WATER.—Post-office. Small settlement on Clear Water Harbor, in Hillsboro' County, Gulf Coast. See Chap. V.

CLIFTON.—Small settlement in Madison County, near Georgia line. See Chap. VI.

COCOANUT GROVE.—Dade County, on Biscayne Bay. See Chap. XI.

COLUMBIA COUNTY.—County-site, Lake City. See Chap. VIII.

COOK'S FERRY, and KING PHILIP'S TOWN.—Landing on the Upper St. Johns, at Lake Harney, 224 miles above Jacksonville. Lake Harney is itself an expanse of the St. Johns. See Chap. VII.

CORK.—Post-office. Small settlement in northwestern part of Hillsboro' County, Peninsular Florida. In region described in Chap. VIII.

CORKSCREW RIVER.—In Monroe County, Indian Country, South

Florida. Runs northwest into Gulf of Mexico. Region described in Chaps. X. and XI.

COTTON PLANT.—Post-office. Small settlement in Marion County, a few miles west of Ocala. In region described in Chap. VIII.

CRAWFORDSVILLE.—Post-office. County-site of Wakulla County. Small town on Appalachee Bay, Gulf Coast. A short distance southwest of St. Marks, the terminus of the St. Marks Branch of the Jacksonville, Pensacola and Mobile Railroad.

CRESWELL.—Small settlement on eastern bank of Ocklockony River, in Leon County. See Chap. VI.

CRYSTAL RIVER.—A short, but wide and clear stream in the northwestern part of Hernando County, flowing west into the Gulf of Mexico. See Chap. V.

DADE COUNTY.—In the extreme southeast of Florida. Contains Lake Okeechobee and the Everglades. County-site, Key Biscayne. See Chaps. X. and XI.

DANCY'S PLACE.—Post-office. A steamboat-landing on the St. Johns, in Putnam County, 65 miles above Jacksonville; named from the plantation of Colonel Dancy—a prominent Florida orange-grower and planter—which is situated here.

DANIEL.—Small settlement in Levy County, not far from the mouth of the Suwannee River, a few miles north of Cedar Keys. See Chap. V.

DARBYVILLE.—Post-office. Small settlement in Baker County, near Baldwin. Baker County adjoins Duval (Jacksonville).

DAVIS.—Last station on the Jacksonville, Pensacola and Mobile Railway before reaching Chattahoochee, the present terminus of that road. In Gadsden County. See Chap. VI.

DAYTONA.—Post-office. Settlement in Volusia County, on Halifax River. Described under head of "Indian River" in last part of Chap. VII.

DELK'S BLUFF.—Steamboat-landing on Ocklawaha River, 100 miles above its mouth.

DRAYTON ISLAND.—In Lake George, Marion County. See Chap. VII., after "Welaka," on the St. Johns.

DUMMITT'S GROVE.—A noted orange-grove on the northern end of Indian River, in Volusia County. See under head of "Indian River," in latter portion of Chap. VII.

DUNN'S LAKE.—Post-office. Small settlement at the southern end of Dunn's Lake, in Volusia County. General country described in Chap. VII.

DURISOE.—Steamboat-landing on Ocklawaha River, 89 miles above its mouth.

DUTTON.—Station on Atlantic, Gulf and West India Transit Company's (formerly "The Florida") Railroad, 32 miles from Fernandina, 122 miles from Cedar Keys.

DUVAL COUNTY.—County-site, Jacksonville. See Chap. IV.

EAUCLAIR.—A Wisconsin settlement, in Orange County, in the neighborhood of Mellonville and Sanford.

EAU GALLIE.—Post-office. On Indian River, in Brevard County, and near Lake Washington. See under head of "Indian River," in latter part of Chap. VII.

ECONFINA.—Post-office. Small settlement on Econfina River, in Washington County, West Florida.

ECONFINA RIVER.—There are two streams so called. One runs south through Washington County, West Florida, and empties into St. Andrews Bay, Gulf Coast. The other runs southwest through Taylor County, in Central Florida, and empties into the Gulf, not far east of St. Marks.

ECONTIKAHOOCHEE RIVER.—A small stream in Orange County, running northeastward, and emptying into the Upper St. Johns just above Lake Harney.

ELLAVILLE.—Post-office. On the Suwannee River, near the line of Madison and Suwannee Counties. Large milling interests centre here, both the river and the railway offering facilities for transportation. It is a station on the Jacksonville, Pensacola and Mobile Railway, 95 miles from Jacksonville, 70 miles from Tallahassee.

ELLISVILLE.—Small settlement in the lower part of Columbia County. See Chap. VIII.

EMANUELS.—Steamboat-landing on St. Johns River, 184 miles above Jacksonville.

ENTERPRISE.—Post-office. County-site of Volusia County. A noted place of resort on the St. Johns River, 205 miles above Jacksonville. For description of it, see Chap. VII.

ESCAMBIA COUNTY.—County-site, Pensacola. See Chaps. V. and IX.

ESCAMBIA RIVER.—Runs between Escambia and Santa Rosa Counties, West Florida, and empties into Escambia Bay. Gulf Coast. See Chaps. V. and IX.

EUREKA.—There are two places so called. One is a post-office and steamboat-landing on the Ocklawaha River, 60 miles above its mouth, in Marion County. The other is a new settlement in Orange County, not far from Sanford and Mellonville, on the Upper St. Johns. See Chap. VII.

FAYETTEVILLE.—Small settlement on the west bank of the Suwannee River, in Lafayette County. In a region similar to that described in Chap. VIII.

FEDERAL POINT.—Steamboat-landing on the east bank of the St. Johns, 60 miles above Jacksonville, in Putnam County.

FINALAWA (sometimes called Finholloway) RIVER.—Runs through Taylor County southwest into the Gulf of Mexico. See Chap. V.

FLEMINGTON.—Small settlement in northern part of Marion County, near Orange Lake. In region described in Chap. VIII.

FORT BROOKS.—Steamboat-landing on the Ocklawaha River, 35 miles above its mouth. Not far from Orange Springs.

FORT BUTLER.—A settlement in Orange County, not far from Lake George and the St. Johns.

FORT CALL.—Small settlement in northern part of Alachua County, near New, or Santa Fé River. In region described in Chap. VIII.

FORT FRANK BROOKE.—Post-office. Small settlement on the Stein-

hatchee (or Isteenhatchee) River, near its mouth, in Lafayette County. Gulf Coast region. Chap. V.

FORT GATES.—Steamboat-landing on the west bank of the St. Johns River, 110 miles above Jacksonville, in Putnam County.

FORT GEORGE ISLAND.—Just north of the mouth of the St. Johns. Has winter accommodations for visitors in a hotel recently erected. In Duval County, 25 miles from Jacksonville. See Chap. IV.

FORT MEAD.—A small but active town in Polk County, near the centre of Peninsular Florida, on Peace Creek, 80 miles above its mouth. Its commerce is mainly in the purchase and sale of cattle; though a considerable quantity of farm-products also are sold here, and farm-supplies bought. It is 108 miles above Punta Rassa, 80 miles southwest from Mellonville, and 125 miles south of Ocala.

FORT PIERCE.—County-site of Brevard County, situated on Indian River—here called St. Lucie Sound. It is in the lower part of the region described under the head of "Indian River" in latter part of Chap. VII.

FORT REID.—Post-office. Settlement in Orange County, in the neighborhood of Mellonville, on the St. Johns. See Chap. VII.

FRANKLIN COUNTY.—County-site, Apalachicola. Lies partly in West Florida, which see, Chap. IX.; and has a Gulf coast reaching from a few miles west of the mouth of the Apalachicola River to the mouth of the Ocklockony. See Chap. V. Off the eastern coast, and separated from it by part of St. George's Sound, is James Island, which is in Franklin County, and is a considerable summer resort for the people of Tallahassee and vicinity.

FREEPORT.—Post-office. Settlement near the mouth of Alaqua Creek, on Choctawhatchee Bay, in Walton County, West Florida. See Chap. IX.

GADSDEN COUNTY.—County-site, Quincy. Described in Chap. VI.

GAINESVILLE.—Post-office. County-site of Alachua County. Important commercial town and consumptive resort, on the Atlantic, Gulf and West India Transit Company's (formerly "The Florida") Railroad, 96 miles from Fernandina, 58 miles from Cedar Keys. See Chap. VIII.

GEORGETOWN.—Post office. Steamboat-landing on the east bank of the St. Johns, in Putnam County, 117 miles above Jacksonville. See Chap. VII.

GOODMAN.—Station and considerable shipping-point for planters on the Jacksonville, Pensacola and Mobile Railroad, 41 miles from Tallahassee, 124 miles from Jacksonville. See Chap. VI.

GORDON.—Small settlement in Alachua County, near Newnansville, which latter is the terminus of a semi-weekly hack-line from Gainesville. In the region described in Chap. VIII.

GORES.—Steamboat-landing on Ocklawaha River, 83 miles above its mouth.

GRAHAM.—Steamboat-landing on Ocklawaha River, 94 miles above its mouth.

GREEN COVE SPRINGS, or GREEN COVE.—Post-office. County-site of Clay County. An important resort on the west bank of the St. Johns, 30 miles above Jacksonville. Described in Chap. VII.

GREENWOOD.—Post-office. Small but thrifty village in Jackson near Chattahoochee River, and not far from Marianna. See Chap. VI. for description of hill-region in which Jackson County lies.

HALIFAX RIVER.—Reaches from northeastern corner of Volusia County to about centre of the county, communicating with the Atlantic Ocean through Mosquito Inlet. For full description of it, see under "Indian River," in latter part of Chap. VII.

HALPATA HATCHEE RIVER.—Short, clear stream in Manatee County; flows west into Charlotte Harbor. See Chap. V.

HAMBURG.—Small settlement in Madison County, a short distance northwest of Madison. Madison is on the Jacksonville, Pensacola and Mobile Railroad, 55 miles from Tallahassee, 110 miles from Jacksonville.

HAMILTON COUNTY.—County-site, Jasper. Adjoins Echols County, in Georgia. Has Madison County, Florida, on the west; Columbia on the east, and Suwannee on the south. Crossed by the Florida branch of the Atlantic and Gulf Railroad; also crossed by the Alapaha River. A little timber floated down to market, but county mostly agricultural. Sparsely inhabited. Productions mainly corn, short and long cotton, upland rice, sugar-cane, oats, potatoes, peanuts, and tobacco. Well timbered with yellow pine.

HAMOSASSA, sometimes HOMOSASSA.—Small settlement near the Gulf Coast, on Hamosassa River in Hernando County. See Chap. V.

HAMOSASSA RIVER.—Short, clear stream in Hernando County, flows west into Gulf of Mexico. See Chap. V.

HART'S ROAD.—Nassau County. Station on the Atlantic, Gulf and West India Transit Company's (formerly "The Florida") Railroad, 12 miles from Fernandina, 142 miles from Cedar Keys.

HATCH'S BEND.—Post-office. Settlement in Lafayette County, near the point where the New (or Santa Fé) River flows into the Suwannee. In the region described in Chap. VIII.

HAWKINSVILLE.—Steamboat-landing, in Orange County, on the west bank of the St. Johns River, 160 miles above Jacksonville. See Chap. VII.

HAYWOOD'S LANDING.—A trading-point and steamboat-landing in Jackson County, on the Chattahoochee River. Jackson County described generally in Chap. VI.

HERNANDO COUNTY.—County-site, Brooksville. Lies in Peninsular Florida, stretching north and south nearly from 29° to 28° north latitude. Interior portion of it in region described in Chap. VIII. Its coast-line described in Chap. V., reaching from the Withlacoochee River to the Anclote River.

HIBERNIA.—Post-office. Settlement and popular resort, in Clay County, on the St. Johns River, 22 miles above Jacksonville. It is described in Chap. VII.

HICKORY HILL.—Small settlement in northeastern part of Washington County, on the main road from Marianna to Pensacola, a short distance southwest of the former. Washington County is in West Florida, for which see Chap. IX.

HILLSBORO' COUNTY.—Similar to, and south of, Hernando County. Its Gulf Coast portion, described in Chap. V., reaches from Anclote River nearly to Manatee River; its interior portion adjoins Polk County, and is mostly a cattle-raising section like that, shipping from Tampa. Tampa is the county-site.

HILLSBORO' RIVER.—There are three bodies of water bearing this name in Florida. One runs down southwest through northern portion of Hillsboro' County, and empties into Hillsboro' Bay at Tampa, on the Gulf Coast; Hillsboro' Bay being a name for the inner bight of Tampa Bay.

A second Hillsboro' River is a short body of water communicating with Hillsboro' Inlet, on the Atlantic coast, about the centre of Dade County.

A third is the name given to the middle portion of that extensive lagoon on the east coast of Volusia County, described under the head of "Indian River," in the latter part of Chap. VII.

HOGARTH'S LANDING.—Post-office. Steamboat-landing in St. Johns County, on the east bank of the St. Johns River, 36 miles above Jacksonville. See Chap. VII.

HOLMES COUNTY.—County-site, Cerro Gordo. Sparsely inhabited. Lies in northern part of West Florida, adjoining Alabama line. For general description of West Florida see Chap. IX.

HOLMES CREEK.—A large creek, running through a fertile valley, from the eastern part of Washington County southwest across the entire county to the Choctawhatchee River, into which it empties. Washington County is in West Florida. See Chap. IX.

HOMOSASSA.—See HAMOSASSA.

HOMOSASSA RIVER.—See HAMOSASSA RIVER.

HORSE LANDING.—Steamboat-landing, in Putnam County, on the St. Johns River, 94 miles above Jacksonville.

HOUSTON.—Post-office. Station on Jacksonville, Pensacola and Mobile Railroad, 77 miles from Jacksonville, 88 miles from Tallahassee; in Suwannee County.

IAMONIA.—Post-office. Small settlement near the lake of that name, in the extreme northern part of Leon County. See Chap. VI.

INDIAN RIVER.—Extends from near the centre of Volusia County, through its lower portion, thence along the entire eastern edge of Brevard, and along a part of the eastern edge of Dade. Fully described under the head of "Indian River," in the latter part of Chap. VII.

IOLA.—Two points so named. One is a post-office and small settlement in Calhoun County, near the confluence of the Chipola River with the Apalachicola. The other is a steamboat-landing on the Ocklawaha River, 50 miles above its mouth.

ISTEEN HATCHEE, OR STEINHATCHEE, RIVER.—Commences in the

northern part of Lafayette County, and runs south through that county, emptying into Deadman's Bay, Gulf Coast.

JACKSON COUNTY.—County-site, Marianna. It is in what is usually denominated West Florida, but its topography and productions ally it with the hill-country, and these are generally described in Chap. VI.

JACKSONVILLE.—See Chap. IV.

JASPER.—Post-office. County-site of Hamilton County. A village on the Florida branch of the Atlantic and Gulf Railroad, 16 miles from Live Oak, where that branch unites with the Jacksonville, Pensacola and Mobile Railroad.

JEFFERSON COUNTY.—County-site, Monticello. Described generally in Chap. VI.

JENNINGS.—Post-office. Small settlement in Hamilton County, near the Georgia line.

KEY BISCAYNE.—Post-office. County-site of Dade County. Small settlement. See Chap. XI.

KING PHILIP'S TOWN.—See COOK'S FERRY.

KNOX HILL.—Post-office. One of the Scotch settlements in the Uchee Valley, in Walton County, West Florida. See Chap. IX.

KOHUMPKA.—In Sumter County, near Lake Harris. Small settlement, not far from Leesburg, in region described in Chap. VIII.

LAFAYETTE COUNTY.—County-site, New Troy. Runs north and south from 30° nearly to 29° north latitude. Its eastern edge is entirely bounded by the Suwannee River. Its inland portion is of the same nature with the region described in Chap. VIII.; its Gulf coast, which is 50 or 60 miles in length, reaches from the mouth of the Steinhatchee River to the mouth of the Suwannee, and is similar to that described in Chap. V., for Cedar Keys, the mouth of the Suwannee being but a few miles above that place.

LA GRANDE.—Small settlement in Washington County, West Florida, near the Choctawhatchee River. See Chap. IX.

LAKE BERESFORD.—Steamboat-landing, in Volusia County, on east bank of the St. Johns River, 165 miles above Jacksonville. See Chap. VII.

LAKE CITY.—Post-office. Terminus of Cuban Telegraph Line. County-site of Columbia County. Described in Chap. VIII.

LAKE EUSTIS.—Post-office. Settlement on Lake Eustis, in Orange County. This lake nearly adjoins Lake Harris, in Sumter County, and lies between Sumter and Orange, in the region described in Chap. VIII.

LAKE GRIFFIN.—Post-office. Thriving settlement in Sumter County, on Lake Griffin (which is on the head-waters of the Ocklawaha River), ten miles below Leesburg, in region described in Chap. VIII.

LAKE HARNEY.—An expanse of the Upper St. Johns, 225 miles above Jacksonville. It lies between Volusia and Orange Counties, and is visited by small river-steamers in winter for pleasure-excursions, and hunting and fishing. See Chap. VII.

LAKE VIEW.—Post-office. Steamboat landing, in Volusia County, on the eastern bank of that expanse of the St. Johns River known as Lake George. It is 132 miles above Jacksonville.

LEESBURG.—Post-office. County-site of Sumter County. Described in Chap. VIII.

LEON COUNTY.—County site, Tallahassee. Adjoins Thomas County, Georgia, on the north. Fully described in Chap. VI.

LEVY COUNTY.—County-site, Bronson. Its sea-port is Cedar Keys, which, with its surrounding country, is described in Chap. V. Its Gulf coast reaches from the mouth of the Suwannee to that of the Withlacoochee. Its interior portion is of the same nature with the region described in Chap. VIII.

LEVYVILLE.—Small settlement in Levy County, a few miles west of Bronson on the A. G. and W. I. T. R. R.

LIBERTY.—Small settlement on the Alapaha River, in Hamilton County, near the Georgia line.

LIBERTY COUNTY.—County-site, Bristol. Its entire western edge is bounded by the Apalachicola River. Sparsely inhabited and little cultivated. Well timbered with yellow pine. Mostly a cattle-range. Has fertile lands. Lies north of Franklin County, and has no coast-line. Nearly the whole county is part of the celebrated purchase made by the Scotchman Forbes many years ago from the Indians and Spaniards, and since known as the Forbes Purchase. Land worth from one to three dollars an acre.

LITTLE RIVER.—Flows south through Gadsden County, and empties into the Ocklockony.

LIVE OAK.—Post-office. Telegraph-office. Small town in Suwannee County. Important railroad point. Junction of the Florida branch of the Atlantic and Gulf Railway (main line running from Savannah to Albany, Georgia) with the Jacksonville, Pensacola and Mobile Railroad. Has about 800 inhabitants. Is 83 miles from Tallahassee and 82 from Jacksonville.

LOTUS.—A small settlement in Jackson County, a few miles south of Marianna.

LOWER WHITE SPRING.—A white sulphur spring in Hamilton County, on the Suwannee River. Locally resorted to for cure of rheumatism, gout, and kindred diseases. Accessible by private conveyance, either from Wellborn, Lake City, or Live Oak—all lying on the Jacksonville, Pensacola and Mobile Railroad, from 8 to 12 miles distant.

MADISON.—County-site of Madison County. Post-office. Telegraph-office. Lies on Jacksonville, Pensacola and Mobile Railroad, 55 miles from Tallahassee and 110 miles from Jacksonville. A pleasant town of 700 or 800 inhabitants in a fine farming country, part of the hill-region described in Chap. VI. It has Methodist, Baptist, and Presbyterian churches, and pleasant accommodations for travelers. It is not far from the Suwannee River, or from Lakes Sampulla, Rachel, Mary Frances, and Cherry, in all of which fishing may be had.

MADISON COUNTY.—County-site, Madison. See next above. Madison County is in the hill-region generally described in Chap. VI.

MAGNOLIA.—Clay County, on the St. Johns, 28 miles above Jacksonville. Described in Chap. VII.

MANATEE.—Post-office. Small settlement near the mouth of Manatee River, in Manatee County, on the Gulf Coast. See Chap. V.

MANATEE COUNTY.—County-site, Pine Level. Has a Gulf coast reaching from the lower end of Tampa Bay to the mouth of the Caloosahatchee River. Interior mostly prairies and cattle-ranges, extending to Lake Okeechobee and Brevard County, which bound Manatee on the east. See Chaps. V. and X.

MANATEE RIVER.—A short stream in Manatee County, running west and emptying into the Gulf between Tampa Bay and Sarasota Bay. See Chap. V.

MANDARIN.—Post office. A pleasant settlement on the eastern bank of the St. Johns River, 15 miles above Jacksonville. Described in Chap. VII.

MARIANNA.—Post-office. County-site of Jackson County, and located near the middle of it. A centre of trade for a fine farming country. Its freights mostly received at and sent to Neal's Landing, Port Jackson, Haywood's Landing, and Bellevue, points on the Chattahoochee River, 18 to 20 miles distant. It is on the upper portion of the Chipola River, which on high waters admits small river-craft. The Chipola empties into the Apalachicola, 40 or 50 miles above its mouth. Marianna is 30 miles from Chattahoochee, and is on the projected extension of the Jacksonville, Pensacola and Mobile Railroad from Chattahoochee, the present terminus, to Powellton, where it would connect with the Pensacola and Mobile (Florida and Alabama) Railroad, and justify its name. The town has a good court-house, a newspaper, four churches, sixteen stores, and other things in proportion. Jackson County, although in what is usually called West Florida, partakes so much of the hill-country characteristics that it is described generally under that head in Chap. VI.

MARION COUNTY.—An important and growing county, adjoining Alachua and Putnam on the north, and Orange, Sumter, and Hernando on the south; bounded on the east by that expanse of the St. Johns River called Lake George and by a part of Orange County, and on the west by Levy County. It contains, besides several smaller lakes, Lakes Weir and Orange, noted for their wild orange groves, which are now being actively brought into culture. See Chap. VIII. It is crossed from south to north by the Ocklawaha River, and has the famous Silver Spring about its centre, for descriptions of which see Chap. II. Its main town is Ocala, and there are settlements at Wacahoota and Flemington in the north-western part, and at Cotton Plant and Camp Izard in the south-western part. Silver Spring is also a trading-point of importance. It is proper to mention that there is another place in the eastern part of the county called "Silver Spring," near the line of Orange

County. Marion County is in the general region described in Chap. VIII.

MARY ESTHER.—Post-office. Small settlement in Santa Rosa County, on Santa Rosa Sound, West Florida; general region described in Chap. IX.

MATANZAS RIVER.—An estuary of the sea, extending from St. Augustine to Matanzas Inlet, inclosed between Anastasia Island and the mainland. In St. Johns County. See Chap. III.

MELLONVILLE.—Orange County. On the St. Johns, which is here called "Lake Monroe," 200 miles above Jacksonville. Described in Chap. VII.

MIAMI RIVER.—Short stream in Dade County, running between the Everglades and the Atlantic, emptying into Biscayne Bay. See Chap. XI.

MICANOPY.—Post-office. A village in the southern part of Alachua County, a few miles south of Gainesville, and on the hack-line from Gainesville to Tampa. It is thought to be on or near the ancient Indian village of Cuscowilla, brought to notice in De Soto's invasion of Florida. In region described in Chap. VIII.

MICCOSUKEE.—Small settlement not far from the lake of that name, in Leon County. Region described in Chap. VI.

MIDWAY.—Post-office. On Jacksonville, Pensacola and Mobile Railroad, half-way between Quincy and Tallahassee (12 miles from each), and 177 miles from Jacksonville. In Gadsden County. Region described in Chap. VI.

MILLWOOD.—Small settlement in the extreme northeast corner of Jackson County, near the Alabama line, on the Chattahoochee River.

MILTON.—Post-office. County-site of Santa Rosa County. An important lumbering- and shipping-point on the Blackwater River, near the head of Pensacola Bay. At Milton and Bagdad (two miles below) are four ship-yards. The former has an iron foundry of several years' establishment, and the latter a sash- and blind-factory employing twenty-five operatives. For general description of West Florida, see Chap. IX.

MITCHELL.—A station near the Alabama line, on the Florida and Alabama Railroad, in northern part of Escambia County.

MOLINA.—Post-office. Settlement on Escambia River, in Escambia County, West Florida, not far above the head of Escambia Bay.

MONROE COUNTY.—County-site, Key West. See Chaps. X. and XI.

MONTICELLO.—Post-office. Telegraph-office. County-site of Jefferson County. Population probably about 1500. Terminus of Monticello Branch (4½ miles long) of Jacksonville, Pensacola and Mobile Railroad, which unites with main line at Monticello Junction. An important town, centre of trade for a fine farming country. It is about midway between, and a few miles from, the Aucilla River on the east and Lake Miccosukee on the west. Has Methodist, Baptist, Presbyterian, and Episcopalian churches, and a newspaper. The Monticello Hotel accommodates travelers. Near Monticello

is the old Murat Plantation named Lipona, where Murat resided before removing to Bellevue, near Tallahassee. Stages run from Monticello to Thomasville, Georgia. See, generally, Chap. VI.

MONTICELLO JUNCTION.—Jefferson County. Junction of Monticello Branch with main line Jacksonville, Pensacola and Mobile Railroad. 138 miles from Jacksonville, 27 miles from Tallahassee. See next above.

MORGAN.—Small settlement in northern part of Gadsden County, near Georgia line.

MOSS BLUFF.—Steamboat-landing on Ocklawaha River, 140 miles from its mouth.

MOUNT ROYAL.—Steamboat-landing in Putnam County, on the east bank of the St. Johns River, 109 miles above Jacksonville.

MOUNT VERNON.—A point in Jackson County, opposite Chattahoochee, at the confluence of the Flint and Chattahoochee into the Apalachicola.

MULBERRY GROVE.—Steamboat-landing on the St. Johns, in Duval County, 11 miles above Jacksonville.

MYAKKA RIVER.—Short stream in Manatee County, flowing near to and parallel with the coast, southward to Charlotte Harbor and emptying therein. See Chap. V.

NASSAU COUNTY.—County-site, Fernandina. Includes Amelia Island, which lies along parallel with its eastern coast, separated therefrom by the Sound. See under FERNANDINA, in latter part of Chap. IV.

NEAL'S LANDING.—Post-office. A trading-point in Jackson County, on the Chattahoochee River, receiving and shipping goods and products for and from the interior, by steamboats plying between Eufala, Alabama, and Chattahoochee and Apalachicola, Florida.

NEWNANSVILLE.—Post-office. Village in the northern part of Alachua County, 16 miles from Gainesville, with which it is connected by a semi-weekly hack-line. In region described in Chap. VII.

NEWPORT.—Wakulla County. See Chap. VI.

NEW RIVER.—Called by some also SANTA FÉ RIVER. Runs from Santa Fé Lake, in the corner between Alachua, Bradford, and Clay Counties, in a general westward direction, between Bradford, Columbia, and Suwannee Counties on the north, and Alachua on the south, and empties into the Suwannee. About midway of its course between Alachua and Columbia Counties it forms the "Natural Bridge,"—*i.e.* disappears into the earth and reappears. It flows across the region described in Chap. VIII.

NEW SMYRNA.—Post-office. Volusia County. On Hillsboro' (sometimes called Halifax) River. See under "Indian River," in latter part of Chap. VII.

NEW TROY.—Post-office. County-site of Lafayette County. Small settlement in the northeastern part of the county, on the Suwannee River, which is here the boundary-line between Lafayette and Suwannee.

NORTH RIVER.—An estuary of the sea, partly fed also by springs, making into the mainland at St. Augustine, St. Johns County, and

extending to the northward parallel with the coast for twenty-five or thirty miles. With the Matanzas coming in from the south, it forms the harbor of St. Augustine. See Chap. III.

OAK BLUFF.—Post-office. Small settlement in Orange County, near Lakes Harris, Buck, and Eustis. A few miles from Leesburg. In region described in Chap. VIII.

OAKFIELD.—First station above Pensacola, on the Florida and Alabama Railroad. In Escambia County, West Florida. Region described in Chap. IX.

OCALA.—Post-office. County-site of Marion County. Relay-station on the tri-weekly hack-line from Gainesville to Tampa. About 40 miles from Gainesville, and 5 miles from the famous Silver Spring. Travelers accommodated at the Ocala Hotel. The town is probably on or near the old Indian settlement of Ocali, notable in the De Soto expedition; and likely its name originates that of the Ocklawaha River, which is not far off. There are private boarding-houses. The region is that described in Chap. VIII.

OCHESEE.—Settlement in the extreme southwestern corner of Jackson County, on the west bank of the Apalachicola River.

OCILLA.—See AUCILLA.

OCILLA RIVER.—See AUCILLA RIVER.

OCKLAWAHA RIVER.—Runs from the central part of Sumter County through Lakes Harris and Griffin, generally northward across the northern portion of Sumter, the whole of Marion, and a part of Putnam Counties, and empties into the St. Johns opposite Welaka, 25 miles above Pilatka and 100 miles above Jacksonville. From its mouth to Leesburg (which is usually spoken of as head of navigation, though the steamboats go a few miles farther to Okahumpkee, on Lake Harris) is about 170 miles. Silver Spring Run, which is the river formed by the outburst of Silver Spring, is 9 miles long, and empties into the Ocklawaha about 100 miles above its mouth. The Run is navigable for the Ocklawaha steamboats; and at low water Silver Spring is the head of navigation on Ocklawaha River for the steamboats. At such times market-vegetables and farm-products from above, as well as supplies and general freights from below, are conveyed by barges between the Leesburg country and Silver Spring. The Ocklawaha landings are as follows:

Fort Brook,	distant	from	mouth	of river	35 miles.
Iola,	"	"	"		50 "
Eureka,	"	"	"		60 "
Sandy Bluff,	"	"	"		68 "
Palmetto Landing,	"	"	"		78 "
Gores,	"	"	"		83 "
Durisoe,	"	"	"		89 "
Graham,	"	"	"		94 "
Delk's Bluff,	"	"	"		100 "
Silver Spring,	"	"	"		109 "
Sharp's Ferry,	"	"	"		114 "
Moss Bluff,	"	"	"		140 "
Stark's Landing,	"	"	"		155 "
Lake Griffin,	"	"	"		160 "
Leesburg,	"	"	"		170 "

For description of Ocklawaha River and Silver Spring, see Chap. II.

OCKLOCKONEE.—Post-office. Small settlement in Wakulla County, near Ocklockonee River.

OKAHUMPKA, sometimes OKAHUMPKEE.—Post-office. Settlement and trading-point in Sumter County, on Lake Harris. Steamboats reach this point a few miles above Leesburg; see next above. In region described in Chap. VIII.

OLD TOWN.—Post-office. Small settlement in Lafayette County, on the western bank of the Suwannee River, a few miles above its mouth.

OLUSTEE.—Post-office. In Baker County, on the Jacksonville, Pensacola and Mobile Railroad (strictly, on the "Florida Central," which runs from Jacksonville to Lake City, and there connects with the J. P. and M., being worked with that as one road, though not merged; but the whole line across the northern part of the State from Jacksonville to Chattahoochee is usually spoken of as the J. P. and M. R. R.). 47 miles from Jacksonville, 118 miles from Tallahassee. The celebrated battle of Olustee, between the Federals and Confederates in 1864, was fought here. See Chap. VIII.

ONORO.—A hotel and sanitarium at Sanford, on Lake Monroe (a name given to the St. Johns, which expands here), in Orange County. See Chap. VII.

ORANGE BLUFF.—Steamboat-landing on St. Johns River, 140 miles above Jacksonville. See Chap. VII.

ORANGE COUNTY.—County-site, Orlando. One of the most important and growing counties in the State, stretching north and south from a few miles above 29° to a few miles below 28° north latitude. Its entire eastern edge is bounded by the St. Johns, across which on the east lie Volusia County and a part of Brevard. On the west it has a part of Marion, Sumter, and a part of Polk Counties. Its county-site is Orlando. In the neighborhood of Sanford and Mellonville, for a radius of fifteen to twenty miles, are numerous new settlements based upon the culture of oranges and other fruits and upon general agriculture. It contains Lakes Buck, Eustis, Apopka, Maitland, Jessup, and many smaller lakes; and borders on those expanses of the St. Johns River known as Lakes Harney, Monroe, and George. The settlements about Mellonville, and the general region, are described in Chap. VII.

ORANGE MILLS.—Post-office. Steamboat-landing on the east bank of the St. Johns River, in Putnam County, 64 miles above Jacksonville. See Chap. VII.

ORANGE POINT.—Steamboat-landing, in Putnam County, on St. Johns River, 103 miles above Jacksonville.

ORANGE SPRINGS.—Post-office. A sulphur spring near Orange Lake, in Marion County, and not far from Fort Brook, which is a landing on the Ocklawaha River, 35 miles above its mouth. The hotel here has been disused for some years. The place was formerly a con-

siderable resort for visitors, particularly invalids. Board can be obtained in the neighborhood. It is in the inland region described in Chap. VIII.

ORLANDO.—Post-office. County-site of Orange County, 24 miles from Mellonville, on Lake Monroe (a name given to an expanse of the St. Johns). Hacks ply between Mellonville and Orlando. Is in a rolling pine country, in the upper edge of the cattle regions. See Chap. VII.

OTTER CREEK.—Post-office. Station on the Atlantic, Gulf and West India Transit Company's (formerly "The Florida") Railroad, 135 miles from Fernandina, 19 miles from Cedar Keys. In Levy County; whose interior is in region described in Chap. VIII.; Gulf Coast in Chap. V.

PALATKA.—See PILATKA, below.

PALMETTO.—Levy County. Station on the Atlantic, Gulf and West India Transit Company's (formerly "The Florida") Railroad, 144 miles from Fernandina, 10 miles from Cedar Keys.

PALMETTO LANDING.—Marion County. Steamboat-landing on the Ocklawaha River, 78 miles above its mouth.

PEACE CREEK.—A notable South Florida stream. Rises in the lower part of Sumter County, and flows south across Polk and Manatee Counties, emptying into Charlotte Harbor, Gulf Coast. Its course is through a great cattle-range. A company has been chartered for the purpose of removing the obstructions, which are mostly only fallen timber, and establishing a line of steamboats on the waters of Peace Creek, as high up as to Fort Mead, in Polk County. See Chap. V.

PENSACOLA.—Post-office. County-site of Escambia County. See Chap. IX.; and Chap. V., *passim*.

PERDIDO RIVER.—Boundary-line between West Florida and Alabama. Flows south and empties into Perdido Bay, Gulf Coast.

PICOLATA.—Steamboat-landing in St. Johns County, on the St. Johns River, 45 miles above its mouth. See Chap. VII.

PILATKA, or PALATKA.—Post-office. County-site of Putnam County. One of the most important and flourishing towns in Florida. On the west bank of the St. Johns River, 75 miles above Jacksonville. Described in Chap. VII.

PINE LEVEL.—Post-office. County-site of Manatee County. Situated a short distance above the head of Charlotte Harbor, on a considerable stream. For character of region, see MANATEE COUNTY; also Chap. V.

PITTITOCHOSCOLEE.—Settlement in Hernando County, on the Gulf Coast, a short distance above Anclote River. See Chap. V.

POLK COUNTY.—County-site, Bartow; Bartow and Fort Mead are principal settlements of the county, both on Peace Creek (which see), a considerable stream running entirely across the county. A project has been chartered, and commenced, to give the county steamboat communication with Charlotte Harbor, on the Gulf Coast, along Peace Creek. It is a county devoted mostly to cattle-

raising. The summer, from June to October, is the wet season, when much of the low land is under water.

PORT ORANGE.—Post-office. Settlement in Volusia County, on the narrow peninsula between Halifax River and the Atlantic Ocean. See under head of "Indian River," in the latter part of Chap. VII.

POWELLTON.—Post-office. Station on the Alabama and Florida Railroad, in Escambia County, West Florida. Here the Alabama and Florida Railroad would be met by the proposed extension of the Jacksonville, Pensacola and Mobile Railroad. Region described in Chap. IX.

PUNTA RASSA.—Post-office. Settlement near the mouth of the Caloosahatchee River, on the Gulf Coast, in Monroe County. Here the Cuban Telegraph reaches the mainland. Is a brisk shipping-point for cattle destined for the Cuba and Key West markets. See Chap. V.

PUTNAM COUNTY.—County-site, Pilatka. An important and growing county, lying on both sides of the St. Johns River, and extending from a point about 45 miles above Jacksonville as far up as, and partly along, the eastern shore of that expanse of the St. Johns known as Lake George. Its lower western portion is also crossed by the Ocklawaha, which empties into the St. Johns opposite Welaka, a steamboat-landing in this county 100 miles above Jacksonville. Its lower eastern portion lies between the St. Johns and the long, parallel waters of Dunn's Lake, and the peninsula thus formed is called Fruitlands, from the activity in fruit-culture—principally oranges and bananas—recently developed by settlers in that locality. See Chap. VII.

QUINCY.—Post-office. Telegraph-office. County-site of Gadsden County. An important town, of about 1000 inhabitants, symmetrically built on a high hill, commanding an extensive prospect along the Attapulgas valley and the surrounding broken country. It is the trade-centre of a fine farming country, and is on the Jacksonville, Pensacola and Mobile Railroad (of which it was the terminus until the recent extension to Chattahoochee), 24 miles west of Tallahassee and 189 miles west of Jacksonville. Travelers are accommodated at the Willard House and at private boarding-houses. It is in the hill-region generally described in Chap. VI. Stages run from Quincy to Bainbridge, Georgia.

REMINGTON PARK.—Post-office. The hotel and fine park of Colonel Remington, a noted resort on the east bank of the St. Johns River, 25 miles above Jacksonville. It is in St. Johns County, and is about 5 miles from Green Cove Springs, on the opposite side of the river.

RICOES BLUFF.—Liberty County, on the Apalachicola River.

ROLLESTOWN.—In the part of Putnam County lying east of the St. Johns River, about 80 miles above Jacksonville. Is probably the site of the old English settlement named after Lord Rolle. See Chap. VII.

ROSE HEAD.—Post-office. Settlement in Taylor County, near the Finalawa River.

ROSEWOOD.—Post-office. Settlement in Levy County, near Palmetto Station, on the Atlantic, Gulf and West India Transit Company's (formerly "The Florida") Railroad, 10 miles from Cedar Keys. In the Gulf Coast region described in Chap. V.

SALLIE'S CAMP.—Landing on the Upper St. Johns, at Lake Harney, 229 miles above Jacksonville.

SANDERSON.—Post-office. Telegraph-office. County-site of Baker County. On the Jacksonville, Pensacola and Mobile Railroad (or more strictly the "Florida Central;" see explanation at Olustee, above), 37 miles from Jacksonville, 128 miles from Tallahassee.

SANDY BLUFF.—Steamboat-landing on Ocklawaha River, 68 miles above its mouth.

SANFORD.—Post-office. In Orange County, 1 mile from Mellonville, on Lake Monroe which is a name for the expanse of the St. Johns at this point. It is 199 miles above Jacksonville. Growing place, in a region rapidly improving. Travelers accommodated at the Orange House, and at Onoro—a sanitarium kept by Dr. Spence; also at private boarding-houses. See Chap. VII.

SAN MATTEO.—Post-office. Putnam County. A pleasant settlement on the east bank of the St. Johns, 80 miles above Jacksonville. See Chap. VII., where it is described.

SAN SEBASTIAN RIVER.—Mainly an estuary from the sea, but partly fed by springs at its upper end. Makes in just below the city of St. Augustine, in St. Johns County, and extends 6 or 7 miles into the back country around that place. It is the stream one crosses in going from the railroad dépôt into the town. See Chap. III. *passim*.

SANTA FÉ.—Post-office. Small settlement in Bradford County, a few miles southeast of Starke, a station on the Atlantic, Gulf and West India Transit Company's (formerly "The Florida") Railroad, 73 miles from Fernandina, 81 miles from Cedar Keys.

SANTA FÉ RIVER.—See NEW RIVER.

SANTA ROSA COUNTY.—County-site, Milton. Next to Escambia the westernmost county of West Florida. Principal town, Milton; settlements also at Bagdad, Mary Esther, Chalk Spring, and Anderson. Main industry the cutting and milling of timber. Some fifteen saw-mills in the county. General region described in Chap. IX.

SHADY GROVE.—Post-office. Small settlement in northern part of Taylor County, near the line of Madison.

SHARP'S FERRY.—Steamboat-landing on Ocklawaha River, 114 miles above its mouth.

SHELL BANK.—Steamboat-landing on the St. Johns River, 193 miles above Jacksonville.

SHOAL RIVER.—Flows from Walton County westward into Santa Rosa, where it empties into the Yellow River, which empties into Pensacola Bay. Region of West Florida, described in Chap. IX.

SILVER SPRING.—Post-office. The famous spring in Marion County, nine miles from the Ocklawaha River, into which the Silver Spring Run—itself a river formed by the waters of Silver Spring—empties, 100 miles above the mouth of the Ocklawaha. Settlement and considerable trading-point. For description of Spring, see Chap. II. It is in the region described in Chap. VIII.

SOPCHOPPY.—Post-office. Settlement in the northwest corner of Wakulla County, near the Ocklockonee River, and near the line of Leon County.

SPRINGHILL.—Settlement in Hernando County, a short distance west of Brooksville, which is a relay-station fifty miles above Tampa, on the hack-line from Gainesville to Tampa.

STARKE.—Post-office. Village of some 250 inhabitants. Station on the Atlantic, Gulf and West India Transit Company's (formerly "The Florida") Railroad, 73 miles from Fernandina, 81 miles from Cedar Keys. In Bradford County, near the line of Clay.

STARK'S LANDING.—A landing on the Ocklawaha River, 155 miles above its mouth, in Sumter County, near the line of Marion.

ST. AUGUSTINE.—St. Johns County. See full description in Chap. III.

STEINHATCHEE RIVER.—See ISTEEN HATCHEE RIVER.

ST. JOHNS COUNTY.—County-site, St. Augustine. The county lying next south of Duval, bounded on the west by the St. Johns River, part of Putnam County, and Dunn's Lake, on the east by the Atlantic, and south by Volusia County. Its main industries centre at St. Augustine; which see, in Chap. III. It is sparsely inhabited; the land is mostly flat and sandy, with occasional hammocks.

ST. JOHNS RIVER.—Commences somewhere near the centre of Brevard County, and runs north through Brevard, between Orange on the west and Volusia on the east; thence between part of Marion on the west and of Putnam on the east; thence through part of Putnam; thence between St. Johns on the east and Clay on the west; thence through Duval as far as to Jacksonville, where it turns abruptly to the east and runs in that direction to where it empties into the Atlantic 25 miles from Jacksonville; a course of about 350 miles. See Chap VII. for full description.

ST. JOSEPHS.—Small settlement on the eastern shore of St. Joseph's Bay, in Calhoun County, West Florida.

ST. LUCIE SOUND or RIVER.—A name given to Indian River along that portion of it which skirts the southeastern edge of Brevard County. See Chap. X.

ST. MARKS.—Post-office. Terminus of St. Marks branch of Jacksonville, Pensacola and Mobile Railroad, said branch running from Tallahassee to St. Marks, 20 miles. Once a prosperous town and brisk shipping-port for the cotton raised in the rich hill-counties to the north of it; but now a small village. It is in Wakulla County, on St. Marks River a short distance from its mouth, at the head of Appalachee Bay. It figures as Appalachee in the early times of the Spanish occupation. See Chap. VI.

ST. MARKS RIVER.—Is thought to be the reappearance of Lake Miccosukee, which, after narrowing, disappears in the earth. It runs southwest between Jefferson County on the east and Leon and Wakulla on the west, and empties into Appalachee Bay. It has a "Natural Bridge,"—*i.e.*, disappears under-ground and reappears. This is not far from Newport. It is navigable for small craft as far up as Newport, some 8 or 10 miles. Its waters abound in fish.

ST. MARY'S RIVER.—Forms part of the boundary-line between Georgia and Florida, running along the northern edges of Baker and Nassau Counties, and emptying into Cumberland Sound near Fernandina.

SUWANNEE COUNTY.—County-site, Live Oak. It is crossed by the Jacksonville, Pensacola and Mobile Railroad from east to west, and has the Suwannee River along its entire western edge, which is navigable as far as to Troy, in the southeastern portion of the county. Industries mostly agricultural, but beginnings are being made in fruit-culture and raising cattle. Land pine and hammock; pine mostly sandy, but often mixed with clay, or having clay subsoil. Has marls, shell-beds, and white clay. In centre of county occurs a white stone, soft when dug, but hardening on exposure, which has been successfully used for furnaces and chimney-backs. The southern and western part of the county is a limestone formation, and the streams here sink into the earth. Well timbered with pine. In region described in Chap. VIII.

SUWANNEE RIVER.—Flows from Southern Georgia south between Hamilton, Suwannee, Alachua, and Levy Counties on the east, and Madison and Lafayette Counties on the west, and empties into the Gulf of Mexico a few miles above Cedar Keys. Navigable for small river-steamers as far up as Troy, in the southeast part of Suwannee County.

SUWANNEE SHOALS.—Post-office. Small settlement in northwest of Columbia County, near the line of Hamilton.

TALLAHASSEE.—County-site of Leon County, and capital of Florida. See Chap. VI.

TAMPA.—Post-office. County-site of Hillsboro' County. An important town at the mouth of Hillsboro' River, on Hillsboro' Bay, a name given to the inner bight of Tampa Bay. Terminus of tri-weekly hack-line from Gainesville. Touched weekly by steamers from Cedar Keys. See "Gulf Coast," Chap. V.

TAYLOR COUNTY.—Lies south of Madison, east of Jefferson, and west of Lafayette Counties, and has the Gulf on the south, with coast reaching from the mouth of the Steinhatchee River to the mouth of the Aucilla. Sparsely inhabited. Good cattle-range. Agricultural products, cotton (both long and short), corn, sugar-cane, peas, peanuts, and sweet potatoes. Wild pine land from one to two dollars an acre. Improved land from two to five dollars an acre. Land mostly good pine and hammock. Well timbered with yellow pine. Has several mineral springs, but unimproved, and only locally visited by persons who camp out. These are sulphur and chalyb-

eate. Several fisheries along the Gulf coast, where large quantities of mullet and red-fish are caught.

TEMPLE.—Station on the Atlantic, Gulf and West India Transit Company's (formerly "The Florida") Railroad, 78 miles from Fernandina, 76 miles from Cedar Keys.

TITUSVILLE.—Post-office. Settlement in Volusia County, on the west bank of Indian River, near the Indian River end of the projected canal between that water and Lake Harney. At Titusville is a sanitarium, kept by Dr. Harris, formerly of Brunswick, Georgia. Region described under head of INDIAN RIVER, in latter part of Chap. VII.

TOCOI.—Post-office. In St. Johns County. Landing on the east bank of the St. Johns River, 52 miles above Jacksonville. Passengers here take steam-cars for St. Augustine, 15 miles distant. See Chap. VII.

TOLOGIE RIVER.—Flows south through the northeast part of Liberty County, and empties into the Ocklockony.

TSALO PAPKO HATCHEE RIVER.—A short stream in Manatee County; flows southwest into Charlotte Harbor, Gulf coast. See Chap. V.

UCHEE ANNA.—Post-office. One of the Scotch settlements in the Uchee Valley, of Walton County, West Florida. See Chap. IX.

VALAMBROSA.—Small settlement near the Choctawhatchee River, in Washington County, West Florida.

VERNON.—Post office. County-site of Washington County, West Florida. Village on Holmes Creek, a considerable stream, running through a fertile valley into the Choctawhatchee River. Vernon is on the projected extension of the Jacksonville, Pensacola and Mobile Railroad from Chattahoochee, its present terminus, to the Pensacola and Mobile (Florida and Alabama) Railroad.

VOLUSIA.—Post-office. Steamboat-landing on east bank of St. Johns, 137 miles above Jacksonville, in Volusia County. See Chap. VII.

VOLUSIA COUNTY.—County-site, Enterprise. Has the Atlantic on the east, St. Johns and Putnam Counties on the north, Orange County (from which its entire western edge is separated by the St. Johns River) on the west, and Brevard on the south. The Hillsboro' and Halifax Rivers, and the northern part of Indian River, run along its eastern edge, separated from the Atlantic by a narrow strip of land. Region described under INDIAN RIVER, in latter part of Chap. VII.

WACAHOOTA.—Post-office. Settlement in the northwestern part of Marion County, near Flemington, and a few miles east of Bronson, which is a town on the Atlantic, Gulf and West India Transit Company's (formerly "The Florida") Railroad, 32 miles from Cedar Keys, 122 miles from Fernandina. In region described in Chap. VIII.

WACASASSA RIVER.—So called from corrupt Spanish and Indian *Waca*, a cow, and *Sassa*, a range: *i.e.* Cow-Range River. A short stream which flows south from the northern part of Levy

County, and empties into the Gulf of Mexico a few miles east of Cedar Keys. See Chap. V.

WACISSA RIVER.—A stream running from the central part of Jefferson County, south, and emptying into the Gulf of Mexico a few miles east of St. Marks, very near the mouth of the Aucilla River. It disappears under a "Natural Bridge" near the Gulf. Its waters and wooded banks offer fine fishing and hunting.

WAKULLA COUNTY.—Has Leon on the north, the St. Marks River and Jefferson County on the east, the Ocklockony and Liberty County on the west; and has a Gulf coast extending from the mouth of the former stream to that of the latter. Its principal settlements are St. Marks, Crawfordsville (the county-site), and Sopchoppy. Sparsely inhabited. Will produce good sugar-cane, sweet-potatoes, cotton, tobacco, and grapes. Mostly timbered with pine; but has several hammocks covered with the usual hammock-timber, to wit: Live and white oaks, sweet-gum, magnolia, hickory, white ash, cherry, red-bay, and in the swamps black and tupelo gums, cypress, maple, and occasionally poplar. Resources of the county much undeveloped, and languishing greatly since the war. Has fisheries on the Gulf coast. In this county is the celebrated Wakulla Spring, described in Chap. VI. It sends forth the Wakulla River, which flows southeast, and empties into the Gulf near St. Marks.

WAKULLA RIVER.—Formed by the outburst of Wakulla Spring, in Wakulla County. Flows southeast and empties into the Gulf near St. Marks. See above.

WAKULLA SPRING.—See just above. See also description in Chap. VI.

WALDO.—Post-office. Village on the Atlantic, Gulf and West India Transit Company's (formerly "The Florida") Railroad, 84 miles from Fernandina and 70 miles from Cedar Keys. Near Santa Fé Lake, and the Santa Fé, or New River. Here the projected (and partly graded) railway to Tampa joins the A. G. and W. I. T. Co.'s Railway. Has three churches, and private accommodations for travelers. In Alachua County, 12 miles from Gainesville. Region described in Chap. VIII.

WALTON COUNTY.—County-site, Uchee Anna, West Florida. See general description in Chap. IX.

WARRINGTON.—Post-office. Settlement in Escambia County, 7 miles below Pensacola, on Escambia Bay. See Chap. IX.

WASHINGTON COUNTY.—County-site, Vernon. In West Florida. See Chap. IX.

WEBBVILLE.—Settlement in Jackson County, a few miles northwest of Marianna.

WAUKEENAH.—Small settlement near the centre of Jefferson County.

WECAIWOOCHEE RIVER.—Short stream in Hernando County, flowing northwest and emptying into the Gulf at Bayport. See Chap. V.

WEELAUNEE.—Post-office. Small settlement near the centre of Jefferson County. Jefferson is in hill-country described in Chap. VI.

WEKIVA or EMANUELS.—Post-office. Settlement in the Sanford neighborhood on the Upper St. Johns. See Chap. VII.

WEKIVA RIVER.—Short stream in Orange County, flows north from near Orlando and empties into the St. Johns, 16 miles below Mellonville. Navigable for light craft to Clay Spring.

WELAKA.—Post-office. Landing on east bank St. Johns River, 100 miles above Jacksonville. In Putnam County, opposite mouth of Ocklawaha River. See Chap. VII.

WELLBORN.—Post-office. Station on Jacksonville, Pensacola and Mobile Railroad, 71 miles from Jacksonville, 94 miles from Tallahassee. Population about 250. 8 miles from here are the Suwannee White Sulphur Springs. See LOWER WHITE SPRINGS.

WHETSTONE'S.—Landing in Putnam County, on the St. Johns River, 65 miles above Jacksonville.

WITHLACOOCHEE RIVER.—Runs from Sumter County between Hernando on the south and west, Sumter on the east, and Marion and Levy on the north; first northward, then westward; and empties into the Gulf of Mexico, a few miles below Cedar Keys. See Chap. V.

WOODLAND.—Post-office.—Small settlement in Putnam County, at the northern end of Dunn's Lake.

WOOLSEY.—Settlement near Warrington, 8 miles below Pensacola, on Escambia Bay, in Escambia County, West Florida. See Chap. IX.

WYOMING.—A suburb of Jacksonville, Duval County. See Chap. III.

YELLOW RIVER.—Runs from Walton County southwest across parts of Walton and Santa Rosa Counties, and empties into Pensacola Bay near Milton. In West Florida. See Chap. IX.

THE END.