

JOHN JAMES AUDUBON

WRITINGS AND DRAWINGS

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lizards and young frogs. Their motions are generally quick and elegant, and, while pursuing small fishes, they run swiftly through the shallows, throwing up their wings. Twenty or thirty seen at once along the margins of a marsh or a river, while engaged in procuring their food, form a most agreeable sight. In autumn and early spring, they are fond of resorting to the ditches of the rice fields, not unfrequently in company with the Blue Herons. When, on being wounded in the wing one falls into the water, it swims off towards the nearest shore, and runs to hide itself by the side of some log, or towards a tree which if possible it climbs, ascending to its very top. When seized, they peck at you with great spirit, and are capable of inflicting a severe wound.

There is no difference between the sexes as to plumage, but the male is somewhat larger. When in good condition, its flesh is excellent eating, especially in early autumn, when it is generally very fat. Some may be seen for sale in the markets of New Orleans and other southern cities. They return southward from the Middle Districts early in October, but in the Carolinas they remain until the first frosts, when they all depart for the Floridas, where I found them during the whole winter in considerable numbers, associating with the Blue Herons.

The Brown Pelican

Pelecanus fuscus, LINN.

(PLATES 45, 46)

THE Brown Pelican, which is one of the most interesting of our American birds, is a constant resident in the Floridas, where it resorts to the Keys and the salt-water inlets, but never enters fresh-water streams, as the White Pelican is wont to do. It is rarely seen farther eastward than Cape Hatteras, but is found to the south far beyond the limits of the United States. Within the recollection of persons still living, its numbers have been considerably reduced, so much indeed that in the inner Bay of Charleston, where twenty or thirty years ago it was quite abundant, very few individuals are now seen, and these chiefly during a continuance of tempestuous weather.

There is a naked bar, a few miles distant from the main land, between Charleston and the mouth of the Santee, on which my friend JOHN BACHMAN some years ago saw a great number of these birds, of which he procured several; but at the present day, few are known to breed farther east than the salt-water inlets running parallel to the coast of Florida, forty or fifty miles south of St Augustine, where I for the first time met with this Pelican in considerable numbers.

My friend JOHN BULLOW, Esq. took me in his barge to visit the Halifax, which is a large inlet, and on which we soon reached an island where the Brown Pelicans had bred for a number of years, but where, to my great disappointment, none were then to be seen. The next morning, being ten or twelve miles farther down the stream, we entered another inlet, where I saw several dozens of these birds perched on the mangroves, and apparently sound asleep. I shot at them from a very short distance, and with my first barrel brought two to the water, but although many of them still remained looking at us, I could not send the contents of my second barrel to them, as the shot had unluckily been introduced into it before the powder. They all flew off one after another, and still worse, as the servants approached those which had fallen upon the water, they also flew away.

On arriving at the Keys of Florida, on board the Marion Revenue Cutter, I found the Pelicans pretty numerous. They became more abundant the farther south we proceeded, and I procured specimens at different places, but nowhere so many as at Key West. There you would see them flying within pistol-shot of the wharfs, the boys frequently trying to knock them down with stones, although I believe they rarely succeed in their efforts. The Marion lay at anchor several days at a short distance from this island, and close to another. Scarcely an hour of daylight passed without our having Pelicans around us, all engaged at their ordinary occupations, some fishing, some slumbering as it were on the bosom of the ocean, or on the branches of the mangroves. This place and all around for about forty miles, seemed to be favourite resorts of these birds; and as I had excellent opportunities of observing their habits, I consider myself qualified to present you with some account of them.



PLATE 44 Snowy Egret, *Egretta thula*



PLATE 45 Brown Pelican, *Pelecanus occidentalis*



PLATE 46 Brown Pelican, *Pelecanus occidentalis*



PLATE 47 Great Blue Heron, *Ardea herodias*

The flight of the Brown Pelican, though to appearance heavy, is remarkably well sustained, that bird being able not only to remain many hours at a time on wing, but also to mount to a great height in the air to perform its beautiful evolutions. Their ordinary manner of proceeding, either when single or in flocks, is by easy flappings and sailings alternating at distances of from twenty to thirty yards, when they glide along with great speed. They move in an undulated line, passing at one time high, at another low, over the water or land, for they do not deviate from their course on coming upon a key or a point of land. When the waves run high, you may see them "troughing," as the sailors say, or directing their course along the hollows. While on wing they draw in their head between their shoulders, stretch out their broad webbed feet to their whole extent, and proceed in perfect silence.

When the weather is calm, and a flood of light and heat is poured down upon nature by the genial sun, they are often, especially during the love season, seen rising in broad circles, flock after flock, until they attain a height of perhaps a mile, when they gracefully glide on constantly expanded wings, and course round each other, for an hour or more at a time, after which, in curious zigzags, and with remarkable velocity, they descend towards their beloved element, and settle on the water, on large sand-bars or on mangroves. It is interesting beyond description to observe flocks of Brown Pelicans thus going through their aerial evolutions.

Now, Reader, look at those birds standing on their strong column-like legs, on that burning sand-bar. How dexterously do they wield that great bill of theirs, as they trim their plumage! Now along each broad quill it passes, drawing it out and displaying its elasticity; and now with necks stretched to their full length, and heads elevated, they direct its point in search of the insects that are concealed along their necks and breasts. Now they droop their wings for a while, or stretch them alternately to their full extent; some slowly lie down on the sand, others remain standing, quietly draw their head over their broad shoulders, raise one of their feet, and placing their bill on their back, compose themselves to rest. There let them repose in peace. Had they alighted on the waters, you might have seen them, like a fleet at anchor, riding on the ever-

rolling billows as unconcernedly as if on shore. Had they perched on yon mangroves, they would have laid themselves flat on the branches, or spread their wings to the sun or the breeze, as Vultures are wont to do.

But see, the tide is advancing; the billows chase each other towards the shores; the mullets joyful and keen leap along the surface, as they fill the bays with their multitudes. The slumbers of the Pelicans are over; the drowsy birds shake their heads, stretch open their mandibles and pouch by way of yawning, expand their ample wings, and simultaneously soar away. Look at them as they fly over the bay; listen to the sound of the splash they make as they drive their open bills, like a pock-net, into the sea, to scoop up their prey; mark how they follow that shoal of porpoises, and snatch up the frightened fishes that strive to escape from them. Down they go, again and again. What voracious creatures they are!

The Brown Pelicans are as well aware of the time of each return of the tide, as the most watchful pilots. Though but a short time before they have been sound asleep, yet without bell or other warning, they suddenly open their eyelids, and all leave their roosts, the instant when the waters, which have themselves reposed for a while, resume their motion. The Pelicans possess a knowledge beyond this, and in a degree much surpassing that of man with reference to the same subject: they can judge with certainty of the changes of weather. Should you see them fishing all together, in retired bays, be assured, that a storm will burst forth that day; but if they pursue their finny prey far out at sea, the weather will be fine, and you also may launch your bark and go to the fishing. Indeed, most sea-birds possess the same kind of knowledge, as I have assured myself by repeated observation, in a degree corresponding to their necessities; and the best of all prognosticators of the weather, are the Wild Goose, the Gannet, the Lestris, and the Pelican.

This species procures its food on wing, and in a manner quite different from that of the White Pelican. A flock will leave their resting place, proceed over the waters in search of fish, and when a shoal is perceived, separate at once, when each, from an elevation of from fifteen to twenty-five feet, plunges in an oblique and somewhat winding direction,

spreading to the full stretch its lower mandible and pouch, as it reaches the water, and suddenly scoops up the object of its pursuit, immersing the head and neck, and sometimes the body, for an instant. It immediately swallows its prey, rises on wing, dashes on another fish, seizes and devours it, and thus continues, sometimes plunging eight or ten times in a few minutes, and always with unerring aim. When gorged, it rests on the water for a while, but if it has a brood, or a mate sitting on her eggs, it flies off at once towards them, no matter how heavily laden it may be. The generally received idea that Pelicans keep fish or water in their pouch, to convey them to their young, is quite erroneous. The water which enters the pouch when it is immersed, is immediately forced out between the partially closed mandibles, and the fish, unless larger than those on which they usually feed, is instantly swallowed, to be afterwards disgorged for the benefit of the young, either partially macerated, or whole, according to the age and size of the latter. Of all this I have satisfied myself, when within less than twenty yards of the birds as they were fishing; and I never saw them fly without the pouch being closely contracted towards the lower mandible. Indeed, although I now much regret that I did not make the experiment when I had the means of doing so, I doubt very much if a Pelican could fly at all with its burden so much out of trim, as a sailor would say.

They at times follow the porpoise, when that animal is in pursuit of prey, and as the fishes rise from the deep water towards the surface, come in cunningly for their share, falling upon the frightened shoal, and seizing one or more, which they instantly gobble up. But one of the most curious traits of the Pelican is, that it acts unwittingly as a sort of purveyor to the Gulls just as the Porpoise acts towards itself. The Black-headed Gull of WILSON, which is abundant along the coast of the Floridas in spring and summer, watches the motions of the Pelicans. The latter having plunged after a shoal of small fishes, of which it has caught a number at a time, in letting off the water from amongst them, sometimes allows a few to escape; but the Gull at that instant alights on the bill of the Pelican, or on its head, and seizes the fry at the moment they were perhaps congratulating themselves on their escape. This

every body on board the Marion observed as well as myself, while that vessel was at anchor in the beautiful harbour of Key West, so that it is not again necessary for me to lay before you a certificate with numerous signatures. To me such sights were always highly interesting, and I doubt if in the course of my endeavours to amuse you, I ever felt greater pleasure than I do at this moment, when, with my journal at my side, and the Gulls and Pelicans in my mind's eye as distinctly as I could wish, I ponder on the faculties which Nature has bestowed on animals which we merely consider as possessed of instinct. How little do we yet know of the operations of the Divine Power! On the occasions just mentioned, the Pelicans did not manifest the least anger towards the Gulls. It is said that the Frigate Pelican or Man-of-war Bird, forces the Brown Pelican to disgorge its food, but of this I never saw an instance; nor do I believe it to be the case, considering the great strength and powerful bill of the Pelican compared with those of the other bird. Indeed, if I had been told that when the Frigate Bird assails the Pelican, the latter opens its large pouch and swallows it entire, I might as soon have believed the one story as the other. But of this more anon, when we come to the habits of the bird in question.

On the ground this species is by no means so active, for it walks heavily, and when running, which it now and then does while in play, or during courtship, it looks extremely awkward, as it then stretches out its neck, partially extends its wings, and reels so that one might imagine it ready to fall at each step. If approached when wounded and on the water, it swims off with speed, and when overtaken, it suddenly turns about, opens its large bill, snaps it violently several times in succession, causing it to emit a smart noise in the manner of owls, strikes at you, and bites very severely. While I was at Mr BULLOW's, his Negro hunter waded after one whose wing had been broken. The Pelican could not be seized without danger, and I was surprised to see the hunter draw his butcher's knife, strike the long blade through the open pouch of the bird, hook it, as it were, by the lower mandible, and at one jerk swing it up into the air with extreme dexterity, after which he broke its neck and dragged it ashore.

The pouch measures from six to ten inches in depth,

according to the age of the bird after the first moult. The superb male whose portrait is before you, and which was selected from among a great number, had it about the last mentioned size, and capable of holding a gallon of water, were the mandibles kept horizontal. This membrane is dried and used for keeping snuff, gunpowder and shot. When fresh it may be extended so as to become quite thin and transparent, like a bladder.

This Pelican seldom seizes fish that are longer than its bill, and the size of those on which it ordinarily feeds is much smaller. Indeed, several which I examined, had in the stomach upwards of a hundred fishes, which were only from two to three inches in length. That organ is long, slender, and rather fleshy. In some I found a great number of live blue-coloured worms, measuring two and a half inches in length, and about the thickness of a crow-quill. The gut is about the size of a swan's quill, and from ten to twelve feet in length, according to the age of the individual.

At all periods the Brown Pelican keeps in flocks, seldom amounting to more than fifty or sixty individuals of both sexes, and of different ages. At the approach of the pairing time, or about the middle of April, the old males and females separate from the rest, and remove to the inner keys or to large estuaries, well furnished with mangroves of goodly size. The young birds, which are much more numerous, remain along the shores of the open sea, unless during heavy gales.

Now let us watch the full grown birds. Some skirmishes have taken place, and the stronger males, by dint of loud snappings of their bill, some hard tugs of the neck and head, and some heavy beats with their wings, have driven away the weaker, which content themselves with less prized belles. The females, although quiet and gentle on ordinary occasions, are more courageous than the males, who, however, are assiduous in their attentions, assist in forming the nest, feed their mates while sitting, and even share the labour of incubation with them. Now see the mated birds, like the citizens of a newly laid out town in some part of our western country, breaking the dry sticks from the trees, and conveying them in their bills to yon mangrove isle. You see they place all their mansions on the south-west side, as if to enjoy the benefit of all the heat of

that sultry climate. Myriads of mosquitoes buzz around them, and alight on the naked parts of their body, but this seems to give them no concern. Stick after stick is laid, one crossing another, until a strong platform is constructed. Now roots and withered plants are brought, with which a basin is formed for the eggs. Not a nest, you observe, is placed very low; the birds prefer the tops of the mangroves, although they do not care how many nests are on one tree, or how near the trees are to each other. The eggs, of which there are never more than three, are rather elliptical, and average three inches and one-eighth in length, by two inches and one-eighth in their greatest breadth. The shell is thick and rather rough, of a pure white colour, with a few faint streaks of a rosy tint, and blotches of a very pale hue, from the centre towards the crown of the egg.

The young are at first covered with cream-coloured down, and have the bill and feet disproportionately large. They are fed with great care, and so abundantly, that the refuse of their food, putrid and disgusting, lies in great quantities round them; but neither young nor old regard this, however offensive it may be to you. As the former grow the latter bring larger fish to them. At first the food is dropped in a well macerated state into their extended throats; afterwards the fish is given to them entire; and finally the parent birds merely place it on the edge of the nest. The young increase in size at a surprising rate. When half fledged they seem a mere mass of fat, their partially indurated bill has acquired considerable length, their wings droop by their sides, and they would be utterly unable to walk. The Vultures at this period often fall upon them and devour them in the absence of their parents. The Indians also carry them off in considerable numbers; and farther eastward, on the Halifax river, for instance, the Negroes kill all they can find, to make gombo soup of them during winter. The crows, less powerful, but quite as cunning, suck the eggs; and many a young one which has accidentally fallen from the nest, is sure to be picked up by some quadruped, or devoured by the Shark or Balacuda. When extensive depredations have thus been made, the birds abandon their breeding places, and do not return to them. The Pelicans in fact are, year after year, retiring from the vicinity of man, and although

they afford but very unsavoury food at any period of their lives, will yet be hunted beyond the range of civilization, just as our best of all game, the Wild Turkey, is now, until to meet with them the student of nature will have to sail round Terra del Fuego, while he may be obliged to travel to the Rocky Mountains before he find the other bird. Should you approach a settlement of the Pelicans and fire a few shots at them, they all abandon the place, and leave their eggs or young entirely at your disposal.

At all seasons, the Negroes of the plantations on the eastern coast of the Floridas lie in wait for the Pelicans. There, observe that fellow, who, with rusty musket, containing a tremendous charge of heavy shot, is concealed among the palmettoes, on the brink of a kind of embankment formed by the shelly sand. Now comes a flock of Pelicans, forcing their way against the breeze, unaware of the danger into which they rush, for there, a few yards apart, several Negroes crouch in readiness to fire; and let me tell you, good shots they are. Now a blast forces the birds along the shore; off goes the first gun, and down comes a Pelican; shot succeeds shot; and now the Negroes run up to gather the spoil. They skin the birds like so many racoons, cut off the head, wings and feet; and should you come this way next year, you may find these remains bleached in the sun. Towards night, the sable hunters carry off their booty, marching along in Indian file, and filling the air with their extemporaneous songs. At home they perhaps salt, or perhaps smoke them; but in whatever way the Pelicans are prepared, they are esteemed good food by the sons of Africa.

The Brown Pelican is a strong and tough bird, although not so weighty as the white species. Its flesh is, in my opinion, always impure. It seems never satisfied with food, and it mutes so profusely, that not a spot of verdure can be seen on the originally glossy and deep-coloured mangroves on which it nestles; and I must say that, much as I admire it in some respects, I should be sorry to keep it near me as a pet.

During winter, when the mullets, a favourite fish with the Brown Pelican, as it is with me, retires into deeper water, these birds advance farther to seaward, and may be seen over all parts of the Gulf of Mexico, and between the Florida Reefs

and the opposite isles, especially during fine weather. They are very sensible to cold, and in this respect are tender birds. Now and then, at this season, they are seen on Lake Borgne and over Lake Pontchartrain, but never on the Mississippi beyond the rise of the tides, the space higher up being abandoned to the White Pelican. The keenness of their sight is probably equal to that of any hawk, and their hearing is also very acute. They are extremely silent birds, but when excited they utter a loud and rough grunt, which is far from musical. The young take two years to attain maturity. Several persons in the Floridas assured me that the Brown Pelicans breed at all seasons of the year; but as I observed nothing to countenance such an idea, I would give it as my opinion that they raise only one brood in the season.

Their bodies are greatly inflated by large air-cells; their bones, though strong, are very light; and they are tough to kill.

The Great White Heron

Ardea occidentalis

(PLATE 47)

I AM now about to present you with an account of the habits of the largest species of the Heron tribe hitherto found in the United States, and which is indeed remarkable not only for its great size, but also for the pure white of its plumage at every period of its life. Writers who have subdivided the family, and stated that none of the True Herons are white, will doubtless be startled when they, for the first time, look at my plate of this bird. I think, however, that our endeavours to discover the natural arrangement of things cannot be uniformly successful, and it is clear that he only who has studied *all* can have much chance of disposing all according to their relations.

On the 24th of April 1832, I landed on Indian Key in Florida, and immediately after formed an acquaintance with Mr EGAN, of whom I have already several times spoken. He it was who first gave me notice of the species which forms the

no means easy; but as I knew that it would please my wife and my then very young children, I persevered. Cutting off the tip of the wounded wing, I turned it loose in the garden. Although at first extremely shy, it gradually became accustomed to the servants, who fed it abundantly, and at length proved so gentle as to come to my wife's call, to receive bread from her hand. "Trumpeter," as we named our bird, in accordance with the general practice of those who were in the habit of shooting this species, now assumed a character which until then had been unexpected, and laying aside his timidity became so bold at times as to give chase to my favourite Wild Turkey Cock, my dogs, children, and servants. Whenever the gates of our yard happened to be opened, he would at once make for the Ohio, and it was not without difficulty that he was driven home again. On one occasion, he was absent a whole night, and I thought he had fairly left us; but intimation came of his having travelled to a pond not far distant. Accompanied by my miller and six or seven of my servants, I betook myself to the pond, and there saw our Swan swimming buoyantly about as if in defiance of us all. It was not without a great deal of trouble that we at length succeeded in driving it ashore. Pet birds, good Reader, no matter of what species they are, seldom pass their lives in accordance with the wishes of their possessors; in the course of a dark and rainy night, one of the servants having left the gate open, Trumpeter made his escape, and was never again heard of.

With the manners of this species during the breeding season, its mode of constructing its nest, the number of its eggs, and the appearance of its young, I am utterly unacquainted. The young bird represented in the plate was shot near New Orleans, on the 16th of December 1822. A figure of the adult male you will find in Plate 55; and should I ever have opportunities of studying the habits of this noble bird, believe me I shall have much pleasure in laying before you the results. Dr RICHARDSON informs us that it "is the most common Swan in the interior of the Fur Countries. It breeds as far south as lat. 61°, but principally within the arctic circle, and in its migrations generally precedes the Geese a few days."

As the adult bird will be subsequently described, I judge it unnecessary at present to enter into a full detail of the ex-

ternal form and characters of the species, and will therefore confine myself to the colours and proportions of the individual represented.

American Flamingo

Phænicopterus ruber, LINN.

(PLATE 53)

ON THE 7th of May 1832, while sailing from Indian Key, one of the numerous islets that skirt the south-eastern coast of the Peninsula of Florida, I for the first time saw a flock of Flamingoes. It was on the afternoon of one of those sultry days which, in that portion of the country, exhibit towards evening the most glorious effulgence that can be conceived. The sun, now far advanced toward the horizon, still shone with full splendour, the ocean around glittered in its quiet beauty, and the light fleecy clouds that here and there spotted the heavens, seemed flakes of snow margined with gold. Our bark was propelled almost as if by magic, for scarcely was a ripple raised by her bows as we moved in silence. Far away to seaward we spied a flock of Flamingoes advancing in "Indian line," with well-spread wings, outstretched necks, and long legs directed backwards. Ah! Reader, could you but know the emotions that then agitated my breast! I thought I had now reached the height of all my expectations, for my voyage to the Floridas was undertaken in a great measure for the purpose of studying these lovely birds in their own beautiful islands. I followed them with my eyes, watching as it were every beat of their wings; and as they were rapidly advancing towards us, Captain DAY, who was aware of my anxiety to procure some, had every man stowed away out of sight and our gunners in readiness. The pilot, Mr EGAN, proposed to offer the first taste of his "groceries" to the leader of the band. As I have more than once told you, he was a first-rate shot, and had already killed many Flamingoes. The birds were now, as I thought, within a hundred and fifty yards; when suddenly, to our extreme disappointment, their chief veered away, and was of course followed by the rest. Mr

EGAN, however, assured us that they would fly round the Key, and alight not far from us, in less than ten minutes, which in fact they did, although to me these minutes seemed almost hours. "Now they come," said the pilot, "keep low." This we did; but, alas! the Flamingoes were all, as I suppose, very old and experienced birds, with the exception of one, for on turning round the lower end of the Key, they spied our boat again, sailed away without flapping their wings, and alighted about four hundred yards from us, and upwards of one hundred from the shore, on a "soap flat" of vast extent, where neither boat nor man could approach them. I however watched their motions until dusk, when we reluctantly left the spot and advanced toward Indian Key. Mr LOGAN then told me that these birds habitually returned to their feeding-grounds toward evening, that they fed during the greater part of the night, and were much more nocturnal in their habits than any of the Heron tribe.

When I reached Key West, my first inquiries, addressed to Dr BENJAMIN STROBEL, had reference to the Flamingoes, and I felt gratified by learning that he had killed a good number of them, and that he would assist us in procuring some. As on that Key they are fond of resorting to the shallow ponds formerly kept there as reservoirs of water, for the purpose of making salt, we visited them at different times, but always without success; and, although I saw a great number of them in the course of my stay in that country, I cannot even at this moment boast of having had the satisfaction of shooting a single individual.

A very few of these birds have been known to proceed eastward of the Floridas beyond Charleston in South Carolina, and some have been procured there within eight or ten years back. None have ever been observed about the mouths of the Mississippi; and to my great surprise I did not meet with any in the course of my voyage to the Texas, where, indeed, I was assured they had never been seen, at least as far as Galveston Island. The western coast of Florida, and some portions of that of Alabama, in the neighbourhood of Pensacola, are the parts to which they mostly resort; but they are said to be there always extremely shy, and can be procured only by way-laying them in the vicinity of their feeding-grounds toward

evening, when, on one occasion, Dr STROBEL shot several in the course of a few hours. Dr LEITNER also procured some in the course of his botanical excursions along the western coast of the Floridas, where he was at last murdered by some party of Seminole Indians, at the time of our last disastrous war with those children of the desert.

Flamingoes, as I am informed, are abundant on the Island of Cuba, more especially on the southern side of some of its shores, and where many islets at some distance from the mainland afford them ample protection. In their flight they resemble Ibises, and they usually move in lines, with the neck and legs fully extended, alternately flapping their wings for twenty or thirty yards and sailing over a like space. Before alighting they generally sail round the place for several minutes, when their glowing tints become most conspicuous. They very rarely alight on the shore itself, unless, as I am told, during the breeding season, but usually in the water, and on shallow banks, whether of mud or of sand, from which however they often wade to the shores. Their walk is stately and slow, and their cautiousness extreme, so that it is very difficult to approach them, as their great height enables them to see and watch the movements of their various enemies at a distance. When travelling over the water, they rarely fly at a greater height than eight or ten feet; but when passing over the land, no matter how short the distance may be, they, as well as Ibises and Herons, advance at a considerable elevation. I well remember that on one occasion, when near Key West, I saw one of them flying directly towards a small hummock of mangroves, to which I was near, and towards which I made, in full expectation of having a fine shot. When the bird came within a hundred and twenty yards, it rose obliquely, and when directly over my head, was almost as far off. I fired, but with no other effect than that of altering its course, and inducing it to rise still higher. It continued to fly at this elevation until nearly half a mile off, when it sailed downwards, and resumed its wonted low flight.

Although my friends Dr JOHN BACHMAN, Dr WILSON, and WILLIAM KUNHARDT, Esq. of Charleston, have been at considerable trouble in endeavouring to procure accounts of the nidification of these birds and their habits during the



PLATE 52 Great Egret, *Casmerodius albus*



PLATE 53 Greater Flamingo, *Phoenicopterus ruber*



PLATE 50 Anhinga, *Anhinga ankinga*



PLATE 51 Anhinga, *Anhinga ankinga*

breeding season, and although they, as well as myself, have made many inquiries by letter respecting them, of persons residing in Cuba, all that has been transmitted to me has proved of little interest. I am not however the less obliged by the kind intentions of these individuals, one of whom, A. MALLORY, Esq. thus writes to Captain CROFT.

"Capt. CROFT,

Matanzas, April 20, 1837.

DEAR SIR,—“I have made inquiry of several of the fishermen, and salt-rakers, who frequent the keys to the windward of this place, in regard to the habits of the Flamingo, and have obtained the following information, which will be found, I believe, pretty correct: *1st*, They build upon nearly all the Keys to the windward, the nearest of which is called Collocino Lignas. *2dly*, It builds upon the ground. *3dly*, The nest is an irregular mass of earth dug in the salt ponds, and entirely surrounded by water. It is scooped up from the immediate vicinity to the height of two or three feet, and is of course hollow at the top. There is no lining, nor any thing but the bare earth. *4thly*, The number of the eggs is almost always two. When there is one, there has probably been some accident. The time of incubation is not known. The egg is white, and near the size of the Goose's egg. On scraping the shell, it has a bluish tinge. *5thly*, The colour of the young is nearly white, and it does not attain the full scarlet colour until two years old. *6thly*, When the young first leave the nest, they take to the water, and do not walk for about a fortnight, as their feet are almost as tender as jelly. I do not think it easy to procure an entire nest; but I am promised some of the eggs, this being the time to procure them. Very truly your obedient servant,

A. MALLORY.”

Another communication is as follows:—“The Flamingo is a kind of bird that lives in lagoons having a communication with the sea. This bird makes its nest on the shore of the same lagoon, with the mud which it heaps up to beyond the level of the water. Its eggs are about the size of those of a goose; it only lays two or three at a time, which are hatched about the end of May. The young when they break the shell have no

feathers, only a kind of cottony down which covers them. They immediately betake themselves to the water to harden their feet. They take from two to three months before their feathers are long enough to enable them to fly. The first year they are rose-coloured, and in the second they obtain their natural colour, being all scarlet; half their bill is black, and the points of the wings are all black; the eyes entirely blue. Its flesh is savoury, and its tongue is pure fat. It is easily tamed, and feeds on rice, maize-meal, &c. Its body is about a yard high, and the neck about half as much. The breadth of the nest, with little difference, is that of the crown of a hat. The way in which the female covers the eggs is by standing in the water on one foot and supporting its body on the nest. This bird always rests in a lagoon, supporting itself on one leg alternately; and it is to be observed that it always stands with its front to the wind.”

An egg, presented to me by Dr BACHMAN, and of which two were found in the nest, measures three inches and three-eighths in length, two inches and one-eighth in breadth, and is thus of an elongated form. The shell is thick, rather rough or granulated, and pure white externally, but of a bluish tint when the surface is scraped off.

The following description is taken from specimens sent to me by JEAN CHARTRAND, Esq. from Cuba, and preserved in spirits, together with several dried skins.

