length; gall-bladder 8 twelfths long, $2\frac{1}{2}$ twelfths in breadth. Intestine 2 feet $9\frac{1}{2}$ inches long, $\frac{3}{4}$ twelfth wide in the duodenal portion, gradually diminishing to $\frac{1}{2}$ twelfth; cœcum a small knob nearly 1 twelfth long, and of the same breadth; rectum $2\frac{1}{2}$ inches long, and 2 twelfths in width; cloaca globular, $\frac{1}{2}$ inch in diameter. It forms 20 folds.

Trachea 6 inches long, 1 twelfth in breadth; its rings 170, and 4 dimidiate. Bronchi very wide, of 12 rings.

GREEN HERON.

†*ARDEA VIRESCENS*, Linn.

PLATE CCCLXVII.—MALE AND YOUNG.

This species is more generally known than any of our Herons, it being very extensively dispersed in spring, summer, and early autumn. It ranges along our many rivers to great distances from the sea, being common on the Missouri and its branches, from which it spreads to all such localities as are favourable to its habits. To the north of the United States, however, it is very seldom seen, it being of rare occurrence even in Nova Scotia. At the approach of winter it retires to the Floridas and Lower Louisiana, where individuals, however, reside all the year, and many remove southward beyond the limits of our country. I have observed their return in early spring, when arriving in flocks of from twenty to fifty individuals. They would plunge downwards from their elevated line of march, cutting various zigzags, until they would all simultaneously alight on the tops of the trees or bushes of some swampy place, or on the borders of miry ponds. These halts took place pretty regularly about an hour after sun-rise. The day was occupied by them, as well as by some other species, especially the Blue, the Yellow-crowned, and Night Herons, all of which at this period travelled eastward, in resting, cleansing their bodies, and searching for food. When the sun approached the western horizon, they would at once ascend in the air, arrange their lines, and commence their flight, which, I have no doubt, continued all night. You may therefore, good reader, conclude that Herons are not only diurnal birds when feeding, but also able to travel at night when

the powerful impulse of migration urges them from one portion of the country to another. But although on their northward journey, the Green Herons travel in flocks, it is a curious fact, that, unlike our smaller Waders, Ducks, Geese, and Cranes, they usually return southward at the approach of winter singly or in very small flocks.

Stagnant pools or bayous, and the margins of the most limpid streams, are alike resorted to by this species for the purpose of procuring food. It is little alarmed by the presence of man, and you may often see it close to houses on the mill-dams, or even raising its brood on the trees of gardens. This is often the case in the suburbs of Charleston in South Carolina, where I have seen several nests on the same live oak in the grounds of the Honourable JOEL R. POINSETT, as well as in those of other cities of the Southern States. The gentleness, or as many would say, the stupidity of this bird is truly remarkable, for it will at times allow you to approach within a few paces, looking as unconcernedly upon you as the House Sparrow is wont to do in the streets of London.

Although they not unfrequently breed in single pairs, they also associate, not only forming communities of their own kind, but mingling with the larger species of their tribe, and with the Boat-tailed Grakles, and other birds. On the 23d May, 1831, I found two nests of the Green Heron on one of the Florida Keys, close to some of *Ardea rufescens* and *A. cærulea*. Now and then a dozen or more of their nests are found on a bunch of vines in the middle of a pond, and placed within two or three feet of the water; while in other cases, they place their tenements on the highest branches of tall cypresses. In our Middle Districts, however, and especially at some distance from the sea, it is very seldom that more than a single nest is seen in one locality.

The nest of the Green Heron, like that of almost every other species of the tribe, is flat and composed of sticks, loosely arranged, among which are sometimes green twigs with their leaves still attached. The eggs are three or four, seldom more, an inch and three-eighths in length, an inch and one-eighth in breadth, nearly equally rounded at both ends, and of a delicate sea-green colour. According to the locality, they are deposited from the middle of March to the beginning of June. In the Southern States, two broods are frequently reared, but in the Middle and Northern Districts, seldom more than one.

The young, which are at first of a deep livid colour, sparingly covered here and there, and more especially about the head, with longish tufts of soft hair-like down, of a brownish colour, remain in the nest until nearly able to fly; but if disturbed, at once leave their couch, and scramble along

the branches, clinging to them with their feet, so as not to be easily drawn off.

After the spring migration is over, the flight of this species is rather feeble, and when they are passing from one spot to another, they frequently use a stronger flap of their wings at intervals. On such occasions, they scarcely contract their neck; but when travelling to a considerable distance, they draw it in like all other species of the tribe, and advance with regular and firm movements of their wings. When alighting to rest, they come down with such force, that their passage causes a rustling sound like that produced by birds of prey when pouncing on their quarry, and on perching they stretch up their neck and jerk their tail repeatedly for some time, as they are also wont to do on any other occasion when alarmed.

The Green Herons feed all day long, but, as I think, rarely at night. Their food consists of frogs, fishes, snails, tadpoles, water-lizards, crabs, and small quadrupeds, all of which they procure without much exertion, they being abundant in the places to which they usually resort. Their gait is light, but firm. During the love-season they exhibit many curious gestures, erecting all the feathers of their neck, swelling their throat, and uttering a rough guttural note like *qua, qua*, several times repeated by the male as he struts before the female. This note is also usually emitted when they are started, but when fairly on wing they proceed in silence. The flesh of this species affords tolerable eating, and Green Herons are not unfrequently seen in the markets of our southern cities, especially of New Orleans.

The young attain their full beauty in the second spring, but continue to grow for at least another year. The changes which they exhibit, although by no means so remarkable as those of *Ardea rufescens* and *A. cærulea*, have proved sufficient to cause mistakes among authors who had nothing but skins on which to found their decisions. I have given figures of an adult in full plumage, and of an immature bird, to enable you to judge how carefully *Nature* ought to be studied to enable you to keep free of mistakes.

GREEN HERON, *Ardea virescens*, Wils. Amer. Orn., vol. viii. p. 97.

ARDEA VIRESCENS, Bonap. Syn., p. 307.

GREEN HERON, Nutt. Man., vol. ii. p. 63.

GREEN HERON, *Ardea virescens*, Aud. Orn. Biog., vol. iv. p. 274.

Male, 17 $\frac{3}{4}$, 27. Female, 17, 25.

Resident in the Floridas and along the Gulf of Mexico to Texas. In spring and summer disperses over the whole country as far as Maine, and up the Missouri. Returns southward at the approach of winter. Very common.

Adult Male.

Bill longer than the head, straight, rather slender, tapering to a very acute point, higher than broad at the base, compressed towards the end. Upper mandible with its dorsal line very slightly arched, the ridge broad and rather flattened at the base, narrowed towards the end, the sides sloping, erect towards the edges, which are sharp and direct, the tip acute. Nasal depression long, with a groove extending to near the point; nostrils basal, linear, longitudinal. Lower mandible with the angle very long and narrow, the dorsal line sloping upwards, the sides sloping outwards and nearly flat, the edges sharp, the tip acuminate.

Head oblong, much compressed. Neck long. Body very slender, much compressed. Feet rather long, moderately stout; tibia bare for about an inch; tarsi of moderate length, covered with hexagonal scales, of which some of the anterior are much larger and scutelliform. Toes rather long and slender, with numerous scutella above; hind toe stout, second and fourth nearly equal, third much longer; claws rather long, slender, arched, compressed, acute, that of middle toe expanded and serrated on the inner edge.

A large space extending from the bill to behind the eye bare. Plumage very soft, loose, and blended; feathers of the hind head elongated and erectile, as are those of the neck generally, but especially of its hind and lower anterior parts; of the fore part of the back much elongated and acuminate; scapulars very large. Wings short, very broad, rounded; second and third quills equal and longest, first and fourth equal and but slightly shorter, the rest slowly graduated; secondaries broad and rounded. Tail very short, even, of twelve broad soft feathers.

Bill greenish-black above, bright yellow beneath. Iris and bare part about the eye also bright yellow. Feet greenish-yellow, claws dusky. Upper part of the head and nape glossy deep green. Neck purplish-red, tinged with lilac behind, and having anteriorly a longitudinal band of white, spotted with dusky-brown; a similar white band along the base of lower mandible to beyond the eye. Elongated feathers of the back greyish-green, in some lights bluish-grey, with the shafts bluish-white; the rest of the back similar; the upper tail-coverts and tail bluish green; the lateral feathers slightly margined with white. Scapulars, wing-coverts, and inner secondaries, deep glossy green, bordered with yellowish-white; primary quills and outer secondaries greyish-blue, tinged with green. Lower parts pale purplish-brown, tinged with grey; axillary feathers purplish-grey, as are some of the lower wing-coverts; lower tail-coverts greyish-white.

Length to end of tail $17\frac{3}{4}$ inches, to end of wings $17\frac{1}{2}$, to end of claws 24, to carpal joint $11\frac{1}{4}$; extent of wings 27; wing from flexure $7\frac{5}{8}$; tail $3\frac{3}{4}$; bill along the ridge $2\frac{1}{4}$, along the edge of lower mandible $3\frac{1}{4}$; bare part of tibia

$\frac{10}{12}$; tarsus 2; hind toe $\frac{7}{8}$, its claw $\frac{1}{2}$; middle toe $1\frac{1}{8}$, its claw $\frac{2\frac{1}{2}}{8}$; inner toe $1\frac{3}{8}$, its claw $\frac{1}{4}$; outer toe $1\frac{3}{8}$ its claw $\frac{1}{4}$. Weight $7\frac{1}{2}$ oz.

The female is considerably smaller, but otherwise similar.

Length to end of tail 17 inches, to end of wings 17, to end of claws $21\frac{3}{4}$; extent of wings 25. Weight $6\frac{1}{4}$ oz.

Young fully fledged.

The bill dull greyish-green, the lower mandible lighter; bare space around the eye greenish-blue, with the exception of a streak of yellow at the upper part. Iris yellow. Feet greenish-yellow, duller than in the adult. The hind neck light brownish-red, the fore part of the neck and all the under parts white, longitudinally streaked with brownish-red, some of the long feathers on the sides of the neck also white. At this age there are no elongated feathers on the back, which is greenish-blue, as well as the scapulars and tail-feathers. Wing as in the adult, but the smaller feathers on its anterior part more red, the coverts with a small triangular tip of white, and the quills narrowly tipped and margined with the same.

Length to end of tail $17\frac{1}{2}$ inches, to end of wings 17, to end of claws 23; extent of wings 25. Weight $6\frac{1}{2}$ oz.

The roof of the mouth is anteriorly a little concave, with a median prominent line; the palate convex; the lower jaw with a kind of joint about an inch from the base, its intercrural membrane or skin very extensile. The tongue is $1\frac{7}{12}$ inches long, very slender, trigonal, emarginate at the base, with a groove along the middle, and pointed. Posterior apertures of nares linear, $\frac{1}{2}$ inch long. Oesophagus, *a*, *b*, *c*, 10 inches long, its walls delicate, its diameter at the upper part $1\frac{1}{4}$ inches, gradually contracting to $\frac{1}{2}$ inch at its entrance into the thorax. The lobes of the liver unequal, the right 1 inch 5 twelfths long, the left 11 twelfths; the gall-bladder large, 7 twelfths long. The stomach, *c* *d*, is membranous, of an oblong form, 9 twelfths long, 10 twelfths in breadth; its tendons elliptical, 5 twelfths by

3 twelfths. The proventriculus, *c c*, 9 twelfths long, with a complete belt of oblong glandules. There is a small roundish pyloric lobe *e*. Intestine, *f, g*, 2 feet 11 inches long, its diameter uniform, 1 twelfth, or about the thickness of a Crow's quill. Rectum enlarged to 3 twelfths, and $3\frac{1}{4}$ inches long, its cœcal extremity rounded, and only 1 twelfth long.

The trachea is $7\frac{1}{4}$ inches long, of nearly uniform diameter, averaging 2 twelfths; the rings 160, nearly circular and ossified. The bronchial half-rings about 18. The lateral muscles are very inconspicuous; sterno-tracheals, and a pair of inferior laryngeal, going to the first bronchial rings.

The Herons generally differ from the other Grallæ in having the œsophagus much wider, and similar to that of the fish-eating palmipedes; the stomach in a manner membranous, like that of the rapacious land-birds, without lateral muscles or strong epithelium; the intestine extremely slender, and the anterior extremity of the large intestine or rectum furnished with a single cœcum, in place of two, as in almost all other birds.

THE GREAT WHITE HERON.

+ARDEA OCCIDENTALIS, *Aud.*

PLATE CCCLXVIII.—MALE.

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. He it was who first gave me notice of the species which forms the subject of this article, and of which I cannot find any description. The next day after that of my

Green Heron

Adult Male & Young in Spring

Audubon, John James. 1843. "Green Heron, *Ardea virescens*, Linn. [Pl. 367]." *The birds of America : from drawings made in the United States and their territories* 6, 105–110. <https://doi.org/10.5962/p.319481>.

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