

SCOLOPACEOUS COURLAN.

+ARAMUS SCOLOPACEUS, Vieill.

PLATE CCCXII.—MALE.

This very remarkable bird appears to be entirely confined to that section of the Peninsula of Florida known by the name of "Everglades," and the swampy borders of the many bayous and lagoons issuing from that great morass. Few are found farther north than "Spring Garden Spring." I have heard of its having been in one instance procured on one of the Florida Keys, by Mr. TITIAN PEALE, whose specimen, which was a young male, has been described and figured in the continuation of WILSON's American Ornithology. None were seen by me on any of these islands, and our worthy pilot told me, that in the course of the many years which he had spent in that country he had never met with one off the main-land. It did not occur to me on any part of the coast, while I was proceeding to Texas, nor is it to be found in that country, which seems very strange, when I look at this bird, and compare it with the Rail family, which is so abundant along the whole of that coast, and to which it is very nearly allied in some of its habits, more especially to the Fresh-water Marsh-hen, *Rallus elegans*.

The flight of the Scolopaceous Courlan is heavy and of short duration; the concavity and shortness of its wings, together with the nature of the places which it inhabits, probably rendering it slow to remove from one spot to another on wing, it being in a manner confined among tall plants, the roots of which are frequently under water. When it rises spontaneously it passes through the air at a short distance above the weeds, with regular beats of the wings, its neck extended to its full length, and its long legs dangling beneath, until it suddenly drops to the ground. Few birds then excel it in speed, as it proceeds, if pursued, by long strides, quickly repeated, first in a direct course, along paths formed by itself when passing and repassing from one place to another, and afterwards diverging so as to ensure its safety even when chased by the best dogs, or other not less eager enemies inhabiting the half-submersed wilderness which it has chosen for its residence. When accidentally surprised, it rises obliquely out of its recess, with the neck greatly bent downward, and although its legs dangle for awhile, they are afterwards extended behind in the manner of those of the Heron tribe. At

such times these birds are easily shot; but if they are only wounded, it would be vain to pursue them. Although of considerable size and weight, they are enabled, by the great length and expansion of their toes, to walk on the broad leaves of the larger species of *Nymphaea* found in that country. They swim with the same buoyancy as the Coots, Gallinules, and Rails.

The nest of this bird is placed among the larger tufts of the tallest grasses that grow at short distances from the bayous, many of which are influenced by the low tides of the Gulf. It is so well fastened to the stems of the plants, in the same manner as that of *Rallus crepitans*, as to be generally secure from inundation; and is composed of rank weeds matted together, and forming a large mass, with a depression in the centre. The eggs, which rarely exceed five or six, are large for the size of the bird. The young are hatched early in May, and follow their parents soon after birth, being covered with coarse tufty feathers, of a black colour.

The Everglades abound with a species of large greenish snail, on which these birds principally feed; and, from the great number of empty shells which are found at the foot of the nest and around it, it is probable that the sitting bird is supplied with food by her mate. Their notes, when uttered while they are on wing, are a sort of cackle, but when on the ground, much louder, especially during the pairing season, or when they are started by the report of a gun. The flesh of the young is pretty good eating. Although it is alleged that this bird occasionally alights on trees, I have never seen it in such a situation.

ARAMUS SCOLOPACEUS, Bonap. Syn., p. 39.

SCOLOPACEOUS COURLAN, *Aramus scolopaceus*, Bonap. Amer. Orn., vol. iv. p. 111.

SCOLOPACEOUS COURLAN, *Aramus scolopaceus*, Nutt. Man., vol. ii. p. 68.

SCOLOPACEOUS COURLAN, *Aramus scolopaceus*, Aud. Orn. Biog., vol. iv. p. 543.

Male, $25\frac{3}{4}$, 41. Female, 25, 42. Young, 23.

Confined to the Everglades and central parts of Florida, where it is resident, but rather rare. Accidental on the Florida Keys.

Adult Male.

Bill long, being double the length of the head, rather slender, but strong, much compressed, straight, its breadth less before the nostrils than towards the point; upper mandible with the dorsal line straight until towards the end, then slightly arcuato-declinate, the ridge convex in its whole length, the sides nearly erect, more convex towards the extremity, the tip blunted, the edges broad and obtuse for half their length, sharp but thick in the rest of their extent; lower mandible slightly ascending at the base, then direct, much compressed towards the tip, which is acute, the angle long and very

narrow, the dorsal line slightly convex, the edges obtuse, becoming sharp towards the end. Nasal groove nearly half the length of the bill; nostrils direct, linear, long.

Head rather small, oblong, compressed. Eyes rather large. Neck long and slender. Body ovato-oblong, much compressed. Feet very long and slender, rather stout; tibia bare in its lower half, which is anteriorly covered with hexagonal scales, posteriorly with transverse scutella; tarsus long, compressed, anteriorly with numerous broad scutella, laterally with very small elongated scales, posteriorly with large scutelliform scales, many of which are divided; toes long, rather slender; hind toe small and elevated; fourth considerably longer than second, middle toe nine-twelfths of an inch longer than the outer; the anterior toes are divided to the base, compressed, scutellate above, scaly on the sides, papillate beneath, compressed and not marginate. Claws of moderate length, very slightly arched, compressed, tapering to a point; that of the first toe smallest, of the third largest, without serratures on the inner edge, which is thin and a little expanded.

Plumage of ordinary texture, rather compact and glossy on the upper parts, blended on the lower; feathers on the head and neck short, oblong; on the back ovate and very broadly rounded. Wings of moderate length, very broad, concave, rounded; primaries broad, secondaries very broad and rounded; first primary two-thirds of the length of the second, which is ten-twelfths shorter than the third; the fourth, which is longest, exceeds the third by one-twelfth, and the fifth by half a twelfth; some of the secondaries reach to half an inch of the tip of the longest primary when the wing is closed; the three outer quills are narrower toward the base than toward the extremity, more especially the first. The tail is short, broad, convex, rounded, of twelve broad, rounded feathers.

Bill greenish-yellow, dusky toward the end of both mandibles, but especially of the upper; iris hazel; feet lead-grey, claws dusky. The general colour of the plumage is chocolate-brown, the upper parts glossed with purple and bronze reflections; the fore part of the head paler, inclining to grey, each feather with a greyish-white central line; the sides of the head and the throat are still lighter, and a small portion of the throat is whitish, these parts being streaked with greyish-brown and greyish-white; the lower eyelid white. The hind part and sides of the neck are marked with elliptical spots of white in regular series, there being one on each feather, some of them extending forwards to the posterior angle of the eye. Some of the feathers on the middle of the breast and the lower wing-coverts are similarly marked with lanceolate white spots; the tail is more highly glossed and coloured than the rest of the upper parts.

Length to end of tail $25\frac{3}{4}$ inches, to end of wings 25, to end of claws 32,

to carpal joint $13\frac{3}{4}$; extent of wings 41; wing from flexure $12\frac{1}{2}$; tail $5\frac{1}{2}$; bill along the ridge $4\frac{7}{12}$, along the edge of lower mandible $4\frac{3}{4}$; bare part of tibia $2\frac{1}{2}$; tarsus $4\frac{8}{12}$; hind toe $1\frac{1}{2}$, its claw $\frac{7}{12}$; second toe $2\frac{4}{12}$, its claw $\frac{8\frac{1}{2}}{12}$; third toe $3\frac{1}{2}$, its claw $\frac{10}{12}$; fourth toe $2\frac{8}{12}$, its claw $\frac{8}{12}$.

The female is somewhat less, but resembles the male.

Length to end of tail 25 inches, to end of claws $33\frac{1}{4}$; to end of wings 24, to carpal joint $12\frac{3}{4}$; extent of wings 42; wing from flexure 12; tail $4\frac{3}{4}$; bill along the gap $4\frac{3}{8}$.

The young when fully fledged is of a much lighter tint; the head and fore-neck brownish-grey, the lower parts greyish-brown. The bill is yellowish-green, darker toward the end; the feet much darker than in the adult. Excepting the quills, primary-coverts, tail-feathers, and the rump, all the plumage is marked with spots of white, of which there is one along the centre of each feather; those on the neck elongated, on the back, wings, and breast, lanceolate. In this state it is figured in the continuation of WILSON'S American Ornithology, by the Prince of MUSIGNANO.

Length to end of tail 23 inches.

This remarkable bird has exercised the ingenuity of the systematizing ornithologists, some of whom have considered it as a Heron, others a Crane, while many have made it a Rail, and many more a genus apart, but allied to the Rails, or to the Herons, or to both. It seems in truth to be a large Rail, with the wings and feet approaching in form to those of the Herons; but while frivolous disputes might be carried on *ad libitum* as to its location in the system of nature, were we merely to consider its exterior, it is fortunate that we possess a means of determining its character with certainty: —if we examine its digestive organs, we shall at once see if it be a Rail, or a Heron, or anything else. If a Heron, it will have a very wide œsophagus, a roundish, thin-walled stomach, very slender intestines, and a single short obtuse cœcum; if a Rail or Gallinule, or bird of that tribe, it will have a narrow mouth, a narrow œsophagus, a very muscular stomach, intestines of moderate width, and two moderately long, rather wide cœca. Here then are two specimens, shot in Florida, and preserved in spirits.

The first, which is found to be a female, has the mouth narrow, measuring only 7 twelfths across; the tongue very long and extremely slender, trigonal, pointed, extending to within half an inch of the tip of the lower mandible, being $3\frac{7}{12}$ inches in length. The œsophagus, *a b c d*, which is 12 inches long, is narrow in its whole length, its diameter at the upper part being 6 twelfths, below the middle of the neck 8 twelfths. The proventriculus, *b c*, is nearly 1 inch long, 9 twelfths in its greatest diameter, bulbiform; its glandules cylindrical, $1\frac{1}{2}$ twelfths long. Between the termination of the proventriculus, and the commencement of the stomach, the space, *c d*, is

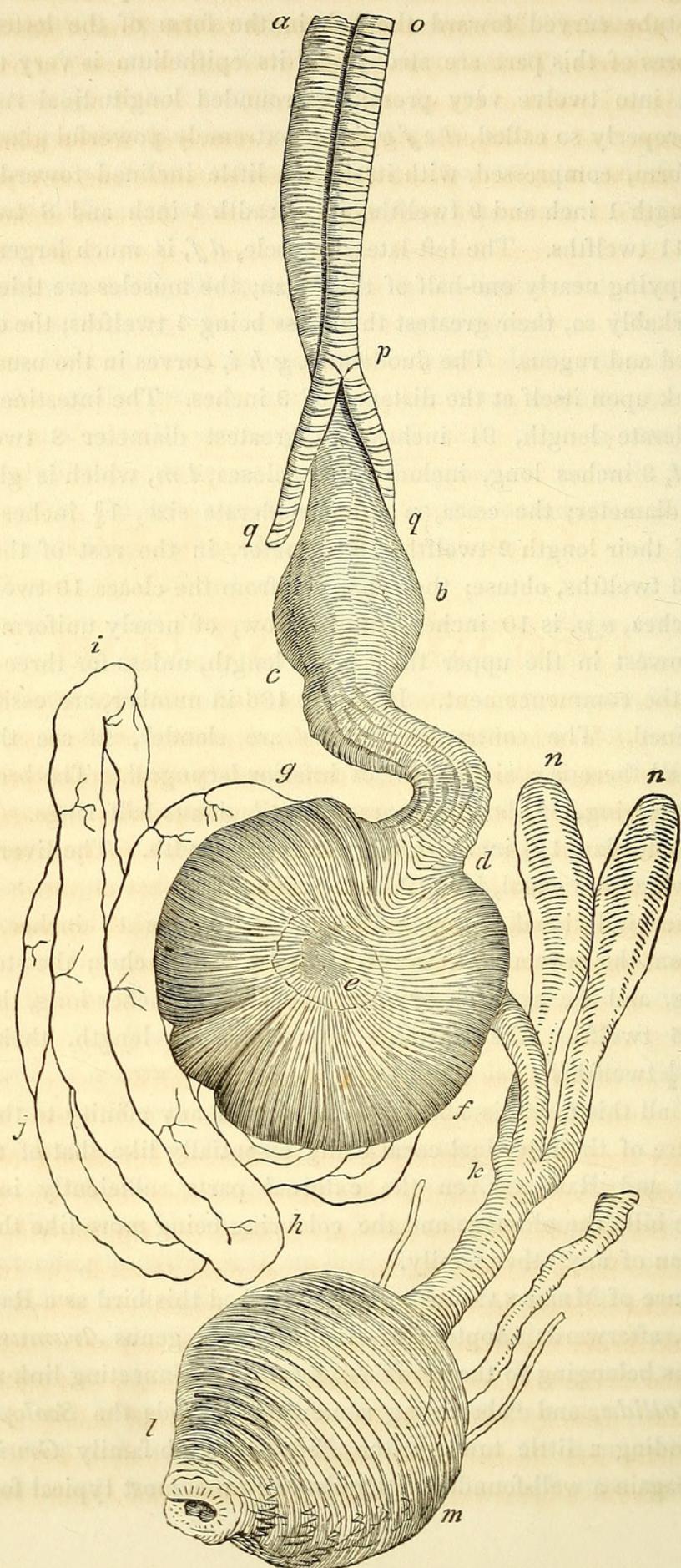
more elongated than usual, an inch and 2 twelfths, and presents the appearance of a tube curved toward the left in the form of the letter S. The circular fibres of this part are strong, and its epithelium is very thick, soft, and raised into twelve very prominent rounded longitudinal rugæ. The stomach, properly so called, *d e f g*, is an extremely powerful gizzard, of an orbicular form, compressed, with its axis a little inclined toward the right side, its length 1 inch and 9 twelfths, its breadth 1 inch and 8 twelfths, its thickness 11 twelfths. The left lateral muscle, *d f*, is much larger than the right, occupying nearly one-half of the organ; the muscles are thick, but not very remarkably so, their greatest thickness being 4 twelfths; the epithelium is very hard and rugous. The duodenum, *g h i*, curves in the usual manner, folding back upon itself at the distance of 3 inches. The intestine, *g h i j k*, is of moderate length, 31 inches, its greatest diameter 3 twelfths; the rectum, *k l*, 3 inches long, including the cloaca, *l m*, which is globular, $1\frac{1}{2}$ inches in diameter; the cœca, *n n*, of moderate size, $1\frac{3}{4}$ inches long, for nearly half their length 2 twelfths in diameter, in the rest of their extent from 4 to 6 twelfths, obtuse; their distance from the cloaca 10 twelfths.

The trachea, *o p*, is 10 inches long, narrow, of nearly uniform diameter, being narrowest in the upper third of its length, unless for three-fourths of an inch at the commencement. Its rings, 186 in number, are ossified, and a little flattened. The contractor muscles are slender, as are the sternotracheal; and there is a single pair of inferior laryngeal. The bronchi, *p q*, are wide, tapering, of about 15 narrow cartilaginous half rings. The heart is of moderate size, $1\frac{7}{8}$ inches long, 1 inch in breadth. The liver is small, its lobes, which are equal, being 1 inch in length.

The other individual, a male, has the œsophagus 12 inches long; the distance from the proventriculus to the stomach $1\frac{2}{3}$ inches; the stomach $1\frac{8}{9}$ inches long, and the same in breadth; the cœca 2 inches long, the greatest diameter 5 twelfths; the intestine $32\frac{1}{2}$ inches in length, their greatest diameter $3\frac{1}{2}$ twelfths.

Now, in all this there is nothing indicative of any affinity to the Herons; the structure of the intestinal canal being essentially like that of the Coots, Gallinules, and Rails. Even the external parts sufficiently indicate its station, the bill; the plumage and the colouring being more like those of the Rallinæ than of any other family.

The Prince of MUSIGNANO, who first described this bird as a Rail, *Rallus giganteus*, afterwards adopted for it VIEILLOT's genus *Aramus*, and considered it as belonging to the *Ardeidæ*, forming a connecting link with them and the *Rallidæ*, and "aberrating somewhat towards the *Scolopacidæ*, as well as tending a little towards the *Psophidæ*, sub-family *Gruinæ*," and claiming "again a well-founded resemblance to the most typical form of the



genus *Rallus*." Finally, he reverts to his original idea, and places it at the head of the *Rallidæ*. Mr. SWAINSON refers it to the *Tantalidæ*, associating it with *Anastomus*, *Tantalus*, and *Ibis*, to which it certainly has very little affinity in any point of view.

The efficiency of the digestive organs as a means of determining affinities in cases of doubt, is happily illustrated in this instance; and any person who will make himself acquainted with them will easily discover numerous false associations in all systems founded on the external aspect alone.

FAMILY XXXIV.—GRUINÆ. CRANES.

Bill about the length of the head, straight, depressed at the base, compressed toward the end, rather obtuse. Nostrils sub-basal, lateral oblong. Head rather small, oblong; neck long; body large, compressed. Legs long and slender; tibia bare at the lower part; tarsus somewhat compressed, anteriorly scutellate; toes rather long, first short and somewhat elevated; claws obtuse. Plumage full and rather compact. Wings broad, convex, the inner secondaries elongated and decurved; tail short, rounded.

GENUS I.—GRUS, *Briss.* CRANE.

Bill longer than the head, straight, rather slender, but strong, compressed, obtusely pointed; upper mandible with the dorsal line nearly straight, a little concave at the middle, slightly declinate toward the tip, the ridge flat and rather broad as far as the middle, the sides sloping, towards the end convex; the nasal sinus narrow, bare, and extending to nearly two-thirds, the edges direct, thick; lower mandible with the angle narrow and very long, the sides perpendicular at the base, the edges thick, the tip narrow and obtuse. Nostrils sub-basal, lateral, oblong, large, pervious. Head small, compressed; neck very long and slender; body very large, but compressed. Feet very long; tibia bare to a great extent; tarsus long, stout, moderately compressed,

Pl. 312.



N° 63.

Scolopacous Courlan

Drawn from Nature by J.J. Audubon F.R.S.L.S.

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