GADWALL DUCK.

+ ANAS STREPERA, *Linn.*

PLATE CCCLXXXVIII.—MALE AND FEMALE.

I have met with this species along the whole of our Atlantic coast, from Eastport in Maine to Texas. It is, however, more abundant in the interior than in most of our maritime districts, and is particularly so on the tributaries of the Ohio, Missouri, and Mississippi. In the early part of autumn and late in spring many are found on the margins of our great lakes. Yet the Gadwall has been represented as not plentiful in the United States, probably on account of its being generally dispersed, and not congregated in particular districts.

The Creoles of Louisiana name it "Violon," on account of the whistling sound of its wings. It arrives in the neighbourhood of New Orleans and the mouths of the Mississippi along with the Widgeon, and is fond of the company of the Red-head, to which it is about equal as an article of food. The Gadwalls are usually seen in small flocks, and during winter resort to the larger lakes and the pools in the interior of the great marshes, adjoining the waters of the Gulf. In that part of the country they feed on small fish, insects, and aquatic grasses. Fewer of them are found in Massachusetts and the State of New York than elsewhere, and this probably on account of these districts being more elevated and less marshy than those farther south. My friend Dr. BACHMAN informs me that they are rather plentiful in South Carolina, where they are considered good eating, and where they arrive in the beginning of October, but are more frequently met with at that season, and in early spring, than during winter, when a single individual may sometimes be seen in a flock of other Ducks.

While we were in Texas, in the latter part of April and the beginning of May, we found the Gadwall quite abundant on all the inland ponds and streams, as well as on the brackish pools and inlets of the islands and shores of Galveston Bay. Many of them had paired and separated from the other Ducks; and I was assured that this species breeds there, as does the Dusky Duck, the Mallard, the Blue-winged Teal, the Widgeon, and the Shoveller, the young of all these species being plentiful in the end of June and beginning of July. I was satisfied as to the truth of the repeated assurances I had

Canada Duck

N. Y.

1. Male & Female

received on this subject, by observing the manners of individuals of all these species before my departure from that country. After a continuance of rainy weather, Gadwalls are found in great numbers on the vast prairies of Oppelousas and Attacapas, where I have been told they continue until very late in spring, and some remain to breed.

This species dives well on occasion, especially on being wounded. At the appearance of danger, it rises on wing—whether from the ground or from the water—at a single spring, in the manner of the Mallard, and, like it also, ascends almost perpendicularly for several yards, after which it moves off in a direct course with great celerity. I have never seen it dive on seeing the flash of the gun; but when approached it always swims to the opposite part of the pond, and, when the danger increases, flies off. On being wounded, it sometimes by diving makes its escape among the grass, where it squats and remains concealed. It walks with ease, and prettily, often making incursions upon the land, when the ponds are not surrounded by trees, for the purpose of searching for food. It nibbles the tender shoots and blades of grasses with apparent pleasure, and will feed on beech-nuts, acorns, and seeds of all kinds of gramineæ, as well as on tadpoles, small fishes, and leeches. After rain it alights in the corn-fields, like the Mallard, and picks up the scattered grains of maize. The common notes or cry of the female have a considerable resemblance to those of the female Mallard; but the cry of the male is weaker as in that species.

It is by no means shy in the Western Country, where I have often found it associating with other species, which would leave the pond before it. Near the sea, however, it is much more wary, and this no doubt on account of the greater number of persons who there follow shooting as a regular and profitable employment. From the following note of my friend Dr. BACHMAN, you may judge how easily this fine species might be domesticated.

“In the year 1812, I saw in Dutchess county, in the State of New York, at the house of a miller, a fine flock of Ducks, to the number of at least thirty, which, from their peculiar appearance, struck me as differing from any I had before seen among the different varieties of the tame Duck. On inquiry, I was informed that three years before, a pair of these Ducks had been captured in the mill-pond, whether in a trap, or by being wounded, I cannot recollect. They were kept in the poultry-yard, and, it was said, were easily tamed. One joint of the wing was taken off, to prevent their flying away. In the following spring they were suffered to go into the pond, and they returned daily to the house to be fed. They built their nest on the edge of the pond, and reared a large brood. The young were perfectly reconciled to domestication, and made no attempts, even at the migratory season, to fly away, although their wings were perfect. In the following

season they produced large broods. The family of the miller used them occasionally as food, and considered them equal in flavour to the common Duck, and more easily raised. The old males were more beautiful than any that I have examined since; and as yet domestication had produced no variety in their plumage."

The migration of this species extends to the Fur Countries, where it is said to breed. The description of a male killed on the Saskatchewan river, on the 22nd of May, 1827, is given in the *Fauna Boreali-Americana*; and I have a fine male procured by Mr. TOWNSEND on the Columbia river.

GADWALL, *Anas strepera*, Wils. Amer. Orn., vol. viii. p. 120.

ANAS STREPERA, Bonap. Syn., p. 383.

ANAS (CHAULIODUS) STREPERA, *Gadwall*, Swains. and Rich. F. Bor. Amer., vol. ii. p. 440.

GADWALL or GREY, Nutt. Man., vol. ii. p. 383.

GADWALL DUCK, *Anas strepera*, Aud. Orn. Biog., vol. iv. p. 353.

Male, $21\frac{3}{4}$, 35. Female, $19\frac{1}{4}$, 31.

Breeds in Texas, and westward to the Columbia river, Fur Countries, and sometimes in the States of New York, Massachusetts, and Maine. Rather common in autumn and spring in the middle Atlantic districts; more so in the Southern and Western States.

Adult Male.

Bill nearly as long as the head, deeper than broad at the base, depressed towards the end, the sides parallel, the tip rounded. Upper mandible with the frontal angles short and obtuse, the dorsal line at first sloping, then slightly concave and direct, the ridge broad and flat at the base, then broadly convex, the edges soft, with about fifty internal lamellæ, the unguis roundish, curved abruptly at the end. Nostrils sub-basal, lateral, rather small, oblong, pervious. Lower mandible flattened, its angle very long and narrow, the dorsal line very short, slightly convex, the edges soft, with about sixty lamellæ.

Head of moderate size, oblong, compressed. Neck rather long, slender. Body elongated, slightly depressed. Feet very short; tibia bare for about a quarter of an inch; tarsus very short, compressed, anteriorly with two series of scutella, the outer shorter, the rest covered with reticulated angular scales; toes obliquely scutellate above; first very small, free, with a narrow membrane beneath; third longest, fourth considerably shorter, second shorter than fourth, their connecting webs entire, on the edge crenate; the second or inner toe with a membranous margin. Claws small, slightly arched, compressed, rather acute, the hind one very small and more curved, that of the middle toe with an inner sharp edge.

Plumage dense, soft, blended. Feathers of the head short, of the occiput and nape a little elongated, of the lower parts glossy, with the extremities of the filaments stiffish. Wings rather long, little curved, pointed; the first quill longest, the rest rapidly graduated; secondaries very broad, but pointed, the inner much elongated, and tapering to a point. The tips of the filaments of the outer web of the first primary are separated and curved a little forwards. Tail short, rounded, of sixteen strong pointed feathers, of which the middle pair project considerably.

Bill bluish-black. Iris reddish-hazel. Feet dull orange-yellow, claws brownish-black, webs dusky. Head light yellowish-red, the upper part and nape much darker and barred with dusky; the rest dotted with the same. The lower part of the neck, the sides of the body, the fore part of the back, and the outer scapulars, undulated with dusky and yellowish-white, the bands much larger and semicircular on the fore part of the neck and breast; the latter white, the abdomen faintly and minutely undulated with brownish-grey; the elongated scapulars brownish-grey, broadly margined with brownish-red; the hind part of the back brownish-black; the rump all round, and the upper and lower tail-coverts, bluish-black. The anterior smaller wing-coverts are light grey, undulated with dusky, the middle coverts of a deep rich chestnut-red; primary coverts brownish-grey, outer secondary coverts darker and tinged with chestnut, the rest black, excepting the inner, which are grey. Primaries and inner elongated secondaries brownish-grey, of which colour also are the inner webs of the rest, part of the outer webs of five of the outer black, and their terminal margins white, of which colour are the whole outer webs of the three next to the inner elongated quills. Tail brownish-grey, the feathers margined with paler.

Length to end of tail $21\frac{3}{4}$ inches, to end of wings 19, to end of claws $23\frac{1}{4}$; extent of wings 35; bill along the ridge $1\frac{3}{4}$, along the edge of lower mandible $1\frac{7}{8}$; wing from flexure 11; tail $4\frac{3}{8}$; tarsus $1\frac{1}{2}$; hind toe and claw $\frac{1}{2}$; second toe $1\frac{5}{8}$, its claw $\frac{4}{12}$; third toe $1\frac{7}{8}$, its claw $\frac{4}{12}$; outer toe $1\frac{7}{12}$, its claw $\frac{2}{12}$. Weight 1 lb. 10 oz.

Adult Female.

The female is considerably smaller. Bill dusky along the ridge, dull yellowish-orange on the sides. Iris hazel. Feet of a fainter tint than in the male. Upper part of head brownish-black, the feathers edged with light reddish-brown; a streak over the eye, the cheeks, the upper part of the neck all round, light yellowish-red tinged with grey, and marked with small longitudinal dusky streaks, which are fainter on the throat, that part being greyish-white; the rest of the neck, the sides, all the upper parts and the lower rump feathers brownish-black, broadly margined with yellowish-red. Wing-coverts brownish-grey, edged with paler; the wing otherwise as in

the male, but the speculum fainter. Tail-feathers and their coverts dusky, laterally obliquely indented with pale brownish-red, and margined with reddish-white.

Length to end of tail $19\frac{1}{4}$ inches, to end of wings $18\frac{3}{4}$, to end of claws $19\frac{1}{2}$; extent of wings 31; wing from flexure $8\frac{1}{4}$; tail $3\frac{3}{4}$; tarsus $1\frac{4}{12}$; middle toe $1\frac{9}{12}$, its claw $\frac{4}{12}$.

In a male, the roof of the mouth is deeply concave, with a prominent median ridge, and oblique grooves toward the end. The tongue is 1 inch 10 twelfths long, fleshy, with a deep longitudinal groove, two lateral series of filaments, and a thin broadly rounded tip, as in other Ducks. The œsopha-

gus, *a, b*, is $10\frac{1}{2}$ inches long, 5 twelfths in diameter for about four inches, then enlarged to 10 twelfths, and again contracted as it enters the thorax. The proventriculus, *b b*, is 1 inch and 2 twelfths long, its greatest diameter 8 twelfths. The stomach, *c d e*, is a very large and powerful gizzard, of an elliptical form, compressed, 1 inch and 9 twelfths long, 2 inches in its greatest breadth, or in the direction of the lateral muscles, of which the right, *c*, is 10 twelfths thick, the left, *d*, 9 twelfths. The epithelium is thick and rugous; much thickened and forming two roundish, flat or slightly concave grinding surfaces, opposite the muscles. The intestine, *e f g*, is 6 feet 10 inches long, wide, its diameter for 2 feet being $4\frac{1}{2}$ twelfths, towards the rectum enlarging to 6 twelfths. It forms first a very long duodenal

curve, *c e f g*, and is then convoluted or coiled in numerous folds. The rectum is $5\frac{1}{4}$ inches long; the cœca 11 inches, their greatest diameter 6 twelfths, for 2 inches at the commencement 2 twelfths, towards the end $2\frac{1}{2}$ twelfths, their extremity rounded.

The trachea, *h*, is $7\frac{1}{2}$ inches long; its diameter at the upper part 4 twelfths, gradually diminishing to $3\frac{1}{2}$ twelfths; it then enlarges to 5 twelfths, and contracts to $3\frac{1}{2}$ twelfths at the commencement of the dilatation of the inferior larynx, which is extremely similar to that of the Widgeon, but larger; there being an enlargement, *i*, formed by a number of the lower rings united, and to the left side a rounded bony tympanum *j*; the greatest transverse diameter of this part, from *i* to *j*, is 1 inch 1 twelfth. The bronchi, *k k*, are of moderate size, covered with a dense layer of adipose matter.

AMERICAN WIDGEON.

+ANAS AMERICANA, *Gmel.*

PLATE CCCLXXXIX.—MALE AND FEMALE.

This lively and very handsome Duck is abundant during winter at New Orleans, where it is much esteemed on account of the juiciness of its flesh, and is best known by the name of *Zinzin*. In the Western Country, and in most parts of the Eastern and Middle States, it is called the *Bald Pate*. Early in September it enters the United States by their northern extremities, as well as from Texas; and in both these regions it is now well known to breed in nearly equal numbers. Those which retreat south-westward remain along the coast and in the interior of the Floridas, as well as all that portion of the Gulf of Mexico extending to the mouths of the Mississippi, where they remain until the latter part of April, sometimes even until the middle of May, as they have but a comparatively short journey to perform in order to arrive in Mexico in time to breed. On the coast of the Atlantic they keep in the marshes in company with various species of the same family, being in a manner indifferent as to their associates. During early spring, in Louisiana, they are often seen alighted on extensive plains that have very little water on them.

Canada Duck

N. Y.

1. Male & Female

Audubon, John James. 1843. "Gadwall Duck, *Anas strepera*, Linn. [Pl. 388]."
The birds of America : from drawings made in the United States and their territories 6, 254–259. <https://doi.org/10.5962/p.319501>.

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