coming off at the distance of $2\frac{1}{2}$ inches, the latter at that of 1 inch 2 twelfths, from the inferior larynx. The cleido-tracheal muscle is a direct continuation of part of the contractor, but the sterno-tracheal is independent of them, and attached to two rings of the trachea. The contractor muscle terminates in the solid tube, at the distance of 9 twelfths from the inferior larynx.

THE WHITE-FRONTED GOOSE.

†ANSER ALBIFRONS, *Bechst.*

PLATE CCCLXXX.—MALE AND FEMALE.

Neither WILSON nor NUTTALL seem to have been aware of the regularity with which this species migrates through the United States. When I shewed a drawing of it to the first of these authors, he pronounced it to be a young Snow Goose, although I described to him its peculiar notes. During the whole of my residence in Kentucky, a winter never passed without my seeing a good number of them; and at that season they are frequently offered for sale in the markets of New Orleans. An English gentleman, who was on his way to the settlement of Birkbeck in the prairies west of the Ohio, and who spent a few weeks with me at Henderson, was desirous of having a tasting of some of our game. His desire was fully gratified, and the first that was placed before him was a White-fronted Goose. I had killed seven of these birds the evening before, in a pond across the Ohio, which was regularly supplied with flocks from the beginning of October to the end of March. He pronounced it "delicious," and I have no reason to dissent from his opinion. From the numbers seen high on the Arkansas river, I presume that many winter beyond the southern limits of the United States. They are exceedingly rare, however, along our Atlantic coast. In Kentucky they generally arrive before the Canada Goose, betaking themselves to the grassy ponds; and of the different species which visit that country they are by far the least shy. The flocks seldom exceed from thirty to fifty individuals. Their general appearance is that exhibited in the plate, and which I consider as their winter plumage, feeling pretty confident that in summer the lower part of the body becomes pure black.

The flight of the White-fronted is very similar to that of the Canada Goose, being firm and well sustained. When travelling, these birds pass at a considerable height, arranged in the same angular order, and apparently guided by one of the older Ganders. They walk with ease, and can run with considerable speed when wounded. In feeding they immerse their necks, like other species; but during continued rains they visit the cornfields and large savannahs. While in Kentucky they feed on the beech nuts and acorns that drop along the margins of their favourite ponds. In the fields they pick up the grains of maize left by the squirrels and racoons, and nibble the young blades of grass. In their gizzards I have never found fishes nor water lizards, but often broken shells of different kinds of snails.

They leave us a fortnight sooner than the Canada Geese, and start along with the Snow Geese, but keep in separate flocks. In this order they have been observed travelling over the fur countries by Dr. RICHARDSON, who informs us that they breed in the woody districts skirting Mackenzie's river to the north of the sixty-seventh parallel, and also on the islands of the Arctic sea; but that they are not common about Hudson's bay. The egg of this Goose measures two inches and three-quarters in length, by one and three-quarters in breadth. The shell is smooth, of a dull yellowish-green, with indistinct patches of a darker tint of the same colour.

ANSER ALBIFRONS, Bonap. Syn., p. 376.

ANSER ALBIFRONS, *Laughing Goose*, Swains. and Rich. F. Bor. Amer., vol. ii. p. 456.

WHITE-FRONTED GOOSE, Nutt. Man., vol. ii. p. 346.

WHITE-FRONTED GOOSE, *Anser albifrons*, Aud. Orn. Biog., vol. iii. p. 568.

Male, $27\frac{1}{4}$, 60.

Through the interior of the Western and Southern States during winter, as well as along the coast, from Massachusetts to Texas. Columbia river. Breeds in the far north.

Adult Male.

Bill shorter than the head, much higher than broad at the base, somewhat conical, depressed towards the end, rounded at the tip. Upper mandible with the dorsal line sloping, the ridge broad and flattened, but slightly convex, the sides sloping, the edges with twenty-eight oblique lamellæ, the unguis circular, convex, obscurely denticulate along the edge. Nasal groove oblong, parallel to the ridge, filled by the soft membrane of the bill; nostrils medial, lateral, longitudinal, narrow-elliptical, open, pervious. Lower mandible nearly straight, with the angle very long and rather narrow, the edges soft and obtuse, with about forty oblique, slightly recurved lamellæ.

Head of moderate size, oblong, compressed. Neck rather long and

slender. Body full, slightly depressed. Feet rather short, strong, placed rather behind the centre of the body; legs bare a little above the joint; tarsus rather short, a little compressed, covered all round with angular reticulated scales, which are smaller behind; hind toe very small, with a narrow membrane; third toe longest, fourth considerably shorter, but longer than second; all the toes reticulated above at the base, but with narrow transverse scutella towards the end; the three anterior connected by a reticulated membrane, the outer having a thick margin, the inner with the margin extended into a two-lobed web; claws small, arched, rather compressed, obtuse, that of the middle toe bent obliquely outwards and depressed, with a curved edge.

Plumage close, full, compact above, blended on the neck and lower part of the body, very short on the head. Feathers of the head and neck very narrow, on the latter part disposed in oblique series separated by grooves, of the back very broad and abrupt, of the breast and belly broadly rounded. Wings rather long, broad; primaries incurved, broad, towards the end tapering, the second longest, first and third about equal, first and second sinuate on the inner web, second and third on the outer; secondaries long, very broad, rounded. Tail very short, rounded, of sixteen broad rounded feathers.

Bill carmine-red, the unguis of both mandibles white. Edges of eyelids dull orange; iris hazel. Feet orange, webs lighter; claws white. Head and neck rich greyish-brown, the upper part of the former darker; a white band, margined behind with blackish-brown on the anterior part of the forehead along the bill. The general colour of the back is deep grey, the feathers of its fore part broadly tipped with greyish-brown, the rest with greyish-white; the hind part of the back pure deep grey. Wings greyish-brown, but towards the edge ash-grey, as are the primary coverts, and outer webs of the primaries; the rest of the primaries and the secondaries are greyish-black, the latter with a narrow edge of greyish-white, the former edged and tipped with white. Breast, abdomen, lower tail-coverts, sides of the rump and upper tail-coverts, white, but the breast and sides patched with brownish-black; on the latter intermixed with greyish-brown feathers.

Length to end of tail $27\frac{1}{4}$ inches, to end of wings 26, to end of claws $28\frac{7}{8}$; extent of wings 60; wing from flexure $14\frac{1}{2}$; tail $4\frac{3}{4}$; bill along the back $1\frac{8}{12}$, along the edge of lower mandible $1\frac{7}{12}$; tarsus $2\frac{1}{4}$; middle toe $2\frac{4}{12}$, its claw $\frac{5}{12}$. Weight $5\frac{1}{4}$ lbs.

Adult Female.

The female, which is somewhat smaller, resembles the male; the white margins of the wing-feathers not so distinct. Weight 4 lbs. 4 oz.

The gizzard is very large, its muscular coat an inch and a half thick at the

lower extremity, the cuticular lining thick, very hard, and denticulate on one side. The intestine seven feet long, the cæca twelve inches, and placed at the distance of one foot from the anus.

SNOW GOOSE.

ANSER HYPERBOREUS, Gmel.

PLATE CCCLXXXI.—ADULT MALE AND YOUNG FEMALE.

The geographical range of the Snow Goose is very extensive. It has been observed in numerous flocks, travelling northward, by the members of the recent overland expeditions. On the other hand, I have found it in Texas, and it is very abundant on the Columbia river, together with Hutchins' Goose. In the latter part of autumn, and during winter, I have met with it in every part of the United States that I have visited.

While residing at Henderson on the Ohio, I never failed to watch the arrival of this and other species in the ponds of the neighbourhood, and generally found the young Snow Geese to make their appearance in the beginning of October, and the adult or white birds about a fortnight later. In like manner, when migrating northward, although the young and the adult birds set out at the same time, they travel in separate flocks, and, according to Captain Sir GEORGE BACK, continue to do so even when proceeding to the higher northern latitudes of our continent. It is not less curious that, during the whole of the winter, these Geese remain equally divided, even if found in the same localities; and although young and old are often seen to repose on the same sand-bar, the flocks keep at as great a distance as possible.

The Snow Goose in the grey state of its plumage is very abundant in winter, about the mouths of the Mississippi, as well as on all the muddy and grassy shores of the bays and inlets of the Gulf of Mexico, as far as Texas, and probably still farther to the south-west. During the rainy season, it betakes itself to the large prairies of Attacapas and Oppellousas, and there young and adult procure their food together, along with several species of Ducks, Herons, and Cranes, feeding, like the latter, on the roots of plants,

W.H.

White-fronted Goose.
1. Male. 2. Female.

Audubon, John James. 1843. "The White-Fronted Goose, *Anser aleifrons*, Bechst. [Pl. 380]." *The birds of America : from drawings made in the United States and their territories* 6, 209–212. <https://doi.org/10.5962/p.319494>.

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