GENUS II.—ANSER, *Briss.* GOOSE.

Bill shorter than the head, rather higher than broad at the base, somewhat conical, depressed toward the end, rounded at the tip; upper mandible with the dorsal line sloping, the ridge broad and flattened, the sides sloping, the edges soft and obtuse, internally with numerous oblique marginal lamellæ, the unguis obovate, convex; nasal groove oblong, filled by the soft membrane of the bill; nostrils medial, lateral, longitudinal, narrow-elliptical, open, pervious, lower mandible straight, with the angle very long, narrow, and rounded, the edges soft and obtuse, with numerous oblique lamellæ, the tip broadly convex. Head small, oblong, compressed; neck long and slender; body very full, slightly depressed. Feet short, stout; tibia bare for a short space below; tarsus short, a little compressed, covered all round with angular scales; hind toe very small and elevated, third toe longest, fourth longer than second; all reticulated at the base, scutellate toward the end, the anterior webbed. Claws small, arched, rather compressed. Plumage close, compact above, blended beneath. Wings long, convex, the second quill longest, the first and third nearly equal. Tail very short, of sixteen or more feathers.

 THE CANADA GOOSE.
†ANSER CANADENSIS, *Linn.*

PLATE CCCLXXVI.—MALE AND FEMALE.

Although the Canada Goose is considered as a northern species, the number of individuals that remain at all seasons in the milder latitudes, and in different portions of the United States, fully entitles this bird to be looked upon as a permanent resident there. It is found to breed sparingly at the

Canada Goose.

1. Male. 2. Female.

present day, by many of the lakes, lagoons, and large streams of our Western Districts, on the Missouri, the Mississippi, the lower parts of the Ohio, on Lake Erie, the lakes farther north, and in several large pools situated in the interior of the eastern parts of the States of Massachusetts and Maine. As you advance farther toward the east and north, you find it breeding more abundantly. While on my way to Labrador, I found it in the Magdeleine Islands, early in June, sitting on its eggs. In the Island of Anticosti there is a considerable stream, near the borders of which great numbers are said to be annually reared; and in Labrador these birds breed in every suitable marshy plain. The greater number of those which visit us from still more northern regions, return in the vernal season, like many other species, to the dismal countries which gave them birth.

Few if any of these birds spend the winter in Nova Scotia, my friend Mr. THOMAS MACCULLOCH having informed me that he never saw one about Pictou at that period. In spring, as they proceed northward, thousands are now and then seen passing high in the air; but in autumn, the flocks are considerably smaller, and fly much lower. During their spring movements, the principal places at which they stop to wait for milder days are Bay Chaleur, the Magdeleine Islands, Newfoundland, and Labrador, at all of which some remain to breed and spend the summer.

The general spring migration of the Canada Goose, may be stated to commence with the first melting of the snows in our Middle and Western Districts, or from the 20th of March to the end of April; but the precise time of its departure is always determined by the advance of the season, and the vast flocks that winter in the great savannahs or swampy prairies south-west of the Mississippi, such as exist in Opellousas, on the borders of the Arkansas river, or in the dismal "Everglades" of the Floridas, are often seen to take their flight, and steer their course northward, a month earlier than the first of the above mentioned periods. It is indeed probable that the individuals of a species most remote from the point at which the greater number ultimately assemble, commence their flight earlier than those which have passed the winter in stations nearer to it.

It is my opinion that all the birds of this species, which leave our States and territories each spring for the distant north, pair before they depart. This, no doubt, necessarily results from the nature of their place of summer residence, where the genial season is so short as scarcely to afford them sufficient time for bringing up their young and renewing their plumage, before the rigours of advancing winter force them to commence their flight towards milder countries. This opinion is founded on the following facts:—I have frequently observed large flocks of Geese, in ponds, on marshy grounds, or even on dry sand-bars, the mated birds renewing their courtship as early as

the month of January, while the other individuals would be contending or coquetting for hours every day, until all seemed satisfied with the choice they had made, after which, although they remained together, any person could easily perceive that they were careful to keep in pairs. I have observed also that the older the birds, the shorter were the preliminaries of their courtship, and that the barren individuals were altogether insensible to the manifestations of love and mutual affection that were displayed around them. The bachelors and old maids, whether in regret, or not caring to be disturbed by the bustle, quietly moved aside, and lay down on the grass or sand at some distance from the rest; and whenever the flocks rose on wing, or betook themselves to the water, these forlorn birds always kept behind. This mode of preparing for the breeding season has appeared to me the more remarkable, that, on reaching the place appointed for their summer residence, the birds of a flock separate in pairs, which form their nests and rear their young at a considerable distance from each other.

It is extremely amusing to witness the courtship of the Canada Goose in all its stages; and let me assure you, reader, that although a Gander does not strut before his beloved with the pomposity of a Turkey, or the grace of a Dove, his ways are quite as agreeable to the female of his choice. I can imagine before me one who has just accomplished the defeat of another male after a struggle of half an hour or more. He advances gallantly towards the object of contention, his head scarcely raised an inch from the ground, his bill open to its full stretch, his fleshy tongue elevated, his eyes darting fiery glances, and as he moves he hisses loudly, while the emotion which he experiences, causes his quills to shake, and his feathers to rustle. Now he is close to her who in his eyes is all loveliness; his neck bending gracefully in all directions, passes all round her, and occasionally touches her body; and as she congratulates him on his victory, and acknowledges his affection, they move their necks in a hundred curious ways. At this moment fierce jealousy urges the defeated gander to renew his efforts to obtain his love; he advances apace, his eye glowing with the fire of rage; he shakes his broad wings, ruffles up his whole plumage, and as he rushes on the foe, hisses with the intensity of anger. The whole flock seems to stand amazed, and opening up a space, the birds gather round to view the combat. The bold bird who has been caressing his mate, scarcely deigns to take notice of his foe, but seems to send a scornful glance towards him. He of the mortified feelings, however, raises his body, half opens his sinewy wings, and with a powerful blow, sends forth his defiance. The affront cannot be borne in the presence of so large a company, nor indeed is there much disposition to bear it in any circumstances; the blow is returned with vigour, the aggressor reels for a moment, but he soon recovers, and now the combat

rages. Were the weapons more deadly, feats of chivalry would now be performed; as it is, thrust and blow succeed each other like the strokes of hammers driven by sturdy forgers. But now, the mated gander has caught hold of his antagonist's head with his bill; no bull-dog could cling faster to his victim; he squeezes him with all the energy of rage, lashes him with his powerful wings, and at length drives him away, spreads out his pinions, runs with joy to his mate, and fills the air with cries of exultation.

But now, see yonder, not a couple, but half a dozen of ganders are engaged in battle! Some desperado, it seems, has fallen upon a mated bird, and several bystanders, as if sensible of the impropriety of such conduct, rush to the assistance of the wronged one. How they strive and tug, biting, and striking with their wings! and how their feathers fly about! Exhausted, abashed, and mortified, the presumptuous intruder retreats in disgrace;—there he lies, almost breathless, on the sand!

Such are the conflicts of these ardent lovers, and so full of courage and of affection towards their females are they, that the approach of a male invariably ruffles their tempers as well as their feathers. No sooner has the goose laid her first egg, than her bold mate stands almost erect by her side, watching even the rustling sound of the breeze. The least noise brings from him a sound of anger. Should he spy a racoon making its way among the grass, he walks up to him undauntedly, hurls a vigorous blow at him, and drives him instantly away. Nay, I doubt if man himself, unarmed, would come off unscathed in such an encounter. The brave gander does more; for, if imminent danger excite him, he urges his mate to fly off, and resolutely remains near the nest until he is assured of her safety, when he also betakes himself to flight, mocking as it were by his notes his disappointed enemy.

Suppose all to be peace and quiet around the fond pair, and the female to be sitting in security upon her eggs. The nest is placed near the bank of a noble stream or lake; the clear sky is spread over the scene, the bright beams glitter on the waters, and a thousand odorous flowers give beauty to the swamp which of late was so dismal. The gander passes to and fro over the liquid element, moving as if lord of the waters; now he inclines his head with a graceful curve, now sips to quench his thirst; and, as noontide has arrived, he paddles his way towards the shore, to relieve for awhile his affectionate and patient consort. The lisping sounds of their offspring are heard through the shell; their little bills have formed a breach in the inclosing walls; full of life, and bedecked with beauty, they come forth, with tottering steps and downy covering. Toward the water they now follow their careful parent, they reach the border of the stream, their mother already floats on the loved element, one after another launches forth, and

now the flock glides gently along. What a beautiful sight! Close by the grassy margin, the mother slowly leads her innocent younglings; to one she shews the seed of the floating grass, to another points out the crawling slug. Her careful eye watches the cruel turtle, the garfish, and the pike, that are lurking for their prey, and, with head inclined, she glances upwards to the Eagle or the Gull that are hovering over the water in search of food. A ferocious bird dashes at her young ones; she instantly plunges beneath the surface, and, in the twinkling of an eye, her brood disappear after her; now they are among the thick rushes, with nothing above water but their little bills. The mother is marching towards the land, having lisped to her brood in accents so gentle that none but they and her mate can understand their import, and all are safely lodged under cover until the disappointed Eagle or Gull bears away.

More than six weeks have now elapsed. The down of the goslings, which was at first soft and tufty, has become coarse and hairlike. Their wings are edged with quills, and their bodies bristled with feathers. They have increased in size, and, living in the midst of abundance, they have become fat, so that on shore they make their way with difficulty, and as they are yet unable to fly, the greatest care is required to save them from their numerous enemies. They grow apace, and now the burning days of August are over. They are able to fly with ease from one shore to another, and as each successive night the hoarfrosts cover the country, and the streams are closed over by the ice, the family joins that in their neighbourhood, which is also joined by others. At length they spy the advance of a snow-storm, when the ganders with one accord sound the order for their departure.

After many wide circlings, the flock has risen high in the thin air, and an hour or more is spent in teaching the young the order in which they are to move. But now, the host has been marshalled, and off it starts, shewing, as it proceeds, at one time an extended front, at another a single lengthened file, and now arraying itself in an angular form. The old males advance in front, the females follow, the young come in succession according to their strength, the weakest forming the rear. Should one feel fatigued, his position is changed in the ranks, and he assumes a place in the wake of another, who cleaves the air before him; perhaps the parent bird flies for awhile by his side to encourage him. Two, three, or more days elapse before they reach a secure resting place. The fat with which they were loaded at their departure has rapidly wasted; they are fatigued, and experience the keen gnawings of hunger; but now they spy a wide estuary, towards which they direct their course. Alighting on the water, they swim to the beach, stand, and gaze around them; the young full of joy, the old full of fear, for well are they aware that many foes have been waiting their arrival. Silent all night

remains the flock, but not inactive; with care they betake themselves to the grassy shores, where they allay the cravings of appetite, and recruit their wasted strength. Soon as the early dawn lightens the surface of the deep they rise into the air, extend their lines, and proceed southward, until arriving in some place where they think they may be enabled to rest in security, they remain during the winter. At length, after many annoyances, they joyfully perceive the return of spring, and prepare to fly away from their greatest enemy man.

The Canada Goose often arrives in our Western and Middle Districts as early as the beginning of September, and does not by means confine itself to the sea-shore. Indeed, my opinion is, that for every hundred seen during the winter along our large bays and estuaries, as many thousands may be found in the interior of the country, where they frequent the large ponds, rivers, and wet savannahs. During my residence in the State of Kentucky, I never spent a winter without observing immense flocks of these birds, especially in the neighbourhood of Henderson, where I have killed many hundreds of them, as well as on the Falls of the Ohio at Louisville, and in the neighbouring country, which abounds in ponds overgrown with grasses and various species of *Nymphææ*, on the seeds of which they greedily feed. Indeed all the lakes situated within a few miles of the Missouri and Mississippi, or their tributaries, are still amply supplied with them from the middle of autumn to the beginning of spring. In these places, too, I have found them breeding, although sparingly. It seems to me more than probable, that the species bred abundantly in the temperate parts of North America before the white population extended over them. This opinion is founded on the relations of many old and respectable citizens of our country, and in particular of General GEORGE CLARK, one of the first settlers on the banks of the Ohio, who, at a very advanced age, assured me that, fifty years before the period when our conversation took place (about seventy-five years from the present time), wild geese were so plentiful at all seasons of the year, that he was in the habit of having them shot to feed his soldiers, then garrisoned near Vincennes, in the present State of Indiana. My father, who travelled down the Ohio shortly after BRADDOCK's defeat, related the same to me; and I, as well as many persons now residing at Louisville in Kentucky, well remember that, twenty-five or thirty years ago, it was quite easy to procure young Canada Geese in the ponds around. So late as 1819, I have met with the nests, eggs, and young of this species near Henderson. However, as I have already said, the greater number remove far north to breed. I have never heard of an instance of their breeding in the Southern States. Indeed, so uncongenial to their constitution seems the extreme heat

of these parts to be, that the attempts made to rear them in a state of domestication very rarely succeed.

The Canada Goose, when it remains with us to breed, begins to form its nest in March, making choice of some retired place not far from the water, generally among the rankest grass, and not unfrequently under a bush. It is carefully formed of dry plants of various kinds, and is of a large size, flat, and raised to the height of several inches. Once only did I find a nest elevated above the ground. It was placed on the stump of a large tree, standing in the centre of a small pond, about twenty feet high, and contained five eggs. As the spot was very secluded, I did not disturb the birds, anxious as I was to see in what manner they should convey the young to the water. But in this I was disappointed, for, on going to the nest, near the time at which I expected the process of incubation to terminate, I had the mortification to find that a racoon, or some other animal, had destroyed the whole of the eggs, and that the birds had abandoned the place. The greatest number of eggs which I have found in the nest of this species was nine, which I think is more by three than these birds usually lay in a wild state. In the nests of those which I have had in a domesticated state, I have sometimes counted as many as eleven, several of them, however, usually proving unproductive. The eggs measure, on an average, $3\frac{1}{2}$ inches by $2\frac{1}{2}$, are thick shelled, rather smooth, and of a very dull yellowish-green colour. The period of incubation is twenty-eight days. They never have more than one brood in a season, unless their eggs are removed or broken at an early period.

The young follow their parents to the water a day or two after they have issued from the egg, but generally return to land to repose in the sunshine in the evening, and pass the night there under their mother, who employs all imaginable care to ensure their comfort and safety, as does her mate, who never leaves her during incubation for a longer time than is necessary for procuring food, and takes her place at intervals. Both remain with their brood until the following spring. It is during the breeding season that the gander displays his courage and strength to the greatest advantage. I knew one that appeared larger than usual, and of which all the lower parts were of a rich cream-colour. It returned three years in succession to a large pond a few miles from the mouth of Green river in Kentucky, and whenever I visited the nest, it seemed to look upon me with utter contempt. It would stand in a stately attitude, until I reached within a few yards of the nest, when suddenly lowering its head, and shaking it as if it were dislocated from the neck, it would open its wings, and launch into the air, flying directly at me. So daring was this fine fellow, that in two instances he struck me a blow with one of his wings on the right arm, which, for an

instant, I thought was broken. I observed that immediately after such an effort to defend his nest and mate, he would run swiftly towards them, pass his head and neck several times over and around the female, and again assume his attitude of defiance.

Always intent on making experiments, I thought of endeavouring to conciliate this bold son of the waters. For this purpose I always afterwards took with me several ears of corn, which I shelled, and threw towards him. It remained untouched for several days; but I succeeded at last, and before the end of a week both birds fed freely on the grain even in my sight! I felt much pleasure on this occasion, and repeating my visit daily, found, that before the eggs were hatched, they would allow me to approach within a few feet of them, although they never suffered me to touch them. Whenever I attempted this the male met my fingers with his bill, and bit me so severely that I gave it up. The great beauty and courage of the male rendered me desirous of obtaining possession of him. I had marked the time at which the young were likely to appear, and on the preceding day I baited with corn a large coop made of twine, and waited until he should enter. He walked in, I drew the string, and he was my prisoner. The next morning the female was about to lead her offspring to the river, which was distant nearly half a mile, when I caught the whole of the young birds, and with them the mother too, who came within reach in attempting to rescue one of her brood, and had them taken home. There I took a cruel method of preventing their escape, for with a knife I pinioned each of them on the same side, and turned them loose in my garden, where I had a small but convenient artificial pond. For more than a fortnight, both the old birds appeared completely cowed. Indeed, for some days I felt apprehensive that they would abandon the care of the young ones. However, with much attention, I succeeded in rearing the latter by feeding them abundantly with the larvæ of locusts, which they ate greedily, as well as with corn-meal moistened with water, and the whole flock, consisting of eleven individuals, went on prosperously. In December the weather became intensely cold, and I observed that now and then the gander would spread his wings, and sound a loud note, to which the female first, and then all the young ones in succession, would respond, when they would all run as far as the ground allowed them in a southerly direction, and attempt to fly off. I kept the whole flock three years. The old pair never bred while in my possession, but two pairs of the young ones did, one of them raising three, the other seven. They all bore a special enmity to dogs, and shewed dislike to cats; but they manifested a still greater animosity towards an old Swan and a Wild Turkey-cock which I had. I found them useful in clearing the garden of slugs and snails; and although they now and then nipped the vegetables, I liked their com-

pany. When I left Henderson, my flock of Geese was given away, and I have not since heard how it has fared with them.

On one of my shooting excursions in the same neighbourhood, I chanced one day to kill a wild Canada Goose, which, on my return, was sent to the kitchen. The cook, while dressing it, found in it an egg ready for being laid, and brought it to me. It was placed under a common hen, and in due time hatched. Two years afterwards the bird thus raised, mated with a male of the same species, and produced a brood. This Goose was so gentle that she would suffer any person to caress her, and would readily feed from the hand. She was smaller than usual, but in every other respect as perfect as any I have ever seen. At the period of migration she shewed by her movements less desire to fly off than any other I have known; but her mate, who had once been free, did not participate in this apathy.

I have not been able to discover why many of those birds which I have known to have been reared from the egg, or to have been found when very young and brought up in captivity, were so averse to reproduce, unless they were naturally sterile. I have seen several that had been kept for more than eight years, without ever mating during that period, while other individuals had young the second spring after their birth. I have also observed that an impatient male would sometimes abandon the females of his species, and pay his addresses to a common tame Goose, by which a brood would in due time be brought up, and would thrive. That this tardiness is not the case in the wild state I feel pretty confident, for I have observed having broods of their own many individuals which, by their size, the dulness of their plumage, and such other marks as are known to the practical ornithologist, I judged to be not more than fifteen or sixteen months old. I have therefore thought that in this, as in many other species, a long series of years is necessary for counteracting the original wild and free nature which has been given them; and indeed it seems probable that our attempts to domesticate many species of wild fowls, which would prove useful to mankind, have often been abandoned in despair, when a few years more of constant care might have produced the desired effect.

The Canada Goose, although immediately after the full development of its young it becomes gregarious, does not seem to be fond of the company of any other species. Thus, whenever the White-fronted Goose, the Snow Goose, the Brent Goose, or others, alight in the same ponds, it forces them to keep at a respectful distance; and during its migrations I have never observed a single bird of any other kind in its ranks.

The flight of this species of Goose is firm, rather rapid, and capable of being protracted to a great extent. When once high in the air, they advance with extreme steadiness and regularity of motion. In rising from the water

or from the ground, they usually run a few feet with outspread wings; but when suddenly surprised and in full plumage, a single spring on their broad webbed feet is sufficient to enable them to get on wing. While travelling to some considerable distance, they pass through the air at the height of about a mile, steadily following a direct course towards the point to which they are bound. Their notes are distinctly heard, and the various changes made in the disposition of their ranks are easily seen. But although on these occasions they move with the greatest regularity, yet when they are slowly advancing from south to north at an early period of the season, they fly much lower, alight more frequently, and are more likely to be bewildered by suddenly formed banks of fog, or by passing over cities or arms of the sea where much shipping may be in sight. On such occasions great consternation prevails among them, they crowd together in a confused manner, wheel irregularly, and utter a constant cackling resembling the sounds from a disconcerted mob. Sometimes the flock separates, some individuals leave the rest, proceed in a direction contrary to that in which they came, and after awhile, as if quite confused, sail towards the ground, once alighted on which they appear to become almost stupified, so as to suffer themselves to be shot with ease, or even knocked down with sticks. This I have known to take place on many occasions, besides those of which I have myself been a witness. Heavy snow-storms also cause them great distress, and in the midst of them some have been known to fly against beacons and lighthouses, dashing their heads against the walls in the middle of the day. In the night they are attracted by the lights of these buildings, and now and then a whole flock is caught on such occasions. At other times their migrations northward are suddenly checked by a change of weather, the approach of which seems to be well known to them, for they will suddenly wheel and fly back in a southern direction several hundred miles. In this manner I have known flocks to return to the places which they had left a fortnight before. Nay, even during the winter months, they are keenly sensible to changes of temperature, flying north or south in search of feeding-grounds, with so much knowledge of the future state of the weather, that one may be assured when he sees them proceeding southward in the evening, that the next morning will be cold, and *vice versa*.

The Canada Goose is less shy when met with far inland, than when on the sea-coast, and the smaller the ponds or lakes to which they resort, the more easy it is to approach them. They usually feed in the manner of Swans and fresh-water Ducks, that is, by plunging their heads towards the bottom of shallow ponds or the borders of lakes and rivers, immersing their fore parts, and frequently exhibiting their legs and feet with the posterior portion of their body elevated in the air. They never dive on such occasions. If

feeding in the fields or meadows, they nip the blades of grass sidewise, in the manner of the domestic Goose, and after rainy weather, they are frequently seen rapidly patting the earth with both feet, as if to force the earthworms from their burrows. If they dabble at times with their bills in muddy water, in search of food, this action is by no means so common with them as it is with Ducks, the Mallard for example. They are extremely fond of alighting in corn-fields covered with tender blades, where they often remain through the night and commit great havoc. Wherever you find them, and however remote from the haunts of man the place may be, they are at all times so vigilant and suspicious, that it is extremely rare to surprise them. In keenness of sight and acuteness of hearing, they are perhaps surpassed by no bird whatever. They act as sentinels towards each other, and during the hours at which the flock reposes, one or more ganders stand on the watch. At the sight of cattle, horses, or animals of the deer kind, they are seldom alarmed, but a bear or a cougar is instantly announced, and if on such occasions the flock is on the ground near water, the birds immediately betake themselves in silence to the latter, swim to the middle of the pond or river, and there remain until danger is over. Should their enemies pursue them in the water, the males utter loud cries, and the birds arrange themselves in close ranks, rise simultaneously in a few seconds, and fly off in a compact body, seldom at such times forming lines or angles, it being in fact only when the distance they have to travel is great that they dispose themselves in those forms. So acute is their sense of hearing, that they are able to distinguish the different sounds or footsteps of their foes with astonishing accuracy. Thus the breaking of a dry stick by a deer is at once distinguished from the same accident occasioned by a man. If a dozen of large turtles drop into the water, making a great noise in their fall, or if the same effect is produced by an alligator, the Wild Goose pays no regard to it; but however faint and distant may be the sound of an Indian's paddle, that may by accident have struck the side of his canoe, it is at once marked, every individual raises its head and looks intently towards the place from which the noise has proceeded, and in silence all watch the movements of their enemy.

These birds are extremely cunning also, and should they conceive themselves unseen, they silently move into the tall grasses by the margin of the water, lower their heads, and lie perfectly quiet until the boat has passed by. I have seen them walk off from a large frozen pond into the woods, to elude the sight of the hunter, and return as soon as he had crossed the pond. But should there be snow on the ice or in the woods, they prefer watching the intruder, and take to wing long before he is within shooting distance, as if

aware of the ease with which they could be followed by their tracks over the treacherous surface.

The Canada Geese are fond of returning regularly to the place which they have chosen for resting in, and this they continue to do until they find themselves greatly molested while there. In parts of the country where they are little disturbed, they seldom go farther than the nearest sandbank or the dry shore of the places in which they feed; but in other parts they retire many miles to spots of greater security, and of such extent as will enable them to discover danger long before it can reach them. When such a place is found, and proves secure, many flocks resort to it, but alight apart in separate groups. Thus, on some of the great sand-bars of the Ohio, the Mississippi, and other large streams, congregated flocks, often amounting to a thousand individuals, may be seen at the approach of night, which they spend there, lying on the sand within a few feet of each other, every flock having its own sentinel. In the dawn of next morning they rise on their feet, arrange and clean their feathers, perhaps walk to the water to drink, and then depart for their feeding-grounds.

When I first went to the Falls of the Ohio, the rocky shelvings of which are often bare for fully half a mile, thousands of Wild Geese of this species rested there at night. The breadth of the various channels that separate the rocky islands from either shore, and the rapidity of the currents which sweep along them, render this place of resort more secure than most others. The Wild Geese still betake themselves to these islands during winter for the same purpose, but their number has become very small; and so shy are these birds at present in the neighbourhood of Louisville, that the moment they are disturbed at the ponds where they go to feed each morning, were it but by the report of a single gun, they immediately return to their rocky asylums. Even there, however, they are by no means secure, for it not unfrequently happens that a flock alights within half gunshot of a person concealed in a pile of drifted wood, whose aim generally proves too true for their peace. Nay, I knew a gentleman, who had a large mill opposite Rock Island, and who used to kill the poor Geese at the distance of about a quarter of a mile, by means of a small cannon heavily charged with rifle bullets; and, if I recollect truly, Mr. TARASCON in this manner not unfrequently obtained a dozen or more Geese at a shot. This was done at dawn, when the birds were busily engaged in trimming their plumage with the view of flying off in a few minutes to their feeding-grounds. This war of extermination could not last long: the Geese deserted the fatal rock, and the great gun of the mighty miller was used only for a few weeks.

While on the water, the Canada Goose moves with considerable grace, and in its general deportment resembles the Wild Swan, to which I think it

is nearly allied. If wounded in the wing, they sometimes dive to a small depth, and make off with astonishing address, always in the direction of the shore, the moment they reach which, you see them sneaking through the grass or bushes, their necks extended an inch or so above the ground, and in this manner proceeding so silently, that, unless closely watched, they are pretty sure to escape. If shot at and wounded while on the ice, they immediately walk off in a dignified manner, as if anxious to make you believe that they have not been injured, emitting a loud note all the while; but the instant they reach the shore they become silent, and make off in the manner described. I was much surprised one day, while on the coast of Labrador, to see how cunningly one of these birds, which, in consequence of the moult, was quite unable to fly, managed for awhile to elude our pursuit. It was first perceived at some distance from the shore, when the boat was swiftly rowed towards it, and it swam before us with great speed, making directly towards the land; but when we came within a few yards of it, it dived, and nothing could be seen of it for a long time. Every one of the party stood on tiptoe to mark the spot at which it should rise, but all in vain, when the man at the rudder accidentally looked down over the stern and there saw the Goose, its body immersed, the point of its bill alone above water, and its feet busily engaged in propelling it so as to keep pace with the movements of the boat. The sailor attempted to catch it while within a foot or two of him, but with the swiftness of thought it shifted from side to side, fore and aft, until delighted at having witnessed so much sagacity in a *Goose*, I begged the party to suffer the poor bird to escape.

The crossing of the Canada Goose with the common domestic species has proved as advantageous as that of the wild with the tame Turkey, the cross breed being much larger than the original one, more easily raised, and more speedily fattened. This process is at present carried on to a considerable extent in our Western and Eastern States, where the hybrids are regularly offered for sale during autumn and winter, and where they bring a higher price than either of the species from which they are derived.

The Canada Goose makes its first appearance in the western country, as well as along our Atlantic coast, from the middle of September to that of October, arriving in flocks composed of a few families. The young birds procured at this early season soon get into good order, become tender and juicy, and therefore afford excellent eating. If a sportsman is expert and manages to shoot the old birds first, he is pretty sure to capture the less wily young ones afterwards, as they will be very apt to return to the same feeding places to which their parents had led them at their first arrival. To await their coming to a pond where they are known to feed is generally effectual, but to me this mode of proceeding never afforded much pleasure,

more especially because the appearance of any other bird which I wished to obtain would at once induce me to go after it, and thus frighten the game, so that I rarely procured any on such occasions. But yet, as I have witnessed the killing of many a fine Goose, I hope you will suffer me to relate one or two anecdotes connected with the shooting of this kind of game.

Reader, I am well acquainted with one of the best sportsmen now living in the whole of the western country, one possessed of strength, activity, courage, and patience,—qualities of great importance in a gunner. I have frequently seen him mount a capital horse of speed and bottom at midnight, when the mercury in the thermometer was about the freezing point, and the ground was covered with snow and ice, the latter of which so encased the trees that you might imagine them converted into glass. Well, off he goes at a round gallop, his steed rough shod, but nobody knows whither, save myself, who am always by his side. He has a wallet containing our breakfast, and abundance of ammunition, together with such implements as are necessary on occasions like the present. The night is pitch-dark, and dismal enough; but who cares! *He* knows the woods as well as any Kentucky hunter, and in this respect I am not much behind him. A long interval has passed, and now the first glimpse of day appears in the east. We know quite well where we are, and that we have travelled just twenty miles. The Barred Owl alone interrupts the melancholy silence of the hour. Our horses we secure, and on foot we move cautiously towards a “long pond,” the feeding-place of several flocks of Geese, none of which have yet arrived, although the whole surface of open water is covered with Mallards, Widgeons, Pintail Ducks, Blue-winged and Green-winged Teals. My friend’s gun, like mine, is a long and trusty one, and the opportunity is too tempting. On all fours we cautiously creep to the very edge of the pond; we now raise ourselves on our knees, level our pieces, and let fly. The woods resound with repeated echoes, the air is filled with Ducks of all sorts, our dogs dash into the half frozen water, and in a few minutes a small heap of game lies at our feet. Now, we retire, separate, and betake ourselves to different sides of the pond. If I may judge of my companion’s fingers by the state of my own, I may feel certain that it would be difficult for him to fasten a button. There we are shivering, with contracted feet and chattering teeth; but the Geese are coming, and their well known cry, *hawk, hawk, awhawk, awhawk*, resounds through the air. They wheel and wheel for awhile, but at length gracefully alight on the water, and now they play and wash themselves, and begin to look about for food. There must be at least twenty of them. Twenty more soon arrive, and in less than half an hour we have before us a flock of a hundred individuals. My experienced friend has put a snow-white shirt over his apparel, and although I am greatly intent on observing

his motions, I see that it is impossible even for the keen eye of the sentinel Goose to follow them. Bang, bang, quoth his long gun, and the birds in dismay instantly start, and fly towards the spot where I am. When they approach I spring up on my feet, the Geese shuffle, and instantaneously rise upright; I touch my triggers singly, and broken-winged and dead two birds come heavily to the ground at my feet. Oh that we had more guns! But the business at this pond has been transacted. We collect our game, return to our horses, fasten the necks of the Geese and Ducks together, and throwing them across our saddles, proceed towards another pond. In this manner we continue to shoot until the number of Geese obtained would seem to you so very large that I shall not specify it.

At another time my friend proceeds alone to the Falls of the Ohio, and, as usual, reaches the margins of the stream long before day. His well-trained steed plunges into the whirls of the rapid current, and, with some difficulty, carries his bold rider to an island, where he lands drenched and cold. The horse knows what he has to do as well as his master, and while the former ranges about and nips the frozen herbage, the latter carefully approaches a well-known pile of drifted wood, and conceals himself in it. His famous dog Nep is close at his heels. Now the dull grey dawn gives him a dim view of the Geese; he fires, several fall on the spot, and one severely wounded rises and alights in the Indian Chute. Neptune dashes after it, but as the current is powerful, the gunner whistles to his horse, who, with pricked ears, gallops up. He instantly vaults into the saddle, and now see them plunge into the treacherous stream. The wounded game is overtaken, the dog is dragged along, and at length on the Indiana shore the horse and his rider have effected a landing. Any other man than he of whose exploits I am the faithful recorder, would have perished long ago. But it is not half so much for the sake of the game that he undergoes all this labour and danger, as for the gratification it affords his kind heart to distribute it among his numerous friends in Louisville.

On our eastern shores matters are differently managed. The gunners there shoot Geese with the prospect of pecuniary gain, and go to work in another way. Some attract them with wooden geese, others with actual birds; they lie in ambush for many hours at a time, and destroy an immense number of them, by using extremely long guns; but as there is little sport in this sort of shooting, I shall say no more about it. Here the Canada Goose feeds much on a species of long slender grass, the *Zostera marina*, along with marine insects, crustacea, and small shell-fish, all of which have a tendency to destroy the agreeable flavour which their flesh has when their food consists of fresh-water plants, corn, and grass. They spend much of their time at some distance from the shores, become more shy, diminish in

bulk, and are much inferior as food to those which visit the interior of the country. None of these, however, are at all to be compared with the goslings bred in the inland districts, and procured in September, when, in my opinion, they far surpass the renowned Canvass-backed Duck.

A curious mode of shooting the Canada Goose I have practised with much success. I have sunk in the sand of the bars to which these birds resort at night, a tight hogshead, to within an inch of its upper edges, and placing myself within it at the approach of evening, have drawn over me a quantity of brushwood, placing my gun on the sand, and covering it in like manner with twigs and leaves. The birds would sometimes alight very near me, and in this concealment I have killed several at a shot; but the stratagem answers for only a few nights in the season. During severe winters these birds appear to be able to keep certain portions of the deepest part of a pond quite open and free from ice, by their continued movements in the water; at all events, such open spaces occasionally occur in ponds and lakes, and are resorted to by the Geese, among which great havoc is made.

While we were at Newfoundland, on our return from Labrador, on the 15th August, 1833, small flocks of the Canada Goose were already observed flying southward. In that country their appearance is hailed with delight, and great numbers of them are shot. They breed rather abundantly by the lakes of the interior of that interesting country. In the harbour of Great Macatina in Labrador, I saw a large pile of young Canada Geese, that had been procured a few days before, and were already salted for winter use. The pile consisted of several hundred individuals, all of which had been killed before they were able to fly. I was told there that this species fed much on the leaves of the dwarf firs, and, on examining their gizzards, found the statement to be correct.

The young dive very expertly, soon after their reaching the water, at the least appearance of danger. In the Southern and Western States, the enemies of the Canada Goose are, by water, the alligator, the garfish, and the turtle; and on land, the cougar, the lynx, and the racoon. While in the air, they are liable to be attacked by the White-headed Eagle. It is a very hardy bird, and individuals have been kept in a state of captivity or domestication for upwards of forty years. Every portion of it is useful to man, for besides the value of the flesh as an article of food, the feathers, the quills, and the fat, are held in request. The eggs also afford very good eating.

CANADA GOOSE, *Anas canadensis*, Wils. Amer. Orn., vol. viii. p. 52.

ANSER CANADENSIS, Bonap. Syn., p. 377.

ANSER CANADENSIS, *Canada Goose*, Swains. and Rich. F. Bor. Amer., vol. ii. p. 468.

CANADA GOOSE, Nutt. Man., vol. ii. p. 349.

CANADA GOOSE, *Anser canadensis*, Aud. Orn. Biog., vol. iii. p. 1; vol. v. p. 607.

Male, 43, 65. Female, 41.

Breeds sparingly from the Mississippi to Nova Scotia; abundantly in Labrador, and farther north. In the interior, on the Missouri, and across to the Columbia river. Abundant. Migrates far south in winter.

Adult Male.

Bill shorter than the head, rather 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, the sides sloping, the edges soft and obtuse, the oblique marginal lamellæ short, transverse, about thirty on each side; the unguis obovate, convex, denticulate on the inner 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 straight, with the angle very long, narrow, and rounded, the edges soft and obtuse, with about thirty oblique lamellæ on a perpendicular plane.

Head small, oblong, compressed. Neck long and slender. Body full, slightly depressed. Feet short, stout, placed behind the centre of the body; legs bare a little above the tibio-tarsal joint; tarsus 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 a little 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 with a thick margin, the inner with the margin extended into a two-lobed web; claws small, arched, rather compressed, except that of the middle toe, which is bent obliquely outwards and depressed, with a curved edge. Wings of moderate length, with an obtuse protuberance at the flexure.

Plumage close, rather short, compact above, blended on the neck and lower parts of the body. The feathers of the head and neck very narrow, of the back very broad and abrupt, of the breast and belly broadly rounded. Wings, when closed, extending to about an inch from the end of the tail, acute; primaries very strong, curved, the second longest, the third slightly shorter, the first almost as long as the third, the rest rapidly graduated; secondaries long, rather narrow, rounded. Tail very short, rounded, of eighteen stiff, rounded, but acuminate, feathers.

Bill, feet, and claws black. Iris chestnut-brown. Head and two upper thirds of the neck glossy black; forehead, cheeks, and chin tinged with brown; lower eyelid white; a broad band of the same across the throat to

behind the eyes; rump and tail-feathers also black. The general colour of the rest of the upper parts is greyish-brown, the wing-coverts shaded into ash-grey; all the feathers terminally edged with very pale brown; the lower part of the neck passing into greyish-white, which is the general colour of the lower parts, with the exception of the abdomen, which is pure white, the sides, which are pale brownish-grey, the feathers tipped with white, and the lower wing-coverts, which are also pale brownish-grey. The margins of the rump, and the upper tail-coverts, pure white.

In very old males, I have found the breast of a fine pale buff.

Length to end of tail 43 inches, extent of wings 65; bill along the ridge $2\frac{1}{2}$, in depth at the base $1\frac{2}{12}$, in breadth 1; tarsus $3\frac{7}{12}$; middle toe and claw $4\frac{1}{4}$; wing from flexure 20; tail $7\frac{1}{2}$. Weight 7 lbs.

Adult Female.

The female is somewhat less than the male, but similar in colouring, although the tints are duller. The white of the throat is tinged with brown; the lower parts are always more grey, and the black of the head, neck, rump, and tail, is shaded with brown.

Length 41 inches. Weight $5\frac{3}{4}$ lbs.

Male, presented by Dr. T. M. BREWER of Boston. The mouth is 1 inch 2 twelfths in width; the anterior part of its roof, which is concave, is beautifully marked with a middle tuberculated ridge, two lateral ridges of lamelliform tubercles, and between them a number of irregularly dispersed tubercles, besides the lateral lamellæ properly so called, of which there are 38 on each side; the lamellæ of the lower mandible are 50. The tongue is $2\frac{1}{4}$ inches long, fleshy, with a deep median groove, a lateral series of small, tapering, acute, reversed papillæ, and a semicircular tip, having a very thin horny edge. The posterior aperture of the nares is oblongo-linear, $1\frac{1}{4}$ inches in length. The œsophagus, *a b c d*, is 22 inches long; for 12 inches its width is only 9 twelfths, but on entering the thorax it expands, at *b*, to $1\frac{5}{12}$ inches, then contracts a little, in the proventricular portion, *c d*, again enlarges to $1\frac{1}{2}$ inches, and finally to $1\frac{3}{4}$ inches. The stomach, *d e f g*, is an extremely developed gizzard, of a transversely elliptical form, placed obliquely, $4\frac{1}{2}$ inches in breadth, 2 inches 10 twelfths in length; the left muscle 1 inch 9 twelfths thick, the right 2 inches; the epithelium forms two transversely, elliptical, concave, grinding surfaces, of great density (but is altogether wanting on the rest of the inner surface, although this may have happened after death). The proventricular glands are very small, cylindrical, $2\frac{1}{2}$ twelfths in length, and form a belt 2 inches in breadth. The duodenum curves at the distance of 8 inches, and there are formed 12 folds by the intestine, which is 10 feet in length, 10 twelfths in width at the upper part, afterwards $7\frac{1}{2}$ twelfths, until towards the rectum, when it

enlarges to 9 twelfths. The cœca are $9\frac{1}{2}$ inches long, 7 twelfths in their greatest width, but only 2 twelfths at the commencement, their extremity narrow but obtuse. The rectum is $8\frac{1}{2}$ inches long; there is no remarkable cloacal enlargement.

The sternum is very similar to that of a Swan; its length $6\frac{1}{2}$ inches, its

breadth at the anterior costal processes 3 inches; the height of the crest 1 inch 10 twelfths. The liver is small, the left lobe, which is 3 inches in length, covering but a very small portion of the stomach; the right lobe is 5 inches in length; the gall-bladder 2 inches 9 twelfths in length, 8 twelfths in breadth, but contracted to 3 twelfths at the distance of 10 twelfths from the extremity, where it enlarges to about 5 twelfths. The heart is 3 inches long, $2\frac{1}{4}$ inches in breadth at the base.

The trachea measures $20\frac{1}{2}$ inches in length. At first it inclines a little to the left side, then on the anterior concave curve of the neck passes gradually to the right side, along which it proceeds as far as the lower part of the convex curve, when it separates in front from the neck, and forms a loop or abrupt curve, which is attached to the anterior part of the sternum, between the coracoid bones, thus approximating to the trachea of the Swans, but not entering the crest of the sternum. It then passes directly along the spine to behind the middle of the heart, where it bifurcates. In this respect also it is singular, in being more elongated than in the other species, of which the bifurcation is considerably anterior to the heart. At the commencement its breadth is 6 twelfths; presently after it enlarges to 8 twelfths, then contracts to 6 twelfths, and so continues until it begins to form the loop, on which its breadth is again 8 twelfths; after this it gradually tapers, so as to be only $2\frac{1}{2}$ twelfths wide at the inferior larynx, where its depth, however, is 5 twelfths. The form of that part is much the same as in the Swans, there being a similar elevated, bony, curved edge on each side, projecting beyond the commencement of the membrane of the bronchus, which is $\frac{1}{2}$ inch in length before the first ring appears. These membranes form a pretty large sac of a triangular form; and the continuation of the bronchus is extremely diminutive, with only 10 very small and slender cartilaginous half rings. The lateral muscles are large; their anterior part gives off the sterno-tracheal at the distance of $2\frac{1}{4}$ inches from the inferior larynx; but the posterior part, which is much larger, runs down 1 inch farther, and then terminates in a pointed form, not extending so far as to constitute an inferior laryngeal muscle. The rings of the trachea are broad, very firm, considerably flattened, 220 in number.

Canada Goose.

1. Male. 2. Female.

Audubon, John James. 1843. "The Canada Goose, *Anser canafensis*, Linn. [Pl. 376]." *The birds of America : from drawings made in the United States and their territories* 6, 178–197. <https://doi.org/10.5962/p.319490>.

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