+CYGNUS BUCCINATOR, Richardson.

PLATE CCCLXXXII.-Adult. PLATE CCCLXXXIII.-Young in Winter.

The history of the American Swans has been but very slightly traced. Few records of the habits of these majestic, elegant, and useful birds exist, on which much reliance can be placed; their geographical range still remains an unsolved problem; one species has been mistaken for another, and this by ornithologists who are said to be of the first order. The *Cygnus Bewickii* of Great Britain has been given as a North American Swan in place of *Cygnus Americanus* (well described by Dr. SHARPLESS of Philadelphia) in the Fauna Boreali-Americana; and the latter bird has been taken for the Whistling Swan, *C. musicus* of BECHSTEIN, by the Prince of MUSIGNANO, who says in his Synopsis, p. 379, No. 321, that it is "very numerous in winter in Chesapeake Bay." It is possible that we may have more than two species of Swan within the limits of North America, but I am at present acquainted with only that which forms the subject of this article, and the *Cygnus Americanus* of SHARPLESS.

In a note contained in the Journals of LEWIS and CLARK, written in the course of the expedition of these daring travellers across the Rocky Mountains, it is stated that "the Swans are of two kinds, the large and small. The large Swan is the same with the one common in the Atlantic States. The small differs from the large only in size and note; it is about one fourth less, and its note is entirely different. These birds were first found below the great narrows of the Columbia, near the Chilluckittequaw nation. They are very abundant in this neighbourhood, and remained with the party all winter, and in number they exceed those of the larger species in the proportion of five to one." These observations are partly correct and partly erroneous. In fact, the smaller species of the two, which is the C. Americanus of SHARPLESS, is the only one abundant in the middle districts of our Atlantic coast, while the larger Swan, the subject of this article, is rarely if ever seen to the eastward of the mouths of the Mississippi. A perfect specimen of the small Swan mentioned by LEWIS and CLARK has been transmitted to me from the Columbia river by Mr. TOWNSEND, and I find it to correspond in every respect with the C. Americanus of SHARPLESS. Mr.

TOWNSEND corroborates the observations of the two eminent travellers by stating, that the latter species is much more numerous than the large C. *Buccinator*.

The Trumpeter Swans make their appearance on the lower portions of the waters of the Ohio about the end of October. They throw themselves at once into the larger ponds or lakes at no great distance from the river, giving a marked preference to those which are closely surrounded by dense and tall cane-brakes, and there remain until the water is closed by ice, when they are forced to proceed southward. During mild winters I have seen Swans of this species in the ponds about Henderson until the beginning of March, but only a few individuals, which may have staid there to recover from their wounds. When the cold became intense, most of those which visited the Ohio would remove to the Mississippi, and proceed down that stream as the severity of the weather increased, or return if it diminished; for it has appeared to me, that neither very intense cold nor great heat suit them so well as a medium temperature. I have traced the winter migrations of this species as far southward as Texas, where it is abundant at times, and where I saw a pair of young ones in captivity, and quite domesticated, that had been procured in the winter of 1836. They were about two years old, and pure white, although of much smaller size than even the younger one represented in the plate before you, having perhaps been stinted in food, or having suffered from their wounds, as both had been shot. The sound of their wellknown notes reminded me of the days of my youth, when I was half-yearly in the company of birds of this species.

At New Orleans, where I made the drawing of the young bird here given, the Trumpeters are frequently exposed for sale in the markets, being procured on the ponds of the interior, and on the great lakes leading to the waters of the Gulf of Mexico. This species is unknown to my friend, the Rev. JOHN BACHMAN, who, during a residence of twenty years in South Carolina, never saw or heard of one there; whereas in hard winters the *Cygnus Americanus* is not uncommon, although it does not often proceed farther southward than that State. The waters of the Arkansas and its tributaries are annually supplied with Trumpeter Swans, and the largest individual which I have examined was shot on a lake near the junction of that river with the Mississippi. It measured nearly ten feet in alar extent, and weighed above thirty-eight pounds. The quills, which I used in drawing the feet and claws of many small birds, were so hard, and yet so elastic, that the best steel-pen of the present day might have blushed, if it could, to be compared with them.

Whilst encamped in the Tawapatee Bottom, when on a fur-trading voyage, our keel-boat was hauled close under the eastern shore of the Mississippi,

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and our valuables, for I then had a partner in trade, were all disembarked. The party consisted of twelve or fourteen French Canadians, all of whom were pretty good hunters; and as game was in those days extremely abundant, the supply of deer, bear, racoons, and opossums, far exceeded our demands. Wild Turkeys, Grouse, and Pigeons, might have been seen hanging all around; and the ice-bound lakes afforded an ample supply of excellent fish, which was procured by striking a strong blow with an axe on the ice immediately above the confined animal, and afterwards extricating it by cutting a hole with the same instrument. The great stream was itself so firmly frozen that we were daily in the habit of crossing it from shore to shore. No sooner did the gloom of night become discernible through the grey twilight, than the loud-sounding notes of hundreds of Trumpeters would burst on the ear; and as I gazed over the ice-bound river, flocks after flocks would be seen coming from afar and in various directions, and alighting about the middle of the stream opposite to our encampment. After pluming themselves awhile they would quietly drop their bodies on the ice, and through the dim light I yet could observe the graceful curve of their necks, as they gently turned them backwards, to allow their heads to repose upon the softest and warmest of pillows. Just a dot of black as it were could be observed on the snowy mass, and that dot was about half an inch of the base of the upper mandible, thus exposed, as I think, to enable the bird to breathe with ease. Not a single individual could I ever observe among them to act as a sentinel, and I have since doubted whether their acute sense of hearing was not sufficient to enable them to detect the approach of their enemies. The day quite closed by darkness, no more could be seen until the next dawn; but as often as the howlings of the numerous wolves that prowled through the surrounding woods were heard, the clanging cries of the Swans would fill the air. If the morning proved fair, the flocks would rise on their feet, trim their plumage, and as they started with wings extended, as if racing in rivalry, the pattering of their feet would come on the ear like the noise of great muffled drums, accompanied by the loud and clear sounds of their voice. On running fifty yards or so to windward, they would all be on wing. If the weather was thick, drizzly, and cold, or if there were indications of a fall of snow, they would remain on the ice, walking, standing, or lying down, until symptoms of better weather became apparent, when they would all start off. One morning of this latter kind, our men formed a plot against the Swans, and having separated into two parties, one above, the other below them on the ice, they walked slowly, on a signal being given from the camp, toward the unsuspecting birds. Until the boatmen had arrived within a hundred and fifty yards of them, the Swans remained as they were, having become, as it would appear, acquainted with us, in

consequence of our frequently crossing the ice; but then they all rose on their feet, stretched their necks, shook their heads, and manifested strong symptoms of apprehension. The gunners meanwhile advanced, and one of the guns going off by accident, the Swans were thrown into confusion, and scampering off in various directions took to wing, some flying up, some down the stream, others making directly toward the shores. The muskets now blazed, and about a dozen were felled, some crippled, others quite dead. That evening they alighted about a mile above the camp, and we never went after them again. I have been at the killing of several of these Swans, and I can assure you that unless you have a good gun well loaded with large buck-shot, you may shoot at them without much effect, for they are strong and tough birds.

To form a perfect conception of the beauty and elegance of these Swans, you must observe them when they are not aware of your proximity, and as they glide over the waters of some secluded inland pond. On such occasions, the neck, which at other times is held stiffly upright, moves in graceful curves, now bent forward, now inclined backwards over the body. Now with an extended scooping movement the head becomes immersed for a moment, and with a sudden effort a flood of water is thrown over the back and wings, when it is seen rolling off in sparkling globules, like so many large pearls. The bird then shakes its wings, beats the water, and as if giddy with delight shoots away, gliding over and beneath the surface of the liquid element with surprising agility and grace. Imagine, reader, that a flock of fifty Swans are thus sporting before you, as they have more than once been in my sight, and you will feel, as I have felt, more happy and void of care than I can describe.

When swimming unmolested the Swan shews the body buoyed up; but when apprehensive of danger, it sinks considerably lower. If resting and basking in the sunshine, it draws one foot expanded curiously towards the back, and in that posture remains often for half an hour at a time. When making off swiftly, the tarsal joint, or knee as it is called, is seen about an inch above the water, which now in wavelets passes over the lower part of the neck and along the sides of the body, as it undulates on the planks of a vessel gliding with a gentle breeze. Unless during the courting season, or while passing by its mate, I never saw a Swan with the wings raised and expanded, as it is alleged they do, to profit by the breeze that may blow to assist their progress; and yet I have pursued some in canoes to a considerable distance, and that without overtaking them, or even obliging them to take to wing. You, reader, as well as all the world, have seen Swans labouring away on foot, and therefore I will not trouble you with a description of their mode of walking, especially as it is not much to be admired. The flight of the Trumpeter Swan is firm, at times greatly elevated and sustained. It passes through the air by regular beats, in the same manner as Geese, the neck stretched to its full length, as are the feet, which project beyond the tail. When passing low, I have frequently thought that I heard a rustling sound from the motion of the feathers of their wings. If bound to a distant place, they form themselves in angular lines, and probably the leader of the flock is one of the oldest of the males; but of this I am not at all sure, as I have seen at the head of a line a grey bird, which must have been a young one of that year.

This Swan feeds principally by partially immersing the body and extending the neck under water, in the manner of fresh-water Ducks and some species of Geese, when the feet are often seen working in the air, as if to aid in preserving the balance. Often however it resorts to the land, and then picks at the herbage, not sidewise, as Geese do, but more in the manner of Ducks and poultry. Its food consists of roots of different vegetables, leaves, seeds, various aquatic insects, land snails, small reptiles and quadrupeds. The flesh of a cygnet is pretty good eating, but that of an old bird is dry and tough.

I kept a male alive upwards of two years, while I was residing at Henderson in Kentucky. It had been slightly wounded in the tip of the wing, and was caught after a long pursuit in a pond from which it could not escape. Its size, weight, and strength rendered the task of carrying it nearly two miles by no means easy; but as I knew that it would please my wife and my then very young children, I persevered. Cutting off the tip of the wounded wing, I turned it loose in the garden. Although at first extremely shy, it gradually became accustomed to the servants, who fed it abundantly, and at length proved so gentle as to come to my wife's call, to receive bread from her hand. "Trumpeter," as we named our bird, in accordance with the general practice of those who were in the habit of shooting this species, now assumed a character which until then had been unexpected, and laying aside his timidity became so bold at times as to give chase to my favourite Wild Turkey Cock, my dogs, children, and servants. Whenever the gates of our yard happened to be opened, he would at once make for the Ohio, and it was not without difficulty that he was driven home again. On one occasion, he was absent a whole night, and I thought he had fairly left us; but intimation came of his having travelled to a pond not far distant. Accompanied by my miller and six or seven of my servants, I betook myself to the pond, and there saw our Swan swimming buoyantly about as if in defiance of us all. It was not without a great deal of trouble that we at length succeeded in driving it ashore. Pet birds, good reader, no matter of what species they are, seldom pass their lives in accordance with the wishes

of their possessors; in the course of a dark and rainy night, one of the servants having left the gate open, Trumpeter made his escape, and was never again heard of.

With the manners of this species during the breeding season, its mode of constructing its nest, the number of its eggs, and the appearance of its young, I am utterly unacquainted. The young bird represented in the plate was shot near New Orleans, on the 16th of December, 1822.

Dr. RICHARDSON informs us that it "is the most common Swan in the interior of the Fur Countries. It breeds as far south as lat. 61°, but principally within the arctic circle, and in its migrations generally precedes the Geese a few days."

CYGNUS BUCCINATOR, Richardson's Trumpeter Swan, F. Bor. Amer., vol. ii. p. 464. TRUMPETER SWAN, Cygnus Buccinator, Nutt. Man., vol. ii. p. 370. TRUMPETER SWAN, Cygnus Buccinator, Aud. Orn. Biog., vol. iv. p. 536; vol. v. p. 114.

Adult, 68; wing, 27. Young, 521, 91.

Breeds from North California northward. Fur Countries. Abundant during winter on the Missouri, Mississippi, Ohio, and in Texas. Never seen eastward of South Carolina.

Adult Male.

Bill longer than the head, higher than broad at the base, depressed, and a little widened toward the end, rounded at the tip. Upper mandible with the dorsal line sloping, the ridge very broad at the base, with a large depression, narrowed between the nostrils, convex toward the end, the sides nearly erect at the base, gradually becoming more horizontal and convex toward the end, the sides soft and thin, with forty-five transverse, little elevated lamellæ internally, the unguis obovate. Lower mandible narrow, flattened, with the angle very long, rather narrow, anteriorly rounded, the sides convex, the edges erect, inclinate, with about twenty-six external lamellæ, and about seventy above, the unguis obovate-triangular. Nasal groove elliptical, sub-basal, covered by the soft membrane of the bill; nostrils submedial, longitudinal, placed near the ridge, elliptical, pervious.

Head of moderate size, oblong, compressed; neck extremely long and slender; body very large, compact, depressed. Feet short, stout, placed a little behind the centre of the body; legs bare, an inch and a half above the joint; tarsus short, a little compressed, covered all round with angular scales, of which the posterior are extremely small. Hind toe extremely small, with a very narrow membrane; third toe longest, fourth very little shorter, second considerably shorter; anterior toes covered with angular scales for nearly half the length, scutellate in the rest of their extent, and connected by

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broad reticulated entire membranes. Claws rather small, strong, arched, compressed, rather obtuse, that of the middle toe much larger, with a dilated thin edge.

A portion of the forehead about half an inch in length, and the space intervening between the bill and the eye, are bare. Plumage dense, soft, and elastic; on the head and neck the feathers oblong, acuminate; on the other parts in general broadly ovate and rounded, on the back short and compact. Wings long and broad, the anterior protuberance of the first phalangeal bone very prominent; primaries curved, stiff, tapering to an obtuse point; the second longest, exceeding the first by half an inch, and the third by a quarter of an inch; secondaries very broad and rounded, some of the inner rather pointed. Tail very short, graduated, of twenty-four stiffish, moderately broad, rather pointed feathers, of which the middle exceeds the lateral by two inches and a quarter.

Bill and feet black, the outer lamellate edges of the lower mandible, and the inside of the mouth, yellowish flesh-colour. The plumage is pure white, excepting the upper part of the head, which varies from brownish-red to white, apparently without reference to age or sex, as in *Cygnus Americanus* and *Anser hyperboreus*.

Length to end of tail 68 inches; bill along the ridge $4\frac{7}{12}$, from the eye to the tip 6, along the edge of lower mandible $4\frac{7}{12}$; breadth of upper mandible near the base $1\frac{5}{12}$, near the end $1\frac{6\frac{1}{2}}{12}$; wing from flexure 27; tail $8\frac{1}{2}$; tarsus $4\frac{8}{12}$; first toe $\frac{10\frac{1}{2}}{12}$, its claw $\frac{5}{12}$; second toe $4\frac{9}{12}$, its claw 1; third toe 6, its claw $1\frac{1\frac{1}{2}}{12}$; fourth toe $5\frac{11}{12}$, its claw $\frac{10\frac{1}{2}}{12}$.

Young after first moult.

In winter the young has the bill black, with the middle portion of the ridge, to the length of an inch and a half, light flesh-colour, and a large elongated patch of light dull purple on each side; the edge of the lower mandible and the tongue dull yellowish flesh-colour. The eye is dark brown. The feet dull yellowish-brown, tinged with olive; the claws brownish-black; the webs blackish-brown. The upper part of the head and the cheeks are light reddish-brown, each feather having towards its extremity a small oblong whitish spot, narrowly margined with dusky; the throat nearly white, as well as the edge of the lower eyelid. The general colour of the other parts is greyish-white, slightly tinged with yellow; the upper part of the neck marked with spots similar to those on the head.

Length to end of tail $52\frac{1}{2}$ inches; extent of wings 91, wing from flexure $23\frac{1}{4}$; bill along the ridge $4\frac{3}{8}$, from the angle of the eye 6, along the edge of the lower mandible $4\frac{1}{8}$; tarsus $4\frac{1}{2}$; hind toe $1\frac{1}{4}$, its claw $\frac{3}{8}$; middle toe $6\frac{1}{4}$, its claw 1; inner toe $4\frac{1}{2}$, its claw $\frac{10}{12}$; outer toe $6\frac{1}{4}$, its claw $\frac{3}{4}$. Weight 19 lbs. S oz.; the bird very poor.

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Brawn from Nature by J.J. Audubon, F.R.S. P.L.S.

Irumefector Juran.







Audubon, John James. 1843. "Trumpeter Swan, Cygnus buccinator, Richardson [Pl. 382-383]." *The birds of America : from drawings made in the United States and their territories* 6, 219–225. <u>https://doi.org/10.5962/p.319496</u>.

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