THE BELTED KINGFISHER.

+ALCEDO ALCYON, *Linn.*

PLATE CCLV.—MALE AND FEMALE.

You must not suppose, good-natured reader, that the lives which I try to write, are short or lengthy according to the natural dimensions of the objects themselves; for if, with the representation of a large bird, I present you with a long history of its habits, it is merely because that bird, being perhaps more common, and therefore more conspicuous, I have had better and more frequent opportunities of studying them. This happens to be the case with the bird which I proceed to describe.

The Belted Kingfisher!—Now, kind reader, were I infected with the desire of giving new names to well-known objects, you may be assured that, notwithstanding the partly appropriate name given to this bird, I should call it, as I think it ought to have been called, the *United States' Kingfisher*. My reason for this will, I hope, become apparent to you, when I say that it is the only bird of its genus found upon the inland streams of the Union. Another reason of equal force might be adduced, which is, that, although the males of all denominations have, from time immemorial, obtained the supremacy, in this particular case the term Belted applies only to the female, the male being destitute of the belt or band by which she is distinguished.

This species is a constant resident in the States of Louisiana, Mississippi, Arkansas, and all the districts that lie to the south of North Carolina. Its inland migrations along the windings of our noble rivers extend far and wide, over the whole of the United States. In all those portions which I have visited it also breeds, although it returns to the south from many parts during severe winters.

The flight of this bird is rapid, and is prolonged according to its necessities, extending at times to considerable distances, in which case it is performed high in the air. When, for instance, the whole course of one of our northern rivers becomes frozen, the Kingfisher, instead of skimming closely over the surface that no longer allows it to supply itself with food, passes high above the tallest trees, and takes advantage of every short cut which the situation of the river affords. By this means it soon reaches a milder climate. This is also frequently the case, when it seems tired of the kind of fish that occurs in a lake, and removes to another in a direct line, passing over the

forests, not unfrequently by a course of twenty or thirty miles towards the interior of the country. Its motions when on wing consist of a series of flaps, about five or six in number, followed by a direct glide, without any apparent undulation. It moves in the same way when flying closely over the water.

If, in the course of such excursions, the bird passes over a small pool, it suddenly checks itself in its career, poises itself in the air, like a Sparrow Hawk or Kestrel, and inspects the water beneath, to discover whether there may be fishes in it suitable to its taste. Should it find this to be the case, it continues poised for a few seconds, dashes spirally headlong into the water, seizes a fish, and alights on the nearest tree or stump, where it swallows its prey in a moment.

The more usual range of the Belted Kingfisher, however, is confined to the rivers and creeks that abound throughout the United States; all of which, according to the seasons, are amply supplied with various fishes, on the fry of which this bird feeds. It follows their course up to the very source of the small rivulets; and it is not unusual to hear the hard, rapid, rattling notes of our Kingfisher, even amongst the murmuring cascades of our higher mountains. When the bird is found in such sequestered situations, well may the angler be assured that trout is abundant. Mill-ponds are also favourite resorts of the Kingfisher, the usual calmness of the water in such places permitting it to discover its prey with ease. As the freshets are proportionally less felt on the adjoining shores, the holes dug in the earth or sand by this species, in which it deposits its eggs, are generally found in places not far from a mill worked by water.

I have laid open to my view several of these holes, in different situations and soils, and have generally found them to be formed as follows. The male and female, after having fixed upon a proper spot, are seen clinging to the bank of the stream in the manner of Woodpeckers. Their long and stout bills are set to work, and as soon as the hole has acquired a certain depth, one of the birds enters it, and scratches out the sand, earth or clay, with its feet, striking meanwhile with its bill to extend the depth. The other bird all the while appears to cheer the labourer, and urge it to continue its exertions; and, when the latter is fatigued, takes its place. Thus, by the co-operation of both, the hole is dug to the depth of four, five, or sometimes six feet, in an horizontal direction, at times not more than eighteen inches below the surface of the ground, at others eight or ten feet. At the Chicasaw Bluffs, on the Mississippi, I have seen some of these holes more than fifty feet below the surface, but generally beyond reach of the highest freshets. The hole is just large enough to admit the passage of a single bird at a time. The end is rounded and finished in the form of a common oven, to allow the

pair or the whole brood to turn round in it at ease. Here, on a few sticks and feathers, the eggs are deposited to the number generally of six. They are pure white. Incubation continues for sixteen days. In the Middle States, these birds seldom raise more than one brood in the year, but in the southern usually two. Incubation is performed by both parents, which evince great solicitude for the safety of their young. The mother sometimes drops on the water, as if severely wounded, and flutters and flounders as if unable to rise from the stream, in order to induce the intruder to wade or swim after her, whilst her mate, perched on the nearest bough, or even on the edge of the bank, jerks his tail, erects his crest, rattles his notes with angry vehemence, and then springing off, passes and repasses before the enemy, with a continued cry of despair.

I have not been able to ascertain whether or not the young are fed with macerated food disgorged by the parents into their bills, but I have reason to think so, and I have always observed the old ones to swallow the fishes which they had caught, before they entered the hole. The young are, however, afterwards fed directly on the entire fish; and I have frequently seen them follow the parent birds, and alight on the same branch, flapping their wings, and calling with open bill for the food just taken out of the water, when the petition was seldom denied.

The Kingfisher resorts to the same hole, to breed and roost, for many years in succession. On one occasion, when I attempted to secure one of these birds, long after night had closed, I tried in vain. The first time I fitted a small net bag to the entrance, and returned home. Next morning the bird had scratched a passage under the net, and thus escaped. The following evening I saw it enter the hole, and having procured a stick that filled the entrance for upwards of a foot, I felt certain of obtaining it; but before I reached the place next day, it had worked its way out. After this, I abandoned my attempt, although the bird continued to repose in the same hole.

No superstitious notions exist in the United States respecting this species. The flesh is extremely fishy, oily, and disagreeable to the taste. On the contrary, the eggs are fine eating.

I was ready to put my pen aside, kind reader, when, on consulting my journals, all of which are now at hand, I happened to read, that I have seen instances of this bird's plunging into the sea after small fry, at Powles Hook, in the bay opposite to the city of New York. I am not aware that this is a common occurrence.

Mr. TOWNSEND found this species on the Missouri, the Rocky Mountains, and the Columbia river. Dr. RICHARDSON informs us that it frequents all the large rivers in the Fur Countries up to the 67th degree of latitude, and I

have met with it from within the Texas to the shores of Labrador. I have also seen it on the higher and sandy Keys of the Floridas, where, however, I am not sure that it breeds. I have seen this bird fishing in salt water in a great number of instances. It is extremely hardy, and those individuals, which migrate northward to breed, seldom return towards our Southern States, where they spend the winter, until absolutely forced to do so by the great severity of the weather. The eggs measure $1\frac{1}{4}$ inches in length, by 1 inch in breadth, and are thus of a roundish form. Dr. BREWER of Boston informs me, that it abounds on the borders of all the ponds and rivers in Massachusetts, and that he found a nest containing two eggs on a hard gravel bank, on the borders of Charles river, Cambridge.

BELTED KINGFISHER, *Alcedo Alcyon*, Wils. Amer. Orn., vol. iii. p. 59.

ALCEDO ALCYON, Bonap. Syn., p. 48.

ALCEDO ALCYON, *Belted Kingfisher*, Swains. and Rich. F. Bor. Amer., vol. ii. p. 339.

BELTED KINGFISHER, Nutt. Man., vol. i. p. 594.

BELTED KINGFISHER, *Alcedo Alcyon*, Aud. Orn. Biog., vol. i. p. 394; vol. v. p. 548.

Male, $12\frac{1}{2}$, 20.

Breeds from Texas all over the United States, to the Fur Countries, Missouri, Rocky Mountains, and Columbia river. Common. Resident.

Adult Male.

Bill long, straight, tetragonal, tapering to an acute point, compressed towards the end; upper mandible keeled, with the dorsal line straight, the edges overlapping; lower mandible with the dorsal line slightly convex, the tip ascending; gap-line extending to beneath the eyes. Nostrils basal, dorsal, oblong, oblique, half-closed by a bare membrane. Head large, neck short, body robust. Feet very short; tarsus roundish, anteriorly scutellate, half the length of the middle toe; outer and middle toes nearly equal, inner much shorter, hind toe small; claws rather strong, arched, acute, channelled beneath.

Plumage compact. Feathers of the head long, narrow, rather loose, pointed, and erectile, in the form of a longitudinal crest, of which the anterior feathers are longest. Wings longish, the third primary longest. Tail short, even, of twelve broad rounded feathers.

Bill brownish-black, light greenish-blue at the base. Iris hazel. Feet greyish-blue; claws black. Head, cheeks, hind neck and upper parts generally light blue, the shaft of each feather blackish. A white spot before the eye, and a slight streak of the same colour on the under eyelid. Quills brownish-black, the base of the primaries barred with white, the secondaries blue on the outer web. Two middle tail-feathers blue, as are the outer edges

of the rest, excepting the outermost; all, excepting the two middle ones, brownish-black, barred with white. A broad band of white across the neck, broader anteriorly and including the chin and throat. A band of blue across the fore part of the breast. The rest of the under parts white, excepting the sides, which are mottled with blue.

Length $12\frac{1}{2}$ inches, extent of wings 20; bill along the ridge 2, along the gap $2\frac{1}{2}$; tarsus $\frac{1}{2}$, middle toe $1\frac{1}{2}$.

Adult Female.

The blue of the female is much duller. The band on the upper part of the breast is of dull greyish-blue and light red intermixed; below this is a narrow band of white, and across the middle of the breast a broad band of yellowish-red, of which colour also are the sides. The rest of the under parts are white, tinged with red.

An adult male preserved in spirits measures to end of tail $13\frac{1}{2}$ inches, to end of wings $11\frac{1}{2}$, to end of claws $10\frac{4}{12}$; wing from flexure $6\frac{1}{2}$; tail 4. The roof of the mouth is rather flat behind, with the sides sloping upwards; it has two short longitudinal ridges, and is covered with minute papillæ. The posterior aperture of the nares is linear behind, oblong before, $\frac{1}{2}$ inch in length. The anterior part of the palate is moderately concave, with a median ridge and numerous oblique lateral grooves. The lower mandible is also moderately concave, with a prominent middle line. The tongue is very short, only 5 twelfths in length, $2\frac{1}{2}$ twelfths in breadth, fleshy, with two lateral prominent lamellæ at the base, its upper surface slightly convex, its sides parallel until 2 twelfths from the tip, when it tapers abruptly to a bluntish point. The breadth of the mouth is $11\frac{1}{2}$ twelfths. The œsophagus, *a b c*, is $5\frac{1}{4}$ inches long, of the uniform width of 7 twelfths; its parietes very thin, the inner coat thrown into longitudinal rugæ. The liver is large, its left lobe much smaller than the other, the former being 1 inch 11 twelfths in length, the latter 1 inch 4 twelfths. There is no gall-bladder. The stomach, *c d e*, is very large, roundish, a little compressed, its diameter 1 inch 7 twelfths. The proventricular glands are extremely small, and occupy a belt 5 twelfths in breadth. The muscular coat of the stomach is very thin, but composed of strong fasciculi, the middle coat is nearly of equal thickness; internally there is a complete epithelium, which, however, although tough, is very thin, almost membranous, and raised into numerous tortuous rugæ, without any part being thicker than another. The pylorus has six marginal roundish fleshy papillæ. The duodenum, *e f g*, presents the usual curvature, being folded back upon itself at the distance of 1 inch 8 twelfths; the intestine, *g h i*, then forms several convolutions, and is of great length, but very narrow, and disposed in 24 folds. Its length is 3 feet 10 inches, its width

from $1\frac{1}{2}$ twelfths to 1 twelfth. The cloaca, *j k*, is globular, 1 inch in diameter. There are *no cæca*; the rectum in its interior part has a width of only $\frac{1}{2}$ twelfth.

The trachea is 4 inches 1 twelfth long, $3\frac{1}{4}$ twelfths in breadth at the top, rapidly decreasing, so that at the distance of 1 inch to be $2\frac{1}{2}$ twelfths, and at the lower part 2 twelfths. Its rings are firm, slightly flattened, excepting those at the top, of which about 12 are cartilaginous. There are 72 rings, the lowest entire ring very large, with a middle partition. The lateral muscles are very slender, as are the sterno-tracheal; and there is a very large inferior laryngeal muscle inserted into the first bronchial ring, as well as into the last ring of the trachea. The bronchi are rather short and narrow, of about 15 half rings. The inferior laryngeal muscles may be divided into three portions, an anterior, a middle, and a posterior; and thus supply a desideratum, no bird having hitherto been examined in which there are four inferior laryngeal muscles, including the sterno-tracheal slip.

W. H.

Belted Kingfisher
Alcedo Alcyon.

1. Males 2. Female

Audubon, John James. 1842. "The Belted Kingfisher, *Alcedo alycon*, Linn. [Pl. 255]." *The birds of America : from drawings made in the United States and their territories* 4, 205–210. <https://doi.org/10.5962/p.319368>.

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