

THE RAZOR-BILLED AUK.

+ ALCA TORDA, *Linn.*

PLATE CCCCLXVI.—MALE AND FEMALE.

A few birds of this species occasionally go as far south as New York during winter; but beyond that parallel I never met with one. From Boston eastward many are seen, and some breed on the Seal Islands off the entrance of the Bay of Fundy. These Auks generally arrive on our Atlantic coast about the beginning of November, and return northward to breed about the middle of April. During their stay with us, they are generally seen singly, and at a greater distance from the shores than the Guillemots or Puffins; and I have no doubt that they are able to procure shell-fish at greater depths than these birds. I have observed them fishing on banks where the bottom was fifteen or eighteen fathoms from the surface, and, from the length of time that they remained under water, felt no doubt that they dived to it. On my voyage round Nova Scotia and across the Gulf of St. Lawrence, we saw some of them constantly. Some had eggs on the Magdeleine Islands, where, as the inhabitants informed us, these birds arrive about the middle of April, when the Gulf is still covered with ice. As we proceeded towards Labrador, they passed us every now and then in long files, flying at the height of a few yards from the water, in a rather undulating manner, with a constant beat of the wings, often within musket-shot of our vessel, and sometimes moving round us and coming so close as to induce us to believe that they had a wish to alight. The thermometer indicated 44°. The sight of these files of birds passing swiftly by was extremely pleasing; each bird would alternately turn towards us the pure white of its lower parts, and again the jetty black of the upper. As I expected ere many days should pass to have the gratification of inspecting their breeding-grounds, I experienced great delight in observing them as they sped their flight toward the north.

After we had landed, we every day procured Auks, notwithstanding their shyness, which exceeded that of almost all the other sea-birds. The fishermen having given me an account of their principal breeding places, the Ripley proceeded toward them apace. One fair afternoon we came in view of the renowned Harbour of Whapati Guan, and already saw its curious

beacon, which, being in form like a huge mounted cannon placed on the elevated crest of a great rock, produced a most striking effect. We knew that the harbour was within the stupendous wall of rock before us, but our pilot, either from fear or want of knowledge, refused to guide us to it, and our captain, leaving the vessel in charge of the mate, was obliged to go off in a boat, to see if he could find a passage. He was absent more than an hour. The Ripley stood off and on, the yards were manned on the look-out, the sea was smooth and its waters as clear as crystal, but the swell rose to a prodigious height as it passed sluggishly over the great rocks that seemed to line the shallows over which we floated. We were under no apprehension of personal danger, however, for we had several boats and a very efficient crew; and besides, the shores were within cannon shot; but the idea of losing our gallant bark and all our materials on so dismal a coast haunted my mind, and at times those of my companions. From the tops our sailors called out "Quite shallow here, sir." Up went the helm, and round swung the Ripley like a duck taken by surprise. Then suddenly near another shoal we passed, and were careful to keep a sharp look-out until our commander came up.

Springing upon the deck, and turning his quid rapidly from side to side, he called out, "All hands square the yards," and whispered to me "All's safe, my good sir." The schooner advanced towards the huge barrier, merrily as a fair maiden to meet her beloved; now she doubles a sharp cape, forces her way through a narrow pass; and lo! before you opens the noble harbour of Whapati Guan. All around was calm and solemn; the waters were smooth as glass, the sails fell against the masts, but the impetus which the vessel had received urged her along. The lead was heaved at every yard, and in a few minutes the anchor was dropped.

Reader, I wish you had been there, that you might yourself describe the wild scene that presented itself to our admiring gaze. We were separated from the rolling swell of the Gulf of St. Lawrence by an immense wall of rock. Far away toward the east and north, rugged mounds innumerable rose one above another. Multitudes of frightened Cormorants croaked loudly as they passed us in the air, and at a distance fled divers Guillemots and Auks. The mossy beds around us shone with a brilliant verdure, the Lark piped its sweet notes on high, and thousands of young codfish leaped along the surface of the deep cove as if with joy. Such a harbour I had never seen before; such another, it is probable, I may never see again; the noblest fleet that ever ploughed the ocean might anchor in it in safety. To augment our pleasures, our captain some days after piloted the Gulnare into it. But, you will say, "Where are the Auks, we have lost sight of them



W.E.H.

Razor-billed Auk

1. Male. 2. Female.

Drawn from Nature by J.J. Audubon, F.R.S.F.L.S.

Lith. Printed & Col'd by J.T. Bowen, Philad'a

entirely." Never fear, good reader, we are in a delightful harbour, and anon you shall hear of them.

Winding up the basin toward the north-east, Captain Emery, myself, and some sailors, all well armed, proceeded one day along the high and precipitous shores to the distance of about four miles, and at last reached the desired spot. We landed on a small rugged island. Our men were provided with long poles, having hooks at their extremities. These sticks were introduced into the deep and narrow fissures, from which we carefully drew the birds and eggs. One place, in particular, was full of birds; it was an horizontal fissure, about two feet in height, and thirty or forty yards in depth. We crawled slowly into it, and as the birds affrighted flew hurriedly past us by hundreds, many of their eggs were smashed. The farther we advanced, the more dismal did the cries of the birds sound in our ears. Many of them, despairing of effecting their escape, crept into the surrounding recesses. Having collected as many of them and their eggs as we could, we returned, and glad were we once more to breathe the fresh air. No sooner were we out than the cracks of the sailors' guns echoed among the rocks. Rare fun to the tars, in fact, was every such trip, and, when we joined them, they had a pile of Auks on the rocks near them. The birds flew directly towards the muzzles of the guns, as readily as in any other course, and therefore it needed little dexterity to shoot them.

When the Auks deposit their eggs along with the Guillemots, which they sometimes do, they drop them in spots from which the water can escape without injuring them; but when they breed in deep fissures, which is more frequently the case, many of them lie close together, and the eggs are deposited on small beds of pebbles or broken stones raised a couple of inches or more, to let the water pass beneath them. Call this instinct if you will:—I really do not much care; but you must permit me to admire the wonderful arrangements of that Nature from which they have received so much useful knowledge. When they lay their eggs in such an horizontal cavern as that which I have mentioned above, you find them scattered at the distance of a few inches from each other; and there, as well as in the fissures, they sit flat upon them like Ducks, for example, whereas on an exposed rock, each bird stands almost upright upon its egg. Another thing quite as curious, which I observed, is, that while in exposed situations the Auk seldom lays more than one egg, yet in places of greater security I have, in many instances, found two under a single bird. This may perhaps astonish you, but I really cannot help it.

The Razor-billed Auks begin to drop their eggs in the beginning of May. In July we found numerous young ones, although yet small. Their bill then scarcely exhibited the form which it ultimately assumes. They were

covered with down, had a lisping note, but fed freely on shrimps and small bits of fish, the food with which their parents supply them. They were very friendly towards each other, differing greatly in this respect from the young Puffins, which were continually quarrelling. They stood almost upright. Whenever a finger was placed within their reach, they instantly seized it, and already evinced the desire to bite severely so cordially manifested by the old birds of this species, which in fact will hang to your hand until choked rather than let go their hold. The latter when wounded threw themselves on their back, in the manner of Hawks, and scratched fiercely with their claws. They walked and ran on the rocks with considerable ease and celerity, taking to wing, however, as soon as possible. When thus disturbed while breeding, they fly round the spot many times before they alight again. Sometimes a whole flock will alight on the water at some distance, to watch your departure, before they will venture to return.

This bird lays one or two eggs, according to the nature of the place. The eggs measure at an average three inches and one-eighth, by two and one-eighth, and are generally pure white, greatly blotched with dark reddish-brown or black, the spots generally forming a circle towards the larger end. They differ considerably from those of the Common and the Thick-billed Guillemots, being less blunted at the smaller end. The eggs afford excellent eating; the yolk is of a pale orange colour, the white pale blue. The Eggers collect but few of the eggs of this bird, they being more difficult to be obtained than those of the Guillemot, of which they take vast numbers every season.

The food of the Razor-billed Auk consists of shrimps, various other marine animals, and small fishes, as well as roe. Their flesh is by the fishers considered good, and I found it tolerable, when well stewed, although it is dark and therefore not prepossessing. The birds are two years in acquiring the full size and form of their bill, and, when full grown, they weighed about a pound and a half. The stomach is an oblong sac, the lower part of which is rather muscular, and answers the purpose of a gizzard. In many I found scales, remnants of fish, and pieces of shells. The intestines were upwards of three feet in length.

Immediately after the breeding season, these birds drop their quills, and are quite unable to fly until the beginning of October, when they all leave their breeding-grounds for the sea, and move southward. The young at this period scarcely shew the white streak between the bill and the eye; their cheeks, like those of the old birds at this time, and the fore part of the neck, are dingy white, and remain so until the following spring, when the only difference between the young and the old is, that the former have the bill

smaller and less furrowed, and the head more brown. The back, tail, and lower parts do not seem to undergo any material change.

ALCA TORDA, Bonap. Syn., p. 431.

RAZOR-BILL, *Alca Torda*, Nutt. Man., vol. ii. p. 547.

RAZOR-BILLED AUK, *Alca Torda*, Aud. Orn. Biog., vol. iii. p. 112; vol. v. p. 628.

Male, 17, 29½.

Rare on the eastern coast of the United States, and only during winter. Breeds in great numbers on the Gannet Rock in the Gulf of St. Lawrence, on the shores of Newfoundland, and the western coast of Labrador, chiefly in the fissures of rocks.

Adult Male in summer.

Bill shorter than the head, feathered as far as the nostrils, beyond which it is very high, exceedingly compressed, and obliquely furrowed on the sides. Upper mandible with the dorsal line curved so as to form the third of a circle, the ridge extremely narrow but rounded, the sides nearly flat, with five grooves, the one next the base deeper and more narrow, the edges inflected and sharp, the tip decurved and obtuse. Nostrils medial, marginal, linear, short, pervious, but concealed by the feathers. Lower mandible with the angle very narrow, and having a horny triangular appendage, the base at first horizontal and extremely narrow, then sloping forwards and rounded, the dorsal outline rounded, towards the end concave, the sides slightly concave, the edges inflected, the tip decurved.

Head large, oblong, anteriorly narrowed. Eyes small. Neck short and strong. Body full, rather depressed. Wings small. Feet placed far behind, short, rather strong; tibia bare a short way above the joint; tarsus very short, compressed, anteriorly scutellate, laterally covered with reticulated angular scales, posteriorly granulate. Hind toe wanting; toes of moderate length, rather slender, scutellate above, connected by reticulated entire membranes, the inner toe having also a projecting margin; outer toe slightly longer than middle one; inner considerably shorter. Claws rather small, arched, compressed, obtuse.

Plumage close, blended, very soft, on the head very short and velvety. Wings short, curved, narrow, acute. Primary quills narrow, incurved, acute, first longest, second slightly shorter, the rest rapidly graduated; secondary quills very short, obliquely rounded. Tail short, tapering, of twelve narrow, pointed feathers.

Bill black, with a white line across each mandible; inside of the mouth gamboge-yellow. Iris deep hazel. Feet black. Fore part of neck below, and all the lower parts, white; the rest black, the head, hind neck, and back,

glossed with olive-green, the throat and sides of the neck tinged with chocolate, the wings with brown, the tips of the secondary quills, and a narrow line from the bill to the eye, white.

Length to the end of tail 17 inches, to the end of claws $17\frac{3}{4}$; extent of wings $29\frac{1}{2}$; wing from flexure $8\frac{1}{4}$; tail 4; bill along the ridge $1\frac{7}{12}$, along the edge $2\frac{2}{12}$, its greatest depth $\frac{11}{12}$; tarsus $1\frac{2}{12}$; middle toe $1\frac{8}{12}$, its claw $\frac{5}{12}$. Weight $1\frac{1}{2}$ pounds.

Adult Female in summer.

The female is precisely similar to the male.

The Young in their winter plumage have the colouring distributed as in the old birds, but with the black duller, the wings more brown, the throat and sides of the head mottled with white, the white line from the bill to the eye existing, but the bill much smaller, without furrows or a white line.

The Old Birds in winter have the throat and sides of the neck mottled as described above; but in other respects their colours are the same as in summer.

The gullet wide, dilated towards the lower extremity, its mucous coat longitudinally corrugated; the proventriculus very wide and glandular; the stomach rather small, oblong, muscular, with an inner, longitudinally corrugated and horny cuticular coat. Pylorus very small; intestine near its commencement $\frac{4}{12}$ of an inch in diameter, gradually contracted to the cœca, where it is $\frac{2}{12}$; cœca half an inch long, tapering. The length of the gullet and stomach together is 8, that of the intestines 41 inches.

On the palate are several series of reversed papillæ, and two longitudinal papillate ridges; on its anterior part are five prominent lines; the posterior aperture of the nares linear, 1 inch in length; width of mouth 11 twelfths. Tongue $1\frac{1}{4}$ inches long, fleshy, slender in its whole length, trigonal, flat above, with a median groove, and tapering to a very thin horny point. Œsophagus $8\frac{1}{2}$ inches long, its width along the neck 10 twelfths, but within the thorax it forms an enormous sac $3\frac{1}{2}$ inches long, 1 inch 11 twelfths in breadth; the proventricular glands very numerous, forming a complete belt $3\frac{1}{4}$ inches in length, and occupying almost the whole of the sac above mentioned. Stomach very small, 10 twelfths long, 9 twelfths in breadth; its muscular coat thin, the tendons round, and about 5 twelfths in breadth; the epithelium thin, dense, and longitudinally rugous. Intestine 53 inches long, its average width 5 twelfths; the cœca 9 twelfths long, $1\frac{1}{2}$ twelfths in breadth, 2 inches 1 twelfth distant from the extremity; cloaca globular, and about 1 inch in diameter.

Trachea 5 inches long, from $4\frac{1}{2}$ twelfths to 3 twelfths in width, a little flattened; its rings 95, unossified. Bronchi very wide, of 18 half rings. Cleido-tracheal muscles, lateral muscles, sterno-tracheal slips, and a single pair of inferior laryngeal muscles.



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