## GREAT AUK NOTES.

## BY FREDERIC A. LUCAS.

Ornithologists owe a debt of gratitude to Professor Newton and Mr. Grieve for their contributions to the history of the Great Auk, and for their labors in collecting and rendering accessible to English and American readers the substance of many scattered papers by foreign writers. Well as their work has been done a few errors, here and there, have crept in, and in correcting them, as they come up in connection with some of the points herein discussed, the writer trusts that he may not seem ungracious, for few have probably studied the writings of the above-named gentlemen with more pleasure and profit than himself.

To Professor Newton belongs the credit of calling attention to the fact that the range of the Great Auk was much more restricted than was generally supposed, and that the bird never even visited many of the localities in which it was once thought to have bred.

It is my own belief that, in historic times at least, the number of places resorted to by the Great Auk for breeding purposes was comparatively small, partly from the inability of the bird to fly, but more from one of those unknown reasons which impel some animals to select for their homes only one or two out of many possible sites.

We have a striking example of this in the Gannet, a bird whose powers of flight are exceptionally great, and whose considerable size and voracious appetite demand an abundant supply of fish. It might therefore be supposed that this bird would be found breeding at many places from Maine to Labrador, and yet, so far as I am aware, it is found at only two spots in all this range of coast, and to one of these we know certainly that it has resorted for three hundred and fifty years\* in spite of almost ceaseless persecution.

If then such is the case with a bird gifted with unusual powers of locomotion how much more likely it is to have been the habit

<sup>\*</sup>In 'The Auk' for April, by an unfortunate slip of the pen, I wrote three hundred and thirty-two instead of three hundred and fifty-three.

of a bird so hampered by nature as the Great Auk. It is also worthy of note that traditions concerning the Great Auk refer to a small number of localities only, and moreover had the bird availed itself of the many possible breeding places along the coasts of Newfoundland and Labrador it might have endured in lessened numbers until this day.

There is a rumor that twenty years ago the Great Auk was still to be found on the Penguin Islands, in the mouth of Gros Water Bay, sixteen miles from Grady Harbor, a locality about two hundred and fifty miles north of Cape Norman, N. F.\* Of course this is possible, but it seems hardly probable.

It was on the program, during the cruise of the Fish Commission schooner 'Grampus,' in the summer of 1887 (a cruise in which it was my good fortune to take part), to visit as many of the probable former breeding grounds of the Great Auk as circumstances would admit of, notably Penguin Island near Cape la Hune (southern coast of Newfoundland), and Penguin Islands near Cape Freels (eastern coast). Unfortunately Æolus decided against a visit to the former locality—so often mentioned by the early navigators—and let loose upon us a brisk southwester, before which the 'Grampus' drove by under shortened canvas at the rate of ten knots an hour, while, with a visit to Funk Island still in prospect, it was deemed inadvisable to lose any time by waiting for wind and sea to go down.

On the eastern coast we were favored with better weather, and leaving the well-named harbor of Seldom Come By early in the morning, with a 'Newfoundland Pilot' (a lookout at the masthead) to guard against the possible contingency of a rock not laid down on the chart, passed Peckford Reef, the Schoolmarm, and Scrub Rocks, and came to anchor about noon off the Penguin Islands, two flat, grassy islets rising but twenty feet above the water and not at all suggestive of an Alcine breeding place.

Still one of these may be that certain flat island whence men "drave the Penguins on a board into their boats by hundreds at a time," in spite of the fact that the islets are but three miles from shore, and in consequence the Great Auk must have led a very precarious existence.

Offer Wadham, nine miles farther out to sea, is much more

<sup>\*</sup>For this report I am indebted to Mr. William Sclater of St. Johns, N. F.

likely to have been the spot alluded to by Captain Richard Whitbourne, although all attempts to definitely locate it must necessarily be pure guess work.

Certainly if the Garefowl dwelt here, he left no trace of former residence, for not a bone nor a speck of eggshell came to light in making a dozen excavations to the bed rock.

This is in marked contrast to the state of affairs at Funk Island, where bones can readily be found, and where the soil itself, thickly sprinkled with crumbled eggshells, bears mute testimony to long years of occupancy by the Great Auk.

The soil of Funk Island, by the way, is frozen for only a part of the year, and the statement that a mummy of the Greak Auk was taken "from under ice which never melts" was doubtless made from a misapprehension of the facts in the case, for although floe ice is driven upon some portions of the island it never reaches those places where the Auk remains lie buried, and never endures into the summer months.

Today Penguin Islands are overun by a colony of field mice (Arvicola riparia), whose burrows exist in almost incredible numbers, while their well worn connecting paths cover the ground in places with a veritable net work. Sundry boluses of matted fur and bones bore witness to the occasional disturbance of this populous mousery by the visits of Owls.

A little investigation showed that many burrows, having been deserted by their original occupants, the mice, had been taken possession of by Leach's Petrels, and the occurrence of perfectly fresh eggs on the 24th of July, coupled with the fact that well advanced embryos were found at the Bird Rocks on July 9, suggests that possibly this little bird raises two broods in a season.

A few Puffins were also found on the island, but none of the many busy little excavators seemed to have met with better success than ourselves in finding bones, for none lay scattered about the entrance to their burrows (as was the case at Funk Island), and if indications may be relied on the former occurrence of the Great Auk on these Penguin Islands in any considerable numbers must be looked upon as somewhat doubtful.

Another doubtful habitat is found in the Bird Rocks of the Gulf of St. Lawrence, for although the Auks may have strayed thither from the colony at Penguin Island, off Cape la Hune, they

would have found the area available for breeding purposes limited to a narrow strip on the northeastern point of the North Rock, and a still more restricted portion on its southern side, these being the only spots accessible to a flightless bird like the Garefowl.

True, in Hakluyt's 'Voyages' Cartier speaks of the Great Apponatz in connection with the Iles des Margaulx, as he called these rocky islets, but may this not be a mistranslation of grasse Apponatz, or a correct translation of a misprint? Never having seen the original French, I make this suggestion with some hesitation, and it must stand for what it is worth, still it derives a little support from the circumstance that where these problematical birds are first mentioned they are spoken of as being "exceeding fat" (Il y sont excessivement gras").

Mr. Grieve suggests in a recent letter that in former times the space at the base of the little rock was much more extended than at present, since Cartier's crew "killed above a thousand of those Godetz and Apponatz" on "the lowest part of the least island," and "in less than one hour might have filled thirty such boats of them."

This supposition may very well be correct, yet careful observation of the little rock and the depth of water immediately about it leads me to think that the changes it may have undergone have been the result of the fall of fragments from the overhanging sides rather than the wearing away of its base.

Charles Leigh, who visited the Bird Rocks in 1538, does not mention the 'Penguin,' although he landed on the little rock after a skirmish with a herd of Walruses who valiantly attacked the boat and at first put the invaders to flight.

If the Godetz and Apponatz were Murres and Razorbills it would not have required a very great expanse of cliff to have furnished foothold for a thousand or two of them, and even now, after long years of persecution, it is quite possible to approach these birds, when sitting on their eggs, sufficiently near to knock them down with a stick.

That the Iles des Margaulx of Cartier are the Bird Rocks of today can scarcely be questioned, although no locality whatever can be found by following the courses and distances given as having been sailed on the 24th and 25th of June, 1534.

But by following Cartier from Buona Vista northward,

through the Strait of Belle Isle, and thence southward, we learn from the latitudes now and then given that on June 25 he must have been somewhere in the vicinity of the Bird Rocks.

Fortunately, too, there is a reference to the Island of Brion, giving its direction and distance from the Iles des Margaulx, which is alone sufficient to identify the spot, as they harmonize with existing facts. Brion Island, like Blanc Sablon and Chateau Bay, has retained its name unchanged while so many others have either been renamed or have had their original appellation so anglicized as to be quite unrecognizable.

Final confirmation of the locality is found in the Gannets (Margaulx) themselves, whose descendants with true conservative spirit still cling to their historic stronghold, and although they no longer exist in such numbers that the rocks "though red seem white," they still bite as savagely as in the days of yore.

Two more supposed breeding places of the Great Auk may be considered here, Cape Cod and the Virgin Rocks. Of the latter it will suffice to say that they lie three and one half fathoms under water, while many evident reasons, such as the low, sandy character of Cape Cod and the adjacent islands, the proximity of Indians, and the general northern range of the Alcidæ on the Atlantic coast, render the former locality more than doubtful.

As for the bones found in shell heaps, they are probably those of birds taken during their migrations southward, for the Great Auk was doubtless formerly as common on the New England coast during the autumn and winter months as the Razorbill is now.

A word regarding the food of the Great Auk, and in support of the statement made by Fabricius that the lump-fish (Cyclopterus lumpus) formed an important item in its bill of fare. While the lump-fish is rather rough to look upon, the bones are extremely brittle, and the strong beak of the Garefowl would slice through the body of any specimen it might have captured, as easily as the knife of the Eskimo does through the body of the lump-fish he dries or freezes for his winter store. The young lump-fish—and these would be most dainty morsels—keep near the surface of the water and seek concealment in patches of floating rock-weed where they would easily have been detected by the keen eye of a sea fowl, while being but indifferent swimmers there would be no safety in flight.

This calls to mind the somewhat singular remark of Mr. Reeks

that the Great Auk could not have been a powerful swimmer, owing to the small size of its feet, forgetting that, like the Penguins and the Alcidæ, the Garefowl depended for swimming chiefly upon the wings, and if the bird could not fly over the water it certainly could beneath.

I cannot close this paper without referring to the published figures of the Great Auk, for this bird has suffered grievously at the hands of nearly every artist (Audubon is an exception) who has been called upon to portray it.

It is true that the artists may plead extenuating circumstances in the shape of the stuffed—it were flattery to say mounted—specimens that have served as models, most of which are from two to eight inches longer than they should be. I trust that Mr. Hancock will pardon me for including his figure in this criticism, for his bird is too long, too slender, and with too pronounced a crop.

Artists have evidently recognized the fact that the stuffed Auks are too slender, and endeavored to make amends for the short-comings of the taxidermist, for obesity is the general trouble with figures of the Great Auk, although the neck is usually as much too thin as the body is too stout. Could the bird have seen himself portrayed as he is even on the cover of his namesake, he might, like Wolfe, have exclaimed, "now I die content."

The question might naturally be asked what right has one who never saw the Great Auk alive to criticise him dead, and the answer is this, having just compared three mounted skeletons with one of the Razorbill the conclusion is unavoidable that the two species resembled one another very closely in outward contour.

As for internal structure, I must plead guilty to a belief that the two species should be included in the genus Alca, and with this bit of cis-Atlantic heresy bring these notes to a close.