

BULLETIN
OF THE
NORTHEASTERN BIRD-BANDING ASSOCIATION

THE RACES OF *CEPPHUS GRYLLE* (LINN.)

BY OLIVER L. AUSTIN, JR.

DURING my work on the birds of northeastern Labrador, I have been much interested in the problem of assigning the Black Guillemot found there to its proper race. In 1927 Mr. James L. Peters called my attention to an apparent intergradation between *Cepphus grylle* (Linn.) of Maine, Nova Scotia, and the Gulf of St. Lawrence, and *Cepphus mandtii* (Mandt) of Ellesmere Island and northern Greenland. Until very recently the two forms have been considered by most writers to be specifically different from each other, even though it is difficult to assign the bird of northern Labrador and southern Greenland definitely to either one. The first ornithologist to recognize Mandt's Guillemot as a subspecies of the Black Guillemot was Bernard Hantzsch in his "Beitrag zu Kenntnis der Vogelwelt des nordoestlichsten Labradors."¹ He admits that there is an area filled with intermediate birds between their respective ranges, and gives an excellent delineation of the subspecific characters that define the extremes, but through lack of adequate breeding material, he attributes the birds of northeastern Labrador, to *Cepphus grylle mandtii* (Mandt). In the excellent collections of the Museum of Comparative Zoölogy, of A. C. Bent, and of Frederic H. Kennard I have examined a series of 112 Guillemots, which, I find, fall naturally into three distinct geographical races rather than two.

For the hitherto unrecognized intergrade race I resurrect the earliest available name from synonymy, which is *Uria arctica* Brehm (*Lehrb. Eur. Vog.*, II, 1824, p. 923.) Brehm described what was evidently either an immature bird or an adult in winter plumage from Greenland. According to Hartert (*Novitates Zoologica*, Vol. 25, May, 1918, pp. 4-63) the type of this species is not in the Tring Museum with the rest of Brehm's types, but the bird described undoubtedly

¹See *Journal für Ornithologie*, Vol. 65, No. 3, July, 1908, pp. 311-314; also translation into English, *Canadian Field Naturalist*, Vol. XLII, April, 1928, pp. 89-90.

came from the Danish settlements in southern Greenland, which are all well within the range of the intergrade.

All Guillemots of the genus *Cepphus* undergo a considerable change of plumage between the juvenal and the adult nuptial dress (the latter not being attained completely until the second summer), and not a little change between adult summer and winter plumages in all except exceedingly old birds. Banding-records show that, once having selected a nesting-site, individual Black Guillemots tend to return to the same one year after year, so that while there is usually an irregular annual southward migration in winter, as far as we know, the breeding-ranges of the various races remain fairly constant. For these reasons, it is of utmost importance to use nothing but breeding birds for comparison in defining the races.

The characters on which the races may be best divided are the markings of the first primaries and of the greater secondary coverts. There is also a slight difference in the size and shape of the bill and the length of the body, the wings, and the tail, but this is difficult to see except in large series of birds from the extreme limits of their ranges. Mandt's Guillemot from Ellesmere Island, for instance, shows a slightly thinner and deeper bill, and longer wing, tail, and over-all measurements than does the Black Guillemot from Maine and the Gulf of St. Lawrence, but even here we encounter some overlapping of measurements in individuals. As Hantzsch says, ". . . measurements of both [species] are not to be used as unfailing distinguishing marks." The accompanying figures of primaries and greater secondary coverts will serve to illustrate the following:

Key¹ to the races of *Cepphus grylle*.

A₁—Greater secondary coverts completely white; the base of the inner web of the outermost primary seen from below white to the rachis beyond the overlying under coverts: (Plate 1, Fig. a.)

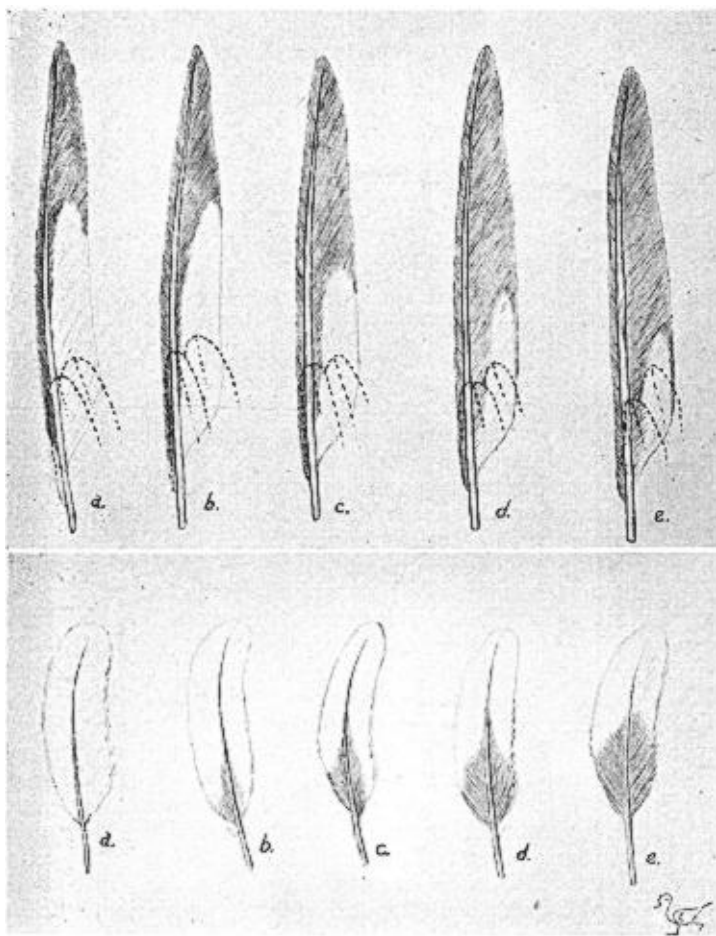
Cepphus grylle mandtii (Mandt)

A₂—Greater secondary coverts not completely white; the base of the inner web of the outermost primary seen from below not white to the rachis beyond the overlying under coverts:

B₁—Outermost primary seen from below sometimes containing no white, but usually with a white patch at the base of the inner web which never extends more than 15mm. beyond the ends of the under coverts, and which seldom reaches the inner edge of the feather beyond the under coverts, being margined there more or less narrowly with dusky: (Plate 1, Figs. d and e.)

Cepphus grylle grylle (Linn.)

¹Based entirely on breeding adult birds.



TOP Row—Outermost primaries seen from below. Position of undercoverts shown in dotted lines.

BOTTOM Row—Greater secondary coverts seen from above.

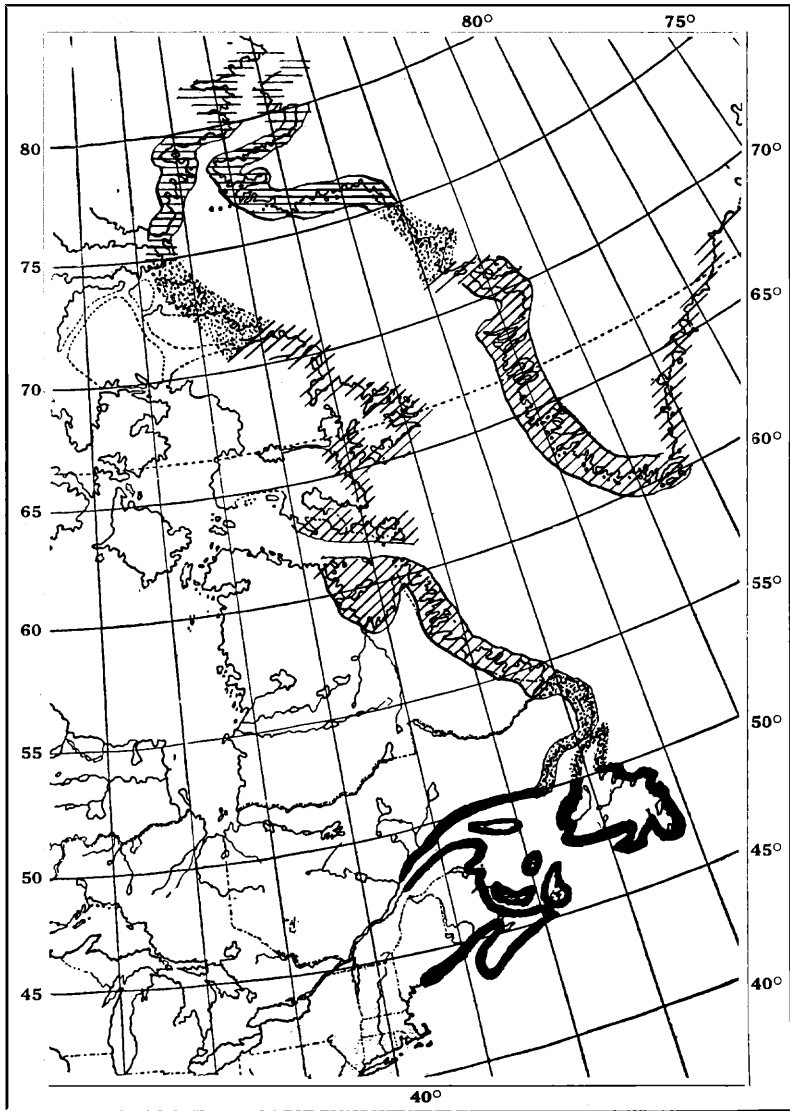
(Drawings reduced to 5/9 natural size.)





- a. M.C.Z. No. 100772, Adult female, Ellesmere Island, Cape Sabine, May 29, 1901.
- b. M.C.Z. No. 48361, Adult unsexed, Greenland, Umanak, August, 1896.
- c. M.C.Z. No. 233441, Adult female, Newfoundland Labrador, Hopedale, July 10, 1925.
- d. M.C.Z. No. 104434, Adult male, Quebec Labrador, L'Anse au Loup, June 30, 1899.
- e. M.C.Z. No. 230747, Adult female, Maine, Penobscot Bay, July 9, 1896.

B₂—Outermost primary seen from below always with the white patch at the base of the inner web extending more than 15mm. beyond the under coverts, and usually reaching the edge of the feather beyond the under coverts, being seldom rimmed there with dusky: (Plate 1, Figs. *b* and *c*.)
Cepphus grylle arcticus (Brehm)

The definite breeding-ranges of the three races on the western side of the North Atlantic are as follows: *C. g. grylle*, from Matinicus Rock, Maine, northward and eastward to Cape Whittle, Labrador, and the 50th parallel of latitude in Newfoundland; *C. g. arcticus*, from Hamilton Inlet, Labrador, northward to the 72d parallel of latitude in western Greenland; *C. g. mandtii*, from the 75th parallel of latitude in Ellesmere Island and western Greenland northward. The accompanying map illustrates these ranges, together with the areas between each wherein birds of either race bordering them have been taken or may be expected.

At present the winter ranges of the various races cannot be worked out satisfactorily from the data at hand. There is evidence pointing to a partial southward migration which probably varies with the mildness or severity of the winter and the presence or absence of open water. Many birds may not go south at all, and some may even go slightly northward in the autumn, wandering about aimlessly instead of pursuing any definite migration. Banding evidence as yet is slight, since most of the recoveries are birds taken too shortly after leaving the nest to show much. A nestling I banded August 20th last at Collingham Island near Gready, Labrador, was killed October 12th at Indian Harbor, Labrador, about seventy-five miles north of the island on which it was reared. Another, which I banded August 11th at Nunarsuk Island off Davis Inlet, Labrador, was shot at Twillingate, Newfoundland, on November 15th, while two more, which I banded August 9th on an islet off Nain, Labrador, were both picked up at Godbout, Quebec, near the head of the Gulf of St. Lawrence, on November 12th and 15th, respectively. The last three recoveries show that the absence of open water is not the sole factor that drives them south, for shore ice never begins to form in the Nain region before December, and Guillemots are seen there, as long as open water exists, throughout the year. Individuals have been taken at almost all times of the year throughout the entire breeding-range of the species, but most of the winter specimens I have examined seem to belong to a group breeding in a locality somewhat north of the places at which they were taken. The Black Guillemot is a



-  *C. g. mandtii*
-  *C. g. arcticus*
-  *C. g. grylle*
-  Uncertain

Solid lines enclose areas from which I have seen specimens; I have seen none from areas not so enclosed.

THE BREEDING RANGES OF THE RACES OF *Cephus grylle* ON THE WESTERN SIDE OF THE NORTH ATLANTIC

common winter visitant to the coast of Massachusetts, and occasionally reaches Long Island and New Jersey at that season, some three hundred miles southeastward of its present southernmost breeding-point.

In the collections of the Museum of Comparative Zoölogy are twenty-eight skins of Black Guillemots from Ireland, one from the Orkney Islands, and one from Iceland. I have compared these very carefully with the larger series of birds from this side of the Atlantic, but I can find no clue whatsoever by which to differentiate between *C. g. grylle* of Ireland and the Orkneys and the bird breeding in Maine, Nova Scotia, and the shores of the Gulf of St. Lawrence. In large series they agree almost perfectly in all measurements and colors. The Iceland bird is *C. g. arcticus*, as also are three adults in winter plumage in the collection of A. C. Bent taken at the Herald Islands, north of Behring Straits. I have seen one adult *C. g. mandtii* taken late in the spring at Cape Vancouver, Alaska, which is probably a tardy straggler taken while still hurrying northward, but we know practically nothing of the distribution of the races in and northward of the Behring Sea.

I should like to see a series of specimens from the islands in the Arctic Ocean and the lands bordering upon it, the Faroe Islands, Norway, northern Russia, Siberia, Alaska, and the western part of the American Arctic Archipelago. The breeding bird of the Faroes, of Norway, and perhaps of parts of Russia, will probably prove to be *C. g. arcticus*, while the race that nests in Spitzbergen and Franz Josef Land is undoubtedly *C. g. mandtii*. Breeding birds from Wrangel and Herald Islands and the north coasts of Siberia and Alaska may throw some light on the relationship of the races of *Cepphus columba* (Pall.) of the Pacific to the Atlantic and Arctic races of *Cepphus grylle* (Linn.) This problem will surely be worth studying, for the two species (if such they are) must have had a common ancestral stock living somewhere in the Arctic Ocean. The one point I should like to see settled more than anything else concerning the Guillemots, is where the young birds select their first nesting-site in relation to the nest in which they were reared. Banding is the only way any light will be shed on the problem.