

MEDDELELSER OM GRØNLAND

UDGIVNE AF

KOMMISSIONEN FOR VIDENSKABELIGE UNDERSØGELSER I GRØNLAND

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LEADER: KNUD RASMUSSEN

BIRDS

BY

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WITH 6 FIGURES IN THE TEXT

KØBENHAVN

C. A. REITZELS FORLAG

BIANCO LUNOS BOGTRYKKERI A/S

1939

UDGIVET MED STØTTE AF CARLSBERGFONDET

The northern part of the east coast of Greenland, north of Scoresby Sund, has been relatively well explored in an ornithological sense. Scoresby Sund itself, with its extensive inner fjords, and the adjacent regions, especially Jameson Land and Liverpool Land, in 1924—25 and 1927—29 were travelled and thoroughly explored by ALW. PEDERSEN, who has given exhaustive information on the avifauna of these enormous stretches ("Beiträge", and "Fortgesetzte Beiträge zur Kenntnis der Säugetier- und Vogelfauna der Ostküste Grönlands" (Meddelelser om Grønland, LXVIII, 1926, pp. 150—249 and LXXVII, 1930, pp. 341—506 respectively)). The birds of the east coast north of Liverpool Land between 73°00' and 75°30', a region explored particularly by FINSCH, KOLTHOFF, BAY, NATHORST, DEICHMANN, LÖPPENTHIN and many others, were very thoroughly described by LÖPPENTHIN in his work "Die Vögel Nordostgrönlands zwischen 73°00' und 75°30' N. B." (Meddelelser om Grønland, Bd. 91, No. 6, 1932, pp. 1—128), which contains an excellent survey of his own investigations and of the observations of all previous explorers, accompanied by full literature references and bibliography. Finally, in MANNICHE: "The Terrestrial Mammals and Birds of North-East Greenland" (Meddelelser om Grønland, XLV, 1910, pp. 1—200) there are particulars of the avifauna in still more northerly parts of the east coast.

On the other hand, on seeing the map of Greenland, and contemplating the long east coast from Kap Brewster, which forms the south point of the mouth of Scoresby Sund, and down to Kap Farvel, it can only be said that these enormous stretches of coast have been only little examined for ornithological purposes. There is one exception, however, the region round about Angmagssalik, where JOHAN PETERSEN the colony manager, in the periods from 1894 to 1915 and 1924 to 1925, made his observations and collected important material in the form of bird skins, which were sent to Denmark to O. HELMS, who described them in "The Birds of Angmagssalik" (Meddelelser om Grønland, LVIII, 1926, pp. 205—274). That work contained so much good information on the avifauna of the district that there has not been much to add for later

authors; among the latter may be mentioned CHAPMAN, "Some Field Notes on the Birds on East Greenland" and "The Tugtilik (Lake Fjord) Country, East Greenland", App. II (*Geographical Journal*, 79, 1932, p. 493, and 83, 1934, p. 375), who travelled the Angmagssalik district up to Tugtilik in 1930—31 and 1932, and TINBERGEN, "Field Observations of East Greenland Birds" (*Ardea*, 24, 1935, pp. 1—42). Previously, Angmagssalik had been travelled by BAY (*Meddelelser om Grønland*, XIX, 1896) in 1892, who published a number of notes on the birds of the region.

Until quite recently, however, practically nothing was known of the birds on the stretch from Angmagssalik district up to Kap Brewster. The scattered reports in the literature were to be found in DEICHMANN, ("Birds of East Greenland", *Meddelelser om Grønland*, XXIX, 1909), who as a member of the Amdrup Expedition in 1898—1900 was i. a. in Turner Sund, and at Kap Dalton, Dueholm, Deichmann's Fjord and Stewart Ø, on whose avifauna he recorded some observations. In the work cited above ALW. PEDERSEN also gives some information regarding the birds in Kangerdlugssuaq, though most of it was based on the observations of some Greenlanders. Finally, CHAPMAN (*Geographical Journal*, 79, 1932, p. 496) travelled the stretch from Angmagssalik to Kangerdlugssuaq.

From an ornithological point of view it was practically virgin country that DEGERBØL and MØHL-HANSEN explored in the summer of 1932 as members of the Scoresby Sound Committee's Second East Greenland Expedition to Kong Christian IX Land, and the essential part of their investigations was carried out on the stretch from Kap Dalton down to Kangerdlugssuaq, i. e. on Blosseville Kyst. For though the Amdrup Expedition passed this coast in 1898—1900, its purpose had been other than ornithological research. The interesting investigations of DEGERBØL and MØHL-HANSEN were described in "Birds" (*Meddelelser om Grønland*, Bd. 104, No. 18, 1935, pp. 1—30).

Later on, in 1933, BERTRAM, LACK and ROBERTS were in Scoresby Sund, with headquarters at Hurry Fjord, but subsequently they were ashore at Kap Dalton and in d'Aunay Fjord on Blosseville Kyst, from which they have published a few ornithological records (see "Notes on East Greenland Birds, with a Discussion on the Periodic Non-Breeding among Arctic Birds", *The Ibis*, 1934, p. 816).

And finally, the stretch from Angmagssalik district down to Lindenows Fjord is the least known region on the east coast of Greenland as far as its avifauna is concerned. What we do know was published by HOLM and GARDE: "Den danske Konebaads-Expedition til Grønlands Østkyst in 1887" (*Meddelelser om Grønland*, 9th and 10th part, 1889 and 1888), whose report, however, contains only very little about

the birds; GRAAH: "Undersøgelses-Rejse til Østkysten af Grønland 1828—31", gave a list of the species of birds he observed on the south part of the east coast, and in letters and diaries his companion VAHL provided some supplementary information; NANSEN: "Paa Ski over Grønland; en Skildring af den norske Grønlands-Expedition 1888—89", 1890, who travelled along the coast from Kap Farvel to Umivik, mentioned some few casual observations on birds. All ornithological observations made on these three expeditions are assembled by WINGE: "Grønlands Fugle" (Meddelelser om Grønland, XXI, 1898), to which reference is here made.

In conclusion, it must be added that KNUDSEN in 1925—26 wintered in Lindenows Fjord, and in some letters to LÖPPENTHIN gave a good deal of information on the birds of that fjord, which had never been thoroughly examined before (Dansk Ornithologisk Forenings Tidsskrift, 29, 1935, pp. 37—41). However, as the overland distance from there to the west coast is so short, the avifauna resembles that of the southwest coast so much that in the following it is not included as the east coast of Greenland.

Beyond these investigations nothing is known of the avifauna on the coast from Angmagssalik to Lindenows Fjord; but as the ice cap extends right down to the sea for long stretches of these inhospitable regions, so that the birds have to live on rocks and small islands, that part of the coast does not seem to be particularly rich in its avifauna. Nevertheless, it could not be otherwise than of great interest to see what the Seventh Thule Expedition, which i. a. sailed along the coast from Angmagssalik down to Tingmiarmiut, would contribute to our knowledge; but unfortunately, there was evidently no very favourable opportunity for the expedition ornithologist, U. MØHL-HANSEN, to make studies on shore, as the voyage was mainly performed in the ice-belt. All the same, some information and some skins were brought home to Denmark from Tingmiarmiut, Skjoldungen and Umivik, and from out on the ice; MØHL-HANSEN's definite impression is that the number of individuals on this coast is much lower than that to which we are accustomed in the more northerly parts. On the other hand, he returned with a rather considerable material of skins from Angmagssalik and Blosseville Kyst, which will serve to supplement those secured in those parts on former occasions. They are accounted for in the following.

The description in the following comprises only those species of which skins were secured or particulars noted, and it is accompanied by remarks on the distribution as far as it is now known, especially for the stretch Kap Brewster—Lindenows Fjord. Accordingly, it pretends in no way to be a collective account of the birds on this part of Greenland's east coast.

The Seventh Thule Expedition returned in all 163 bird skins, all prepared by MØHL-HANSEN, accompanied by very sparse biological information. A very large part of these skins, however, were those of young birds, which could provide no sort of guide to race determination.

The avifauna of the east coast was enriched by one new species, *Puffinus gravis* (O'Reilly).

The species brought home by the Expedition were as follows:

Somateria mollissima islandica Brehm.

Somateria Islandica BREHM: Isis 1830, p. 998.

Somateria mollissima (L.) *typica*. WINGE: Meddelelser om Grønland XXI, 1898, p. 94.

Somateria mollissima islandica BREHM. SCHIØLER: Danmarks Fugle II, 1926, p. 208.

Two skins have the following measurements:

No.	Sex	Locality	Date	Wing length mm	Culmen mm	Tarsus mm
94	♂ ad.	Mikis Fjord	19.8.1933	..	55	50
82	♀ pull.	Tingmiarmiut	9.8.1933	..	..	..

The male is in summer plumage with its winter dress appearing, but with the primaries entirely shed; thus there can be no question of determining its subspecies; but as SCHIØLER (l. c.) after a circumstantial account places all the Common Eiders of East Greenland to *S. m. islandica*, I follow him in this respect as regards both the adult male and the young bird; with its very light colour the latter also confirms well with SCHIØLER's description.

On the low, barren rocks along the coast south of the Angmagssalik region in the middle of June MØHL-HANSEN found only few Common Eiders; and down at Tingmiarmiut on July 18th and August 9th he saw only a few individuals; on the whole the species was not at all numerous on this part of the coast.

We know little about its occurrence on the most southerly part of the east coast: WINGE (l. c., p. 106) merely states that GRAAH saw it there in 1931, and that NANSEN saw a flock or two at Kap Moltke (63°30') on August 7th, 1888; he had not seen others while travelling along the coast.

According to HELMS (Meddelelser om Grønland, LVIII, 1926, p. 228) the Common Eider is a "fairly common" breeding bird in the Angmagssalik area itself; but MØHL-HANSEN states (in lit.) that the species was very scarce along the coast from there up to Kangerdlugssuaq.

CHAPMAN (Geographical Journal, 83, 1934, p. 376), found only few pairs breeding in Lake Fjord. DEGERBØL and MØHL-HANSEN observed it as one of the most common breeding birds on the stretch from Kangerdlugssuaq up to Kap Dalton (Meddelelser om Grønland, Bd. 104, No. 18, 1935, p. 7), and DEICHMANN (Meddelelser om Grønland, XXIX, 1909, p. 144) in the latter half of July found them breeding in large numbers on Dunholm, and at the end of July observed a number of young on Manly Halvø.

The gastric contents of the ♂ ad. brought home were: 55 *Portlandia arctica*, 3 *Macoma lovénii*, 1 *Modiolaria laevigata*, 2 *Cylichna* sp. (WRIGHT-THORSON det.) and 3 Gammarides, *Atylus carinatus*, (K. STEPHENSEN det.).

Mergus serrator serrator Linné.

Mergus Serrator LINNAEUS: Syst. Nat. Ed. X. I, 1758, p. 129.

Mergus serrator L. WINGE: Meddelelser om Grønland, XXI, 1898, p. 113.

The Seventh Thule Expedition returned four downy young, whose total length on the skins is between 210 and 225 mm; they were shot on August 5th, 1933, on a tarn just north of the Angmagssalik colony, where MØHL-HANSEN surprised a female with twelve young.

SCHIØLER (Dansk Ornithologisk Forenings Tidsskrift, XIX, 1925, p. 115) would separate the Redbreasted Merganser of West Greenland from the typical one as being of a slightly larger race, *M. serrator major*. He had only one skin for examination from the east coast (Sabine Ø), though according to the measurements he was inclined to place it to the typical race; other two skins, afterwards brought to Denmark by ALW. PEDERSEN (Meddelelser om Grønland, LXXVII, 1930, p. 437), have measurements conforming to those of the typical Redbreasted Merganser, so that in all probability it is this form that breeds here and there on the east coast. Consequently, in the absence of other evidence I consider it reasonable to place the four young from Angmagssalik to *M. serrator serrator*, especially as SCHIØLER's race *M. serrator major* does not seem to be too well founded.

That this Merganser, which breeds so commonly in Iceland, may be encountered in the more northerly parts of the east coast, though in small numbers, is proved by MANNICHE (Meddelelser om Grønland, XLV, 1910, p. 105), who saw a female at Renskeret (76°41' N.), whilst the museum in Copenhagen has a skin from Sabine Ø, a ♂ ad., shot June 17th, 1922. ALW. PEDERSEN (Meddelelser om Grønland, LXXVII, 1930, p. 437), considers that it is a regular but not frequent breeding bird in Scoresby Sund, where he believes it has its breeding places in the inner parts of the fjord. DEGERBØL and MØHL-HANSEN (Meddelelser

om Grønland, Bd. 104, No. 18, 1935) did not see the species on Blosseville Kyst. At Angmagssalik, according to HELMS (Meddelelser om Grønland, LVIII, 1926, p. 230) it is a regular breeder, though scarcely in large numbers. On his journeys south of Angmagssalik MØHL-HANSEN did not observe the species.

Branta bernicla hrota (O. F. Müller).

Anas Hrota O. F. MÜLLER: Zoolog. Danicae Prodrum, 1776, p. 14.

Anser torqvatus FRISCH *typicus*. WINGE: Meddelelser om Grønland, XXI, 1898, p. 120.

One skin, having the following dimensions:

No.	Sex	Locality	Date	Wing length mm	Culmen mm	Tarsus mm
161	..	Mikis Fjord	7.9.1933	318	32.5	59

The skin was that of an adult bird, evidently on its autumn migration southwards, coming from the breeding grounds in Northeast Greenland.

As yet this bird is not known to breed south of Kap Hope in Scoresby Sund (cf. ALW. PEDERSEN: Meddelelser om Grønland, LXXVII, 1930, p. 443), but the principal breeding places are in the more northerly regions of East Greenland (Hochstetter Vorland). DEGERBØL and MØHL-HANSEN (Meddelelser om Grønland, Bd. 104, No. 18, 1935) did not see it on Blosseville Kyst. At Angmagssalik it usually appears in flocks from the beginning of September till the middle of October (cf. HELMS: Meddelelser om Grønland, LVIII, 1926, p. 233). CHAPMAN (Geographical Journal, LXXIX, 1932, p. 494) also saw several there from the early part of September.

Lagopus mutus rupestris (Gmelin).

Tetrao rupestris GMELIN: Syst. Nat. I, 2, 1789, p. 751.

Lagopus mutus (MONT.) var. *rupestris* (GMEL.). WINGE: Meddelelser om Grønland, XXI, 1898, p. 124.

Lagopus mutus rupestris (GMELIN). SALOMONSEN: Meddelelser om Grønland, Bd. 118, No. 2, 1936, p. 33.

The ten skins below, secured by the Seventh Thule Expedition, had the following measurements:

No.	Sex	Locality	Date	Wing length mm	Culmen mm
139	♂ ad.	Kûngmiut in Angmagssalik	6.9.1933	192	12
135	♂ ad.	Kûngmiut in Angmagssalik	6.9.1933	199	12
144	♂ juv.	Kûngmiut in Angmagssalik	6.9.1933	(164)	12
136	♂ juv.	Kûngmiut in Angmagssalik	6.9.1933	(170)	12
138	♀ ad.	Kûngmiut in Angmagssalik	6.9.1933	189	12
137	♀ ad.	Kûngmiut in Angmagssalik	6.9.1933	180	12
134	♀ ad.	Kûngmiut in Angmagssalik	6.9.1933	184	11
30	♂ pull.	Sermilik, 2nd east fjord....	24.7.1933	..	..
31	♂ pull.	Sermilik, 2nd east fjord....	24.7.1933	..	..
29	♀ pull.	Sermilik, 2nd east fjord....	24.7.1933	..	..

SALOMONSEN (l. c.) has carefully gone through a large number of Ptarmigan skins from the west and east coasts, and arrived at the conclusion that the race *L. m. rupestris* lives in all parts of the west coast and the southerly part of the east coast, at any rate as far as up to Kangerdlugssuaq; from Kap Dalton, and north of that point, the Ptarmigans should, he thought, be placed to the race *L. m. captus* PETERS. From Angmagssalik he had only two skins, of females, and from Kangerdlugssuaq three skins of adults, for examination, but in colour he found them to be in conformity with skins from the west coast of Greenland. On measuring the very large material he found that the wing length of *L. m. rupestris* was between 188 and 211 mm as far as the males were concerned, as compared with 211—223 mm for the males of *L. m. captus*, whereas the females of the former species had wing lengths of between 179 and 199 mm as compared with 193 to 207 for the females of *L. m. captus*. The five adult Ptarmigan skins brought home from Angmagssalik by MØHL-HANSEN by their low wing measurements show that they even go in among the small *L. m. rupestris* and are not at all to be confused with *L. m. captus*, and furthermore, their colour corresponds exactly to that of *L. m. rupestris* from West Greenland. The male wing length between 192 and 199 mm and that of the females between 180 and 189 mm show that they coincide exactly with SALOMONSEN's account of the geographical distribution of the races in East Greenland.

DEGERBØL and MØHL-HANSEN (Meddelelser om Grønland, Bd. 104, No. 18, 1935, p. 11) found the Ptarmigan fairly common at Kangerdlugssuaq, but otherwise did not come across it on the Blosseville Kyst until they reached Kap Dalton, whence they secured a skin which apparently (SALOMONSEN l. c.) must be placed to *L. m. captus*. Accordingly, the boundary between these two races of the Ptarmigan must presumably lie on the Blosseville Kyst. On the coasts south of Ka-

ngerdlugssuaq CHAPMAN (Geographical Journal, LXXIX, 1932, p. 496) found it breeding in small numbers.

According to HELMS (Meddelelser om Grønland, LVIII, 1926, p. 235) it is a "fairly common breeding" species at Angmagssalik. On July 24th MØHL-HANSEN encountered a number of Ptarmigan in Sermilik Fjord, including a female with eight young—in his opinion about seven days old. The seven skins of adult and young birds which he brought home were also collected on July 6th, 1933, at Kûngmiut in Angmagssalik; the adult males had a few white feathers appearing on the back; of the females only two had reached that stage, whereas one, like the young birds, still had dark feathers on the back exclusively. MØHL-HANSEN in his notes does not mention having seen Ptarmigan elsewhere.

Regarding the Ptarmigan on the south part of the east coast, WINGE (l. c., p. 129) states that a number were shot at Kekertatsiak ($60^{\circ}10'$), according to GARDE in May and June 1884, and the latter also encountered them in large numbers on the west side of Kap Torden-skjold ($61^{\circ}24'$); at Anoritôq ($61^{\circ}32'$) VAHL found its nest at the end of June 1829. WALLØE, too, in 1752 mentions it as occurring on the south part of the east coast.

Colymbus stellatus Pontoppidan.

Colymbus stellatus PONTOPPIDAN: Danske Atlas, I, 1763, p. 621.

Colymbus septentrionalis L. WINGE: Meddelelser om Grønland, XXI, 1898, p. 131.

No skin of this species was brought back by the Seventh Thule Expedition, but MØHL-HANSEN states (in lit.) that on July 28th, 1933, near a lake at Kûngmiut (Angmagssalik) on a tussock he found a nest with one egg of this Diver. According to HELMS (Meddelelser om Grønland, LVIII, 1926, p. 240) it is common everywhere at Angmagssalik. DEGERBØL and MØHL-HANSEN (Meddelelser om Grønland, Bd. 104, No. 18, 1935, p. 11) also found it to be common on the Blosseville Kyst. DEICHMANN (Meddelelser om Grønland, XXIX, 1909, p. 146) saw some downy young at the mouth of Turner Sund on July 25th. According to ALW. PEDERSEN (Meddelelser om Grønland, LXXVII, 1930, p. 432) it breeds commonly in Scoresby Sund.

At Tingmiarmiut MØHL-HANSEN (in lit.) found the species very common on August 9th, often observing five or six birds flying in the air at the same time. In the middle of July, too, he saw some individuals there.

Regarding the occurrence of the species on the south part of the east coast we do not know much; WINGE (l. c., p. 134) states that GRAAH



MØHL-HANSEN PHOT.

Fig. 1. Nest of Red-throated Diver, Kûngmiut 28.7.1933.

mentioned it from there, and VAHL writes in a letter in 1830 that in 1829 it was seen for the first time on May 15th at Nanûseq ($60^{\circ}28'$).

Puffinus gravis (O'Reilly).

Procellaria gravis O'REILLY: Voy. Greenl. Adj. Seas, 1818, p. 140.

Puffinus major FABER. WINGE: Meddelelser om Grønland, XXI, 1898, p. 140.

Two skins had the following dimensions:

No.	Sex	Locality	Date	Wing length mm	Culmen mm	Tarsus mm
78	♀ ad.	ca. 30 miles off Angmagssalik	7.8.1933	(295)	46	60
77	♀ ad.	ca. 30 miles off Angmagssalik	7.8.1933	(302)	48	57

The strikingly short wing measurements are due to the fact that the primaries are not fully grown after the moult; as a rule the wing length of this species lies between 320 and 330 mm (cf. HARTERT: Vögel der paläark. Fauna, 1915, p. 1423).

MØHL-HANSEN saw about thirty of the species on the ice about thirty miles outside, but slightly to the south of Angmagssalik. This species of Shearwater does not seem to have been observed previously

on the east coast of Greenland, it being a common summer guest along the west coast (cf. WINGE, l. c.), where it is occasionally seen in enormous flocks; and as it sometimes occurs numerously in the sea south of Iceland, it is not actually strange that it also comes in near the east coast of Greenland.

Fulmarus glacialis glacialis (Linné).

Procellaria glacialis LINNAEUS: Fauna suecica, Ed. II, 1761, p. 51.

Fulmarus glacialis (L.). WINGE: Meddelelser om Grønland, XXI, 1898, p. 141.

MØHL-HANSEN (in lit.) states that while on the Seventh Thule Expedition on July 15th he saw about fifty Fulmars on the ice while he was journeying southwards from Angmagssalik; he states that he secured two, but their skins were not brought home. On August 11th he again saw many individuals of this species on the ice off Angmagssalik.

The nearest breeding place known on the east coast of Greenland is at Raffle Ø off Liverpool Kyst, where ALW. PEDERSEN (Meddelelser om Grønland, LXXVII, 1930, p. 454) found about thirty pairs breeding; the many Fulmars occurring in the Danmarks Stræde—which means among the drift ice—must come from large breeding grounds farther north; some of the light-coloured specimens are possibly from Iceland.

DEGERBØL and MØHL-HANSEN (Meddelelser om Grønland, Bd. 104, Nr. 18, 1935, p. 15) did not observe this species very often along Blossville Kyst, where it was mostly seen between Kap Ravn and Mikis Fjord.

HELMS (Meddelelser om Grønland, LVIII, 1926, p. 240) states that colony manager PETERSEN encountered it only once at Tasiussaq near Angmagssalik, but that the bird appears among the ice off the colony.

It is not known to breed at Angmagssalik. Off Lake Fjord CHAPMAN saw numbers of them in the ice (Geographical Journal, 83, 1934, p. 376). On the south part of the east coast GRAAH observed it in 1832 (cf. WINGE: Meddelelser om Grønland, XXI, 1898, p. 144).

Charadrius hiaticula hiaticula LINNÉ.

Charadrius Hiaticula LINNAEUS: Syst. Nat. Ed. X. I. 1758, p. 150.

Ægialitis hiaticula (L.). WINGE: Meddelelser om Grønland, XXI, 1898, p. 152.

Charadrius hiaticula psammodroma SALOMONSEN: Journal für Ornithologie, LXXVIII, 1930, p. 71.

The skins secured by the Seventh Thule Expedition had the following measurements:

No.	Sex	Locality	Date	Wing length mm	Culmen mm	Tarsus mm
45	♂ ad.	Kûngmiut, nr. Angmagssalik	28.7.1933	133	14.5	25
44	♂ ad.	Kûngmiut, nr. Angmagssalik	28.7.1933	133	15	25
35	♂ ad.	Ipilagtoq, Sermilik Fjord ..	26.7.1933	125	14.5	24.5
96	♂ ad.	Mikis Fjord	19.8.1933	131	14	27
95	♂ ad.	Mikis Fjord	19.8.1933	130	14.5	25.5
46	♂ juv.	Kûngmiut, Angmagssalik ..	28.7.1933	(119)	14	25
92	♂ juv.	Mikis Fjord	17.8.1933	126	13.5	25
40	♂ juv.	Ipilagtoq, Sermilik Fjord ..	26.7.1933	125	14.5	26.5
47	♂ pull.	Kûngmiut, Angmagssalik ..	28.7.1933	..	..	..
36	♀ ad.	Ipilagtoq, Sermilik Fjord ..	26.7.1933	134	14	25.5
38	♀ ad.	Ipilagtoq, Sermilik Fjord ..	26.7.1933	130	14	24.5
37	♀ ad.	Ipilagtoq, Sermilik Fjord ..	26.7.1933	131	13.5	26
39	♀ juv.	Ipilagtoq, Sermilik Fjord ..	26.7.1933	(123)	14.5	25.5
122	♀ juv.	Mikis Fjord	29.8.1933	125	14	25
91	♀? juv.	Mikis Fjord	17.8.1933	126	14	25
114	vix juv.	Mikis Fjord	20.8.1933	..	..	..

In 1930 SALOMONSEN (l. c.) endeavoured to group the Ringed Plovers of the Faroe Islands, Iceland, Greenland and Cumberland Sound as one race, *Ch. h. psammodroma*, recognizable by a slightly shorter wing (122 to 136 mm) than the nominal form (127 to 139 mm); this difference is so insignificant, however, that he recalled the race in 1935



MOHL-HANSEN PHOT.

Fig. 2. Breeding place of Ringed Plover in Kûngmiut.

(Zoology of the Faroes, 1935, p. 71), and accordingly the Greenland Ringed Plover must again be placed under the nominal form, from which it in fact does not differ.

MØHL-HANSEN on 26th July, 1933, observed Ringed Plovers on the east side of Sermilik Fjord, and remarks (in lit.) that the young there were much older than those he secured in Kangerdlugssuaq on August 15th, 1932. On the gravel flats and by the lakes behind Kûngmiut on July 28th he saw breeding Ringed Plovers. Finally, on August 19th



MØHL-HANSEN PHOT.

Fig. 3. Ringed Plover Nestling, Kûngmiut.

in Mikis Fjord he saw these birds in small flocks together with Sanderlings, Knots and a few Turnstones.

Of the sixteen skins brought home by MØHL-HANSEN, all from localities where the species had previously been observed, the birds were taken in July from the 26th to the 28th, undoubtedly still at the breeding place, for a downy young was among those secured; those taken in August must for the greater part have been passage birds, although No. 114 from Mikis Fjord, taken August 20th, is a young bird with considerable remains of the downy dress.

The species is a common breeding bird at Liverpool Land and Jameson Land (cf. ALW. PEDERSEN: Meddelelser om Grønland, LXXVII, 1930, p. 456). DEGERBØL and MØHL-HANSEN (Meddelelser om Grønland, Bd. 104, No. 18, 1935, p. 15) saw about eight or ten breeding pairs at Kap Dalton, and in August they saw the bird in Mikis Fjord and at

Kangerdlugssuaq, some of them doubtless migrating, but others with downy young, that is to say the breeding birds of that locality. At Angmagssalik the species according to HELMS (Meddelelser om Grønland, LVIII, 1926, p. 243) is a "fairly common" breeding bird, and CHAPMAN (Geographical Journal, 83, 1934, p. 376) found it breeding in Lake Fjord.

On the occurrence of the Ringed Plover on the coast south of Angmagssalik we have only VAHL's record, according to which there were fairly large numbers at Nanûseq (60°28') in May 1829, and after that they were to be seen at most places along the coast farther north (WINGE: Meddelelser om Grønland, l. c., p. 154).

Arenaria interpres interpres (Linné).

Tringa Interpres LINNAEUS: Syst. Nat. Ed. X. I, 1758, p. 148.

Streptilas interpres (L.). WINGE: Meddelelser om Grønland, XXI, 1898, p. 155.

Arenaria interpres (L.) (*morinella* (L.) $\geq$ *interpres* (L.)?) LÖPPENTHIN (Meddelelser om Grønland, Bd. 91, Nr. 6, 1932, p. 54).

The seven skins secured by the Seventh Thule Expedition had the following dimensions:

No.	Sex	Locality	Date	Wing length mm	Culmen mm	Tarsus mm
90	♂ ad.	Mikis Fjord.....	17.8.1933	148	23	25.5
89	♂ juv.	Mikis Fjord.....	17.8.1933	150	19	25
106	♂ juv.	Kap Dalton.....	26.8.1933	159	21	26.5
88	♂ juv.	Mikis Fjord.....	17.8.1933	148	21	25.5
87	♂ juv.	Mikis Fjord.....	17.8.1933	142	20.5	25
105	♀ juv.	Kap Dalton.....	28.8.1933	154	20.5	25
112	juv.	Mikis Fjord.....	20.8.1933	156	22	25

LÖPPENTHIN (l. c.) is almost inclined to believe that the Turnstone which breeds in the northeast coast of Greenland must be regarded as an intermediate form between the typical race *A. i. interpres*, which is widespread in the Old World, and *A. i. morinella* (L.), whose range lies in the east of North America. Nevertheless, he found scarcely any difference in size between the Turnstones of Northeast Greenland and Denmark, but considers that the colour is a prettier red on the back of most of his skins from Loch Fine. As we know, these two races closely approach each other and often are scarcely distinguishable; the best distinctive feature (though it does not always suffice), is doubtless the length of the wing (cf. RIDGWAY: Birds of North and Middle America, VIII, 1919, p. 44), as the red colour on the back is very individual in

shade. For seven undoubted *A. i. morinella*, fully coloured, from arctic North America I found a wing length which averaged 143.7 mm, whereas for 21 individuals (fully coloured and young birds), taken on the stretch Kangerdlugssuaq—Scoresby Sund, this measurement had an average of 150.4 mm, almost corresponding to the wing length of 12 breeding birds of Denmark, whose average lay at 149.4 mm. Nor in my opinion can the back colour of a large number of fully coloured skins from Northeast Greenland in any way be said to place them to the American race; consequently, I have no hesitation in placing the Turnstone breeding in Northeast Greenland to *A. i. interpres*.

Of the seven skins brought back by MØHL-HANSEN only one was of a bird in full plumage, the others being all young birds, all taken between August 17th and 28th at Kap Dalton and in Mikis Fjord, and thus probably all migrating, coming from more northerly breeding grounds; at the last-named place he found them singly in small flocks together with Sanderlings, Ringed Plovers and Knots. He did not observe the species south of Mikis Fjord.

The species is a common breeder in Scoresby Sund and on the coast north of there (cf. ALW. PEDERSEN: Meddelelser om Grønland, LXXVII, 1930, p. 458). South of Scoresby Sund it has scarcely been observed breeding, though ALW. PEDERSEN (l. c., p. 459), mentions that it is said to breed at Kangerdlugssuaq—but on the evidence of some Greenlanders who had wintered there. DEGERBØL and MØHL-HANSEN (Meddelelser om Grønland, Bd. 104, No. 18, 1935, p. 16) did not find it breeding on Blossville Kyst, where it was common in August both in Kangerdlugssuaq and Mikis Fjord, apparently migrating. CHAPMAN (Geographical Journal, 83, 1934, p. 376) encountered it in "the breeding season" in Lake Fjord, but was unable to ascertain that it was breeding.

Calidris maritima maritima (BRÜNNICH).

Tringa Maritima BRÜNNICH: Ornith. Boreal. 1764, p. 54.

Tringa maritima BRÜNN. *typica*. WINGE: Meddelelser om Grønland, XXI, 1898, p. 164.

One skin, secured by MØHL-HANSEN, had the following measurements:

No.	Sex	Locality	Date	Wing length mm	Culmen mm	Tarsus mm
41	♀ juv.	Ipitagloq, Sermilik Fjord ..	26.7.1933	128	30	24

He brought this one skin back, and does not mention any observation of the bird anywhere else.

At Scoresby Sund ALW. PEDERSEN (Meddelelser om Grønland, LXXVII, 1930, p. 459) mentions it as a very rare breeding bird, only twice found breeding by him on the south coast of Jameson Land, but he presumes that it also breeds in Hurry Bugt. Even if it has been observed at several places north of there, right up to about lat. 75° N., it is obviously not a common breeding bird in Northeast Greenland. On Blossville Kyst DEGERBØL and MØHL-HANSEN (Meddelelser om Grønland, Bd. 104, No. 18, 1935, p. 17) saw the species only once, having seen five individuals on August 5th in Mikis Fjord, undoubtedly migrating. ALW. PEDERSEN (l. c.) mentions that it is reported from Kangerdlugssuaq, though he is unable to say whether it breeds there or not. CHAPMAN (Geographical Journal, 83, 1934, p. 376) encountered it in the breeding season in Lake Fjord, but did not establish it as a breeding bird there. At Angmagssalik, HELMS (Meddelelser om Grønland, LVIII, 1926, p. 245) states that it breeds, but in no great numbers. South of there according to WINGE (l. c. 167) the species was observed at Ivimiut (60°50'), where VAHL saw a few individuals at the end of May 1829.

Calidris canutus (LINNÉ).

Tringa Canutus LINNAEUS: Syst. Nat. Ed. X. I, 1758, p. 149.
Tringa canutus L. WINGE: Meddelelser om Grønland XXI, 1898, p. 167.

Three skins were brought back by the Seventh Thule Expedition, the measurements being:

No.	Sex	Locality	Date	Wing length mm	Culmen mm	Tarsus mm
85	♂ juv.	Mikis Fjord.....	17.8.1933	158	27.5	30
86	♀ juv.	Mikis Fjord.....	17.8.1933	159	28.5	30
113	juv.	Mikis Fjord.....	20.8.1933	156	29	30

Unfortunately, these skins are all of young birds with incompletely developed plumage, so that they provide no information as to which race they may belong to, *C. c. canutus* or *C. c. rufus*, which American ornithologists still assume to be breeding birds in North Greenland (Check-List North American Birds, 1931, p. 117); this view is not shared by i. a. SCHIØLER (Danmarks Fugle, II, 1926, p. 46), for he places North Greenland's Knot to the typical race. LØPPENTHIN (Meddelelser om Grønland, Bd. 91, No. 6, 1932, p. 59) will not say anything categorical either.

According to ALW. PEDERSEN (Meddelelser om Grønland, LXXVII, 1930, p. 460) the nearest breeding place of the species would seem to be Jameson Land and the south coast of Scoresby Sund. South of there it is known only on migration, though DEICHMANN (Meddelelser om Grønland, XXIX, 1909, p. 150) saw a few old and young birds in Deichmann's Fjord (July 26th) and on Dunholm (July 28th), possibly breeding.

In Mikis Fjord MØHL-HANSEN (in lit.) in the days around August 19th, 1933, encountered a number of Knots in small flocks together with Sanderlings, Ringed Plovers and a few Turnstones. DEGERBØL and MØHL-HANSEN (Meddelelser om Grønland, Bd. 104, No. 18, 1935, p. 17) also observed them resting there in rather considerable numbers on August 27th and 31st, 1932. At Kangerdlugssuaq, ALW. PEDERSEN (l. c. p. 461) states that it is seen only on passage, and at Angmagssalik, HELMS (Meddelelser om Grønland, LVIII, 1926, p. 245) states that it was only observed now and then, and only on passage. Thus the principal line of migration would seem to be via Iceland, where it is exceedingly numerous everywhere in migration time. The species is not known to have been seen on the coast south of Angmagssalik.

Calidris alpina arctica (SCHIØLER).

Erolia alpina arctica SCHIØLER: Dansk Ornithologisk Forenings Tidsskrift XVI, 1922, p. 19.

Tringa alpina L. WINGE: Meddelelser om Grønland, XXI, 1898, p. 169.

One skin was brought home, having the following measurements:

No.	Sex	Locality	Date	Wing length mm	Culmen mm	Tarsus mm
110	♀ juv.	Kap Dalton.....	26.8.1933	115	28	24

This individual must have been on passage. With the mostly grey edges of the feathers on the back the skin conforms well with young birds from Northeast Greenland, of which the Dunlins (l. c.) were placed by SCHIØLER to *C. c. arctica*. As shown under the following race *C. a. islandica*, in addition to the greyish back colour of *C. a. arctica* this latter is well characterized by the length of the bill, which on females of the former race lies between 30.5 and 35 mm, but on *arctica* only between 27 and 31 mm. Without doubt this skin must therefore be placed to this northerly breeding race of Dunlins.

ALW. PEDERSEN (Meddelelser om Grønland, LXXVII, 1930, p. 461) found *C. a. arctica* breeding in large numbers on the south coast of Jameson Land and in Hurry Bugt, whereas it was entirely absent on

Liverpool Land and on the south coast of Scoresby Sund. DEGERBØL and MØHL-HANSEN (Meddelelser om Grønland, Bd. 104, No. 18, 1935, p. 18) on July 11th found about eight pairs breeding at Kap Dalton, and on July 13th observed two old birds in Barclay Bugt, in all probability, also breeding. From Kap Dalton they brought home a female adult which they rightly identify as *C. a. arctica*. Owing to a printer's or measuring error the length of the bill is shown as 25 mm, an unprecedentedly short culmen, even for an *arctica*. On checking the measurement I found in fact that the culmen was 28 mm, so that the measurements of the skin lie quite within the limits of this race (cf. the measurements under *C. a. islandica*). Later, in August, they found the species in Mikis Fjord, and a male adult secured on August 4th must be assumed to have been breeding in that area. Its back is much faded and therefore is practically devoid of any reddish-brown; its bill length, however, is 29.0 mm, a length that is very unique for a *C. a. arctica* male. I am inclined to describe it as a *C. a. arctica* $\geq$ *islandicus*, or perhaps the sex indication is wrong. At Kangerdlugssuaq the species is met with on passage, according to ALW. PEDERSEN (l. c., p. 461). South of there it has scarcely been observed.

Calidris alpina islandica (SCHIØLER).

Erolia alpina islandica SCHIØLER: Dansk Ornithologisk Forenings Tidsskrift, XVI, 1922, p. 18.

The following are the measurements of the two skins brought home:

No.	Sex	Locality	Date	Wing length mm	Culmen mm	Tarsus mm
55	♂ jun.	Kûngmiut, Angmagssalik ..	28.7.1933	110	26	22
56	♂ pull.	Kûngmiut, Angmagssalik ..	28.7.1933	..	..	..

HELMS (Meddelelser om Grønland, LVIII, 1926, p. 246) has already pointed out that four skins of this species sent home from Angmagssalik must be placed to SCHIØLER's race *C. a. islandica*, which is native to Iceland.

For the purpose of visualizing the differences in size between *C. a. arctica* and *C. a. islandica*, I have measured the adult birds at the Zoological Museum in Copenhagen from Iceland and Northeast Greenland; of the latter, SCHIØLER (l. c.) had only 7 males and 4 females at his disposal, whereas now there are long series.

The measurements proved to be as follows:

38 Icelandic males:	wing length	106—117 mm,	Average	111.4 mm
	culmen	26—31.5 mm,	Average	29.0 mm
18 NE. Greenl. males:	wing length	105—112 mm,	Average	108.3 mm
	culmen	25—27.5 mm,	Average	26.0 mm
18 Icelandic females:	wing length	110—118 mm,	Average	114.3 mm
	culmen	30.5—35 mm,	Average	33.0 mm
16 E. Greenl. females:	wing length	110—120 mm,	Average	113.3 mm
	culmen	27— 31 mm,	Average	28.3 mm

It is seen from the above that while the difference in the size of the wing length is of minor importance, the length of culmen shows such a distinct difference that in most cases it will be a good help in the race determination.

According to my measurements, HELMS' four skins of adult birds from Angmagssalik (sex not determined, unfortunately) show the following values, which by the way do not agree at all with those stated by HELMS.

			Wing length	Bill length	
No. 1.	ad.	8.8.1902.	114 mm	33 mm	Reddish-brown back
No. 2.	ad.	1905.	113 mm	33 mm	Reddish-brown back
No. 3.	ad.	1908	115 mm	ca. 30 mm	Much faded.
No. 4.	ad.	27.5.1902.	109 mm	27 mm	Reddish-brown back

Nos. 1 and 2 are undoubtedly females of *C. a. islandica*. No. 3 has a culmen length of 30 mm, a measurement which unfortunately lies midway between the races, but may thus be a male of *islandica*. No. 4 with its reddish-brown back also seems to be a male *islandica*; accordingly, two of the skins are definitely, the other two probably, of the Icelandic form.

HELMS (l. c.) states that the species was not known to breed at Angmagssalik, and assumes that its occurrence there is accidental, doubtless a casual visit from Iceland.

From the Seventh Thule Expedition MØHL-HANSEN brought two skins home, secured on July 28th at Kungmiut near Angmagssalik; one, which is a downy young with feathers emerging on the back, makes it certain that the species breeds there; and he states (in lit.) expressly that he found Dunlins breeding by lakes behind Kungmiut. On the same day and at the same place he shot a young bird which, as regards the colour of the back, may almost be placed to *C. a. islandica*; its culmen is ca. 30 mm, but unfortunately it is scarcely quite developed.

It now being proved that the species breeds at Sermilik, I consider it reasonable to assume that the four skins sent to HELMS from Ang-

magssalik were not casuals, but birds breeding there, and that the race *C. a. islandica* in all probability is to be found as a breeding bird on those parts of the east coast that lie in the same latitude as Iceland. CHAPMAN (Geographical Journal, 83, 1934, p. 376) met with the species in breeding time in Lake Fjord, but does not say which race it was.

Crocethia alba (Pallas).

Trynga alba PALLAS: Vroeg's Catal. Coll., Adumbratiuncula, 1764, p. 7.

Calidris arenaria (L.). WINGE: Meddelelser om Grønland, XXI, 1898, p. 170.

The 11 skins brought home had the following measurements:

No.	Sex	Locality	Date	Wing length mm	Culmen mm	Tarsus mm
103	♂ juv.	Mikis Fjord.....	19.8.1933	117.5	22	24
100	♂ juv.	Mikis Fjord.....	19.8.1933	121	25	25
97	♂ juv.	Mikis Fjord.....	19.8.1933	122	25	25
93	♂ juv.	Mikis Fjord.....	17.8.1933	118	23	24
98	♂ juv.	Mikis Fjord.....	19.8.1933	120	22.5	24.5
109	♂ juv.	Kap Dalton.....	26.8.1933	123	25.5	24
102	♀ juv.	Mikis Fjord.....	19.8.1933	124	25.5	25
99	♀ juv.	Mikis Fjord.....	19.8.1933	121	25.5	25
101	♀ juv.	Mikis Fjord.....	19.8.1933	126.5	26.5	25.5
108	♀ juv.	Kap Dalton.....	26.8.1933	126	25	25
107	♀ juv.	Kap Dalton.....	26.8.1933	126	24	25.5

On the east coast the breeding grounds of this species have been found only north of lat. 70° N., south of which the bird has been seen only on passage. ALW. PEDERSEN (Meddelelser om Grønland, LXXVII, 1930, p. 461) found it breeding rather numerously in Scoresby Sund, where "im Herbst" he saw the young birds to be common on the beach; only at the end of August did the migrating Sanderlings pass through from more northerly localities. If this statement is correct, the Sanderlings, old and young, which DEGERBØL and MØHL-HANSEN (Meddelelser om Grønland, Bd. 104, No. 18, p. 18) saw commonly in Mikis Fjord on August 4th were probably birds which had been breeding in the neighbourhood; already on August 10th they saw only young birds, and from August 20th these gradually disappeared. It would seem that the line of passage of the Sanderling down along the east coast runs from Blosseville Kyst over to Iceland, where it is a very common bird and numerous in autumn; at any rate it is described by HELMS (Meddelelser om Grønland, LVIII, 1926, p. 246) as of very rare occurrence in Angmagssalik. According to WINGE (l. c., p. 171), the museum in Copenhagen received a skin from Auarqat, collected June 17th, 1829, by VAHL.

On the Seventh Thule Expedition MØHL-HANSEN encountered young birds at Kap Dalton on August 26th and also saw some on August 19th in Mikis Fjord, where they were in small flocks of five to seven, together with Ringed Plovers, Turnstones and Knots; south of there he did not observe the species.

Lobipes lobatus (LINNÉ).

Tringa tobata LINNAEUS: Syst. Nat. Ed. X, I, 1758, p. 148.

Phalaropus hyperboreus (L.). WINGE: Meddelelser om Grønland, XXI, 1898, p. 171.

The seven skins secured had the following measurements:

No.	Sex	Locality	Date	Wing length mm	Culmen mm	Tarsus mm
48	♂ ad.	Kûngmiut, Angmagssalik...	28.7.1933	106	20	20.5
49	♂ ad.	Kûngmiut, Angmagssalik...	28.7.1933	103	20.5	20.5
50	♂ ad.	Kûngmiut, Angmagssalik...	28.7.1933	109	19	21
51	♂ ad.	Kûngmiut, Angmagssalik...	28.7.1933	(99)	19	19
52	♂ juv.	Kûngmiut, Angmagssalik...	28.7.1933	..	..	..
53	♂ pull.	Kûngmiut, Angmagssalik...	28.7.1933	..	..	..
54	♀ pull.	Kûngmiut, Angmagssalik...	28.7.1933	..	..	..

ALW. PEDERSEN (Meddelelser om Grønland, LXXVII, 1930, p. 463) found this species to be extremely sparse in Scoresby Sund, where he saw only few pairs in spring and autumn, probably birds that had bred in the inner part of the fjord. BERTRAM, LACK and ROBERTS (Ibis, 1934, p. 823) found it breeding at Constable Pynt in Hurry Bugt on August 7th, 1933. North of there the bird has been observed only a few times. DEGERBØL and MØHL-HANSEN (Meddelelser om Grønland, Bd. 104, No. 18, 1935, p. 19) on August 18th and 19th, 1932, saw four old females at Kap Daussy; from the time of the year it is presumable that they had nested in the vicinity and then left the males and the young, as is their habit; on August 31st they saw two individuals in Mikis Fjord. Otherwise they did not meet with the Red-Necked Phalarope, and it seems to occur only sparsely on Blosseville Kyst.

CHAPMAN (Geographical Journal, 83, 1934, p. 376) saw it in the breeding season in Lake Fjord, but did not ascertain that it was actually breeding.

At Angmagssalik it is a common breeding bird (HELMS: Meddelelser om Grønland, LVIII, 1926, p. 247, and TINBERGEN: Ardea, XXIV, 1935, p. 2). Consequently, on the Seventh Thule Expedition MØHL-HANSEN also found it to be common on July 28th in Kûngmiut, a little to the north of Angmagssalik, from which part came all the skins,

males and young, that were brought home. They had their breeding places by the small lakes with their rich vegetation, and he states (in lit.) that when one arrived at one of these small lakes, these birds at



MOHL-HANSEN PHOT.

Fig. 4. Lake behind Kungmiut (Angmagssalik), breeding place of Red-necked Phalaropes, Dunlins and Red-throated Divers.

once swam in to the bank and tried to conceal themselves. Of the three young brought home, one was already in pure young bird dress, whereas the other two were still downy with the first plumage breaking through. On the Seventh Thule Expedition MØHL-HANSEN did not observe this species elsewhere, and for the coast south of Angmagssalik we have no record of it.

Larus leucopterus VIEILLOT.

Larus Leucopterus VIEILLOT: Tableau Encycl. Mèth. I, 1820, p. 346.

Larus leucopterus FABER. WINGE: Meddelelser om Grønland, XXI, 1898, p. 182.

Only one skin was secured, the measurements being:

No.	Sex	Locality	Date	Wing length mm	Culmen mm	Tarsus mm
80	♂ ad.	Tingmiarmiut	9.8.1933	408	43	60

This specimen, which was taken right down at Tingmiarmiut, is a fully coloured bird, the low measurements of which leave no doubt as to its species. MØHL-HANSEN states that he shot it because, flying in among *Larus hyperboreus*, it was conspicuous on account of its small size.

ALW. PEDERSEN (Meddelelser om Grønland, LXXVII, 1930, p. 465) reports that in autumn this species is common on passage at Liverpool Kyst and at the mouth of Scoresby Sund, and that it is also met with on migration at Kangerdlugssuaq and Angmagssalik. DEGERBØL and MØHL-HANSEN (Meddelelser om Grønland, Bd. 104, No. 18, 1935) do not mention the bird at Blosseville Kyst. We know little about its breeding places on the southern east coast. According to WINGE (l. c. p. 186), VAHL mentions it as being common on the south part of the east coast, where he found almost fully fledged young at the end of July 1829. CHAPMAN (Geographical Journal, 79, 1932, p. 493) states that he saw the species commonly at Angmagssalik, and found it breeding up to Kangerdlugssuaq (l. c. p. 496), particularly numerous in Lake Fjord (Geographical Journal, 83, 1934, p. 377).

Larus hyperboreus GUNNERUS.

Larus hyperboreus GUNNERUS: Leem's Beskr. Finn. Lapp., 1767, pp. 226, 283.

Larus glaucus BRÜNN. WINGE: Meddelelser om Grønland, XXI, 1898, p. 186.

The five skins had the following measurements:

No.	Sex	Locality	Date	Wing length mm	Culmen mm	Tarsus mm
79	♂ jun.	Umîvik.....	8.8.1933	(410)	51	70
162	juv.	Mikis Fjord.....	4.9.1933	444	50	67
83	♀ pull.	Tingmiarmiut	9.8.1933	..	..	..
33	♂ pull.	Sermilik	25.7.1933	..	..	..
34	♀ pull.	Sermilik	25.7.1933	..	..	..

Skins No. 79 and 162 are of young of the same summer, but fully fledged, though the former specimen, with a wing length of 410 mm, had not fully developed primaries and still has remnants of down; furthermore, the small bill length shows that they were not fully grown. Nos. 83, 33 and 34 are downy young with feathers emerging on the back.

This bird breeds commonly on the east coast of Greenland up to lat. 80°20' N. ALW. PEDERSEN (Meddelelser om Grønland, LXXVII, 1930, p. 470), like BAY and others, found it breeding commonly on Liverpool Kyst and in Scoresby Sund. DEICHMANN (Meddelelser om Grønland, XXIX, 1909, p. 151), found half-grown young on an islet south

of Stewart Ø on July 27th. DEGERBØL and MØHL-HANSEN (*Meddelelser om Grønland*, Bd. 104, No. 18, 1935, p. 19) also found it breeding commonly on Blossville Kyst right down to Kangerdlugssuaq, and CHAPMAN (*Geographical Journal*, 79, 1932, p. 496), saw it breeding on the coast from there down to Angmagssalik. HELMS (*Meddelelser om Grønland*, LVIII, 1926, p. 250) mentions that it is a "fairly commonly breeding" bird at Angmagssalik.



MØHL-HANSEN PHOT.

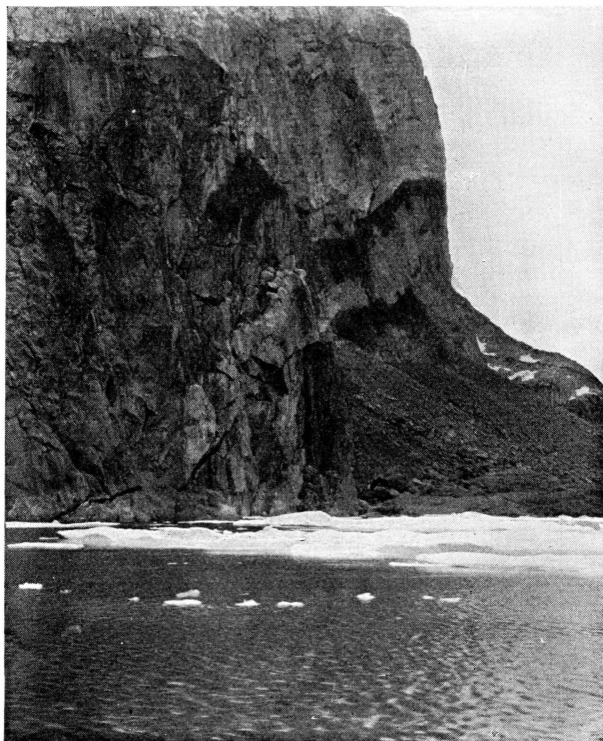
Fig. 5. Nest of Glaucous Gull on Nûulik in Kruuses Fjord 16.8.1933.

It is in accordance with these facts that MØHL-HANSEN reports (in lit.) that on July 24th he saw a cliff in Sermilik Fjord with about 40 pairs of breeding Glaucous Gulls, which had half-grown young in the nests lying in the grass on the rock shelves. On the sandbanks behind Kûngmiut at Angmagssalik on July 28th he saw Glaucous Gulls foraging at ebb-tide; on August 16th on two small islands off Kruuse's Fjord he found a breeding place, though the young had flown. South of Angmagssalik on July 18th he saw a vertical cliff at Umîvik where about 40 pairs were breeding; and on August 9th he saw Glaucous Gulls down at Tingmiarmiut.

Apparently this bird is widely distributed on the south part of the east coast: GRAAH and VAHL (according to WINGE, l. c. p. 189) found it there, and the latter found a breeding place at Tâterait at the mouth of Auarqat Fjord ($61^{\circ}15'$), where large numbers of these birds

were nesting; NANSEN, too, in 1888 found several cliffs with breeding places at Kap Moltke and Kap Møsting (between 63° and 64°).

Some of the stomachs brought home by MØHL-HANSEN give the following information as to the food of the Glaucous Gull:



MØHL-HANSEN PHOT.

Fig. 6. Umivik Bird Rock with nests of Glaucous Gulls and Kittiwakes.

All six birds were taken on July 25th, 1933, in Sermilik Fjord.

- ♀ juv. 5 *Atylus carinatus*, 9 *Halicryptus spinolosus*, remains of moss and other plants.
- juv. Beak of 1 squid, remains of moss, 8 small pebbles.
- ♀ ad. 2 *Atylus carinatus*, 2 *Gymnacanthus tricuspis*.
- juv. Some fragments of brown seaweed and small pebbles.
- ♂ juv. Some gull feathers, a little plant remains, 1 sharp edged piece of quartz, 16 mm long.
- ♀ jun. 15 *Halicryptus spinolosus*, 12 *Pseudalibrotus* sp., 7 *Atylus carinatus*.

Rissa tridactyla tridactyla (LINNÉ).*Larus tridactylus* LINNAEUS: Syst. Nat. Ed. X, I, 1758, p. 136.*Larus tridactylus* L. WINGE: Meddelelser om Grønland, XXI, 1898, p. 190.

The two skins secured had these measurements:

No.	Sex	Locality	Date	Wing length mm	Culmen mm	Tarsus mm
177	♂ juv.	Mikis Fjord.....	29.8.1933	311	32	36
163	juv.	Mikis Fjord.....	30.8.1933	287	32	35

These skins are of young birds of the same summer. The nearest known breeding place of the species is on Raffle Ø off Liverpool Kyst, where ALW. PEDERSEN (Meddelelser om Grønland, LXXVII, 1930, p. 472) found about two thousand pairs breeding; on the other hand it was improbable that it bred in Scoresby Sund. On the whole it is scarcely a very common breeding bird in Northeast Greenland; according to LØPPENTHIN (Meddelelser om Grønland, Bd. 91, No. 6, 1932, p. 69), F. P. KOCH and BERTHELSEN in June 1907 saw about a hundred individuals on Mallemuk Fjæld and a couple of small cliffs between lat. 80°10' and 80°20', and L. KOCH found about thirty pairs breeding on a rock on the west part of Ymer Ø. DEGERBØL and MØHL-HANSEN (Meddelelser om Grønland, Bd. 104, No. 18, 1935, p. 20) encountered rather large numbers of them on August 2nd—4th along the coast between Kap Ravn and Mikis Fjord, but were unable to ascertain that they were breeding there; they saw old and younger birds only, no young of that summer, which would seem to indicate that year's young were not fledged then; in the interior of Kangerdlugssuaq, too, the bird was common. ALW. PEDERSEN (l. c.) also refers to it as being numerous there, but states that whether it breeds there or not is unknown. HELMS (Meddelelser om Grønland, LVIII, 1926, p. 250) says that the species breeds at Angmagssalik, but in small numbers only. CHAPMAN (Geographical Journal, LXXIX, 1932, p. 496) found it to be numerous just north of Angmagssalik, but did not see signs of breeding. MØHL-HANSEN makes no mention of it at Angmagssalik, but on July 18th, 1933, he saw three pairs breeding at Umivik, on a cliff facing the sea; for the present this is the most southerly breeding place of this bird on the east coast. GRAAH mentions it as having been observed in 1832 along the south part of the east coast (WINGE, l. c., p. 196).

Pagophila eburnea (PHIPPS).*Larus eburneus* PHIPPS: Voy. N. Pole. App. 1774, p. 187.*Larus eburneus* PHIPPS. WINGE: Meddelelser om Grønland, XXI, 1898, p. 200.

Only one skin was brought home.

No.	Sex	Locality	Date	Wing length mm	Culmen mm	Tarsus mm
..	♂ juv.	Scoresby Sund	25.8.1933	317	32	40

This skin is that of a young bird. The species is not known to breed in Scoresby Sund, but ALW. PEDERSEN (Meddelelser om Grønland, LXXVII, 1930, p. 474) states that young birds appear in the fjord now and then, and he himself saw it in March and October. Its breeding grounds are on the more northerly parts of the east coast, between lat. 75° and 81° N. MANNICHE, for example (Meddelelser om Grønland, XIV, 1910, p. 163) found it breeding in Germania Land. It is possible that it also breeds at Hochstetter Vorland (LØPPENTHIN, Meddelelser om Grønland, Bd. 91, No. 6, p. 70). DEGERBØL and MØHL-HANSEN (Meddelelser om Grønland, Bd. 104, No. 18, 1935, p. 21) saw one bird off Kap Dalton on July 10th and found it to be common among the ice at Kap Stephensen from July 22nd to 25th, and common from Kap Ravn down to Kangerdlugssuaq; AMDRUP (Meddelelser om Grønland, XXVII, 1902, p. 225) saw one individual at Kap Vedel.

MØHL-HANSEN secured the above Ivory Gull at the mouth of Scoresby Sund, where he observed it together with several others of the same kind; he also saw some few individuals when sailing along the coast south of Kangerdlugssuaq.

At Angmagssalik HELMS (Meddelelser om Grønland, LVIII, 1926, p. 251) states that it is only an infrequent visitor in autumn; south of there we have no record of its occurrence.

Sterna macrura NAUMANN.

Sterna macrura NAUMANN: Isis 1819, p. 1847.

Sterna macrura NAUM. WINGE: Meddelelser om Grønland, XXI, 1898, p. 204.

Two skins had the following measurements:

No.	Sex	Locality	Date	Wing length mm	Culmen mm	Tarsus mm
42	♂ ad.	Ipilagtoq, Sermilik Fjord ..	26.7.1933	272	33	16.5
43	♂ ad.	Ipilagtoq, Sermilik Fjord ..	26.7.1933	275	33	16.5

In Northeast Greenland this species is a common breeding bird as far north as to 80°20'. In the inner part of Scoresby Sund and in Hurry Bugt ALW. PEDERSEN (Meddelelser om Grønland, LXXVII, 1930,

p. 476) found it a fairly common, but not very numerous breeding bird. DEGERBØL and MØHL-HANSEN (Meddelelser om Grønland, Bd. 104, No. 18, 1935, p. 21) in July and August observed it to be common between Kap Stephensen and Kangerdlugssuaq, the latter place with their young in large numbers on the icebergs. ALW. PEDERSEN (l. c., p. 476) also mentions it as breeding there. HELMS (Meddelelser om Grønland, LVIII, 1926, p. 251) states that the Arctic Tern breeds "fairly frequently" at Angmagssalik in colonies of up to about a thousand birds: CHAPMAN (Geographical Journal, LXXIX, 1932, p. 493) also saw hundreds of them breeding there at the beginning of August, whereas he saw nothing of the bird between Sermiligâq and Kangerdlugssuaq (Geographical Journal, 83, 1934, p. 376).

MØHL-HANSEN on July 24th—26th, 1933, observed Arctic Terns in enormous numbers on the east side of Sermilik Fjord; they were breeding on rocks and small islands, and were seen diving in the shallow salt-water lagoons. They all had deep-set eggs, but some hatched young were also seen. The Greenlanders had collected eggs among these colonies. Along the coast south of Angmagssalik down to Skjoldungen he saw Arctic Terns on July 15th, 1933, i. e. doubtless breeding there too.

According to WINGE (l. c., p. 206) GRAAH mentioned it in 1832 as common along the south part of the east coast.

One of the birds from Sermilik, secured on July 26th, 1933, had the following gastric contents: 1 *Pseudalibrosus* sp., 1 *Gammarus locusta*, and 1 Copepod (K. STEPHENSEN determ.).

Cephus grylle grylle (LINNÉ).

Alca Grylle LINNAEUS: Syst. Nat. Ed. X, 1758, p. 130.

Cephus grylle (L.). WINGE: Meddelelser om Grønland, XXI, 1898, p. 214.

Eight skins, secured by the Seventh Thule Expedition, had the following measurements:

No.	Sex	Locality	Date	Wing length mm	Culmen mm	Tarsus mm
32	♂ ad.	Sermilik Fjord, east side ..	25.7.1933	160	32.5	34
118	♂ juv.	Mikis Fjord.....	29.8.1933	(1447)	24	32
84	♂ juv.	Nûâlik, Kruuses Fjord.....	16.8.1933	(124)	23	33
120	♀ juv.	Mikis Fjord.....	29.8.1933	157	21	32
119	♀ juv.	Mikis Fjord.....	29.8.1933	(135)	22	32
121	♀ juv.	Mikis Fjord.....	29.8.1933	157	27	33
164	ad.	Mikis Fjord.....	30.8.1933	(138)	30	30
..	♀ juv.	d'Auvay Bugt.....	27.8.1933	151	26	32

Unfortunately, the skins brought home included only two of completely coloured, adult birds, a male from Sermilik Fjord and an adult in initial winter dress from Mikis Fjord; the others were young birds which are useless for race determination. The skin of the Sermilik Fjord adult has a bill which in length (32.5 mm) and thickness corresponds to typical Black Guillemots of Scandinavia, *C. g. grylle*; its wing patch is all white, with no dark crossband, and the black base of the wing-covers has the same extent as that most often found on Scandinavian specimens. Unfortunately, I have not had access to other skins from Angmagssalik, but for the present the Black Guillemots of the region of that colony must be placed to the typical race *C. grylle grylle*, as indeed was assumed by HELMS (Meddelelser om Grønland, LVIII, 1926, p. 252), who, however, had had no skin for examination.

DEGERBØL and MØHL-HANSEN (Meddelelser om Grønland, Bd. 104, No. 18, 1935, p. 25) had 13 skins of this kind from Blosseville Kyst, where it was the most numerous bird from Kap Dalton to Kangerdlugssuaq. They place them nearest to the race *C. g. mandtii*; I agree with them in this after a close examination of these skins, as their bills are conspicuously thinner and smaller than that of *C. g. grylle*, and the black basal part of the feathers of the wing patch is of smaller extent, though they do not all attain the degree of whiteness that should characterize *C. g. mandtii*; more properly they should be called intermediate forms $C. g. mandtii \leq C. g. grylle$. The skin brought home by MØHL-HANSEN from the Seventh Thule Expedition from Mikis Fjord conforms in every respect with those collected by DEGERBØL and MØHL-HANSEN in 1932, and there is every indication that Blosseville Kyst is the border zone between the two races.

ALW. PEDERSEN (Meddelelser om Grønland, LXXVII, 1930, p. 482) found about two thousand pairs breeding on the south shore of Scoresby Sund near Kap Brewster; he rightly places them to *C. g. mandtii*. DEICHMANN (Meddelelser om Grønland, XXIX, 1909, p. 153) found the species breeding rather numerous on Stewart Ø and Dunholm.

According to ALW. PEDERSEN (l. c.) the species is a frequent breeding bird at Kangerdlugssuaq, and CHAPMAN (Geographical Journal, LXXIX, 1932, p. 496) found it breeding in small numbers on the coast from there down to Angmagssalik, though it was very numerous in Lake Fjord (Geographical Journal, 83, 1934, p. 377). HELMS (l. c.) states that it is rather a common bird at Angmagssalik.

MØHL-HANSEN encountered Black Guillemots breeding on the flat upper side of a very small, steep-sided rocky island at Nûalik, outside of Kruuses Fjord, on August 16th, 1933. They had well-grown young in the nests, though still with faint remnants of down. This unusual

breeding place for a Black Guillemot conforms to some extent with what DEGERBØL and MØHL-HANSEN report, for on Blosseville Kyst they found it breeding on open shelves on vertical cliffs; otherwise in Greenland and elsewhere this species mostly nests under talus and stones, but evidently seems to be well able to adapt itself to local conditions; in Denmark it is also known to nest in holes in steep sand bluffs.

MØHL-HANSEN found a few Black Guillemots in Sermilik Fjord, and he also states (in lit.) that in the middle of July he saw occasional individuals on his journey along the coast between Angmagssalik and Skjoldungen.

Regarding the occurrence of this species on the south part of the east coast, WINGE (l. c.) states that GRAAH mentions it from there, and VAHL reported that it was to be seen everywhere; in particular he refers to a deep cave at Tâterait ($61^{\circ}15'$), where on June 17th, 1829, he found numbers of Black Guillemots, which had nests in the rock clefts; some of them already had young. At the beginning of August 1888 NANSEN saw several bird cliffs with many Black Guillemots at the coast between 63° and 64° .

Accordingly, the bird would seem to be very common all along the south part of the east coast; north of Scoresby Sund, too, it is common and has been met with right up to lat. $80^{\circ}10' N$.

Uria lomvia lomvia (LINNÉ).

Alca lomvia LINNAEUS: Systema Nat. Ed. X, I, 1758, p. 130.

Uria arra (PALL.). WINGE: Meddelelser om Grønland, XXI, 1898, p. 222.

Two skins brought back by the Seventh Thule Expedition had the following dimensions:

No.	Sex	Locality	Date	Wing length mm	Culmen mm	Tarsus mm
4	♀ ad.	In the ice 20 miles off Angmagssalik	15.7.1933	208	35	37
165	ad.	Mikis Fjord	30.8.1933	219	32.5	33

Brünnich's Guillemot is common in Scoresby Sund, where ALW. PEDERSEN (Meddelelser om Grønland, LXXVII, 1930, p. 487) at Kap Brewster and on Raffle Ø saw about ten thousand and five thousand breeding pairs respectively. DEICHMANN (Meddelelser om Grønland, XXIX, 1909, p. 154) saw it breeding in large numbers on a rock between

Kap Brewster and Stewart Ø. On the other parts of the east coast north and south of these colonies the species is not known to breed, but south of Scoresby Sund it is seen as an autumn and winter visitor, often quite common and numerous (cf. CHAPMAN: Geographical Journal, 83, 1934, p. 377).

DEGERBØL and MØHL-HANSEN (Meddelelser om Grønland, Bd. 104, No. 18, 1935) do not mention the species during their summer sojourn on Blosseville Kyst. At Kangerdlugssuaq it occurs, according to ALW. PEDERSEN (l. c.), but not as a breeder. At Angmagssalik, says HELMS (Meddelelser om Grønland, LVIII, 1926, p. 253), it is not known to breed, but it is a common, often numerous winter visitor from November to March.

Of the two skins brought home by MØHL-HANSEN from the Seventh Thule Expedition, one is that of an individual secured on July 15th, 1933, in the ice off Angmagssalik; he saw in all about six or eight Brünnich's Guillemots; this bird is still in very worn dress and does not seem to have had any summer plumage on the front of the neck (perhaps on account of weakness), where a considerable number of the feathers are still white; on August 11th, 1933, too, MØHL-HANSEN saw several of the species, presumably summering there, in the ice off Angmagssalik. The specimen from Mikis Fjord, secured on August 30th, 1933, is an adult, moulted bird lacking all the primaries on the left wing but still with three on the right. MØHL-HANSEN by the way makes no mention of having observed the species during his summer sojourn along the coast between Kangerdlugssuaq and Tingmiarmiut. GRAAH reports having observed it on the south part of the east coast (WINGE, l. c., p. 228), presumably summering there.

Plautus alle alle (LINNÉ).

Alca Alle LINNAEUS: Syst. Nat. Ed. X, I, 1758, p. 131.

Mergulus alle (L.). WINGE: Meddelelser om Grønland, XXI, 1898, p. 228.

Three skins, with the following measurements:

No.	Sex	Locality	Date	Wing length mm	Culmen mm	Tarsus mm
2	♂ ad.	In ice, 20 miles off Angmags.	15.7.1933	114	15	20.5
3	♂ ad.	In ice, 20 miles off Angmags.	15.7.1933	113	16	20
7	♀ ad.	In ice, 20 miles off Angmags.	15.7.1933	114	15	19.5

Nos. 2 and 7 are in normal summer dress, but No. 3, which was shot on the same day and at the same place, is in an abnormal dress, for it seems never to have had a completely coloured summer dress; the throat is practically white and the breast black with broad white borders; no doubt the phenomenon is due to a morbid debility, and without doubt all three were summering birds which had not bred that year or had been disturbed. BAY (Meddelelser om Grønland, XIX, 1894, p. 48) already draws attention to the large numbers in which this species sometimes occurs in the drift ice far from land in the breeding season; on June 21st in lat. $68^{\circ}10'$ N. he saw a great many Little Auks in the ice, whereas according to ALW. PEDERSEN (Meddelelser om Grønland, LXXVII, 1930, p. 488) the Little Auk at Liverpool Kyst usually begins to lay eggs about June 10th—15th, having come to the breeding grounds much earlier.

ALW. PEDERSEN (l. c.) found this species breeding in such large numbers on the entire Liverpool Kyst and along the south shore of Scoresby Sund, that he estimates them at about five millions; DEICHMANN (Meddelelser om Grønland, XXIX, 1909, p. 154) found them breeding in considerable numbers on a rock island between Kap Brewster and Stewart Ø.

As yet no other definite breeding place for this bird is known on the east coast, neither to the north nor to the south of these three localities; but it is a small bird that is easily overlooked when in small colonies only. DEGERBØL and MØHL-HANSEN (Meddelelser om Grønland, Bd. 104, No. 18, 1935, p. 25) came across it in large numbers on September 1st in the mouth of Mikis Fjord, no doubt as visitors from the north, and otherwise they saw it only out in the drift ice when they sailed from one fjord to another; they mention no breeding localities on Blossville Kyst. At Kangerdlugssuaq it occurs as a migratory bird, according to ALW. PEDERSEN (l. c.), but not breeding. CHAPMAN (Geographical Journal, 83, 1934, p. 377) also observed numbers of them in autumn in Lake Fjord.

In the Angmagssalik area HELMS (Meddelelser om Grønland, LVIII, 1926, p. 253) says that often it is extremely numerous in autumn and winter, from October to January, but is not definitely known to breed there, though the Greenlanders told the colony manager PETERSEN that it was supposed to breed in Sermilik Fjord; WINGE (l. c.) is inclined to believe this statement, but it has never been confirmed. MØHL-HANSEN did not see the species elsewhere on the coast travelled by the Seventh Thule Expedition. On the south part of the east coast it is mentioned by GRAAH; VAHL also saw some individuals in the ice north of Anoritôq (cf. WINGE, l. c., p. 232).

Corvus corax principalis RIDGWAY.*Corvus corax principalis* RIDGWAY: Man. North Americ. Birds, 1887, p. 361.*Corvus corax* L. WINGE: Meddelelser om Grønland, XXI, 1898, p. 269.

Four skins had the following measurements:

No.	Sex	Locality	Date	Wing length mm	Culmen mm	Tarsus mm
..	♂ ad.	Scoresby Sund	23.8.1933	439	78.5	75
76	♀ juv.	Angmagssalik	5.8.1933	410	62	72
123	♀ juv.	Kûngmiut, Angmagssalik...	6.9.1933	410	66	70
75	♀ juv.	Angmagssalik	5.8.1933	411	66	67

The skin from Scoresby Sund is that of a full-grown specimen, the measurements and form of bill of which undoubtedly place it under the race *C. c. principalis*. The three from Angmagssalik, on the other hand, are unfortunately of young birds with scarcely the full length of wing or culmen dimensions; and as they are also in moult, they cannot be determined as to race with certainty. Only one skin of this species, evidently that of a young bird, is contained in the Zoological Museum in Copenhagen, sent from Angmagssalik. This bird was shot in February 1936, but on account of its youth has not yet got the long lanceolate feathers on the throat; the primaries are worn at the tips; but, compared with skins of *C. c. principalis*, it appears that the wing had a length corresponding to the wing of that race; the shape of the bill also supports this identification. For the present, then, I place the Ravens from Angmagssalik to the aforesaid race.

It is a widespread type on the east coast, observed right up to lat. 78° N. ALW. PEDERSEN (Meddelelser om Grønland, LXXVII, 1930, p. 495 and LXVIII, 1926, p. 245) found about fifty pairs breeding on Liverpool Kyst and a smaller number scattered in Scoresby Sund, where only the old birds wintered. DEGERBØL and MØHL-HANSEN (Meddelelser om Grønland, Bd. 104, No. 18, 1935, p. 25) saw Ravens only here and there on their journey along Blosseville Kyst; they were more common at Kangerdlugssuaq. According to HELMS (Meddelelser om Grønland, LVIII, 1926, p. 261) it is a "fairly common breeding bird" at Angmagssalik.

In his notes MØHL-HANSEN states that on July 28th he found a pair with fledged young in the fells behind Kûngmiut; at ebb tide they came down to the sand-banks at the shore to seek for food; a specimen caught had in its stomach fragments of two seal intestines (2) some bones of a puppy-dog, a few small fish bones, and two small stones. At Tingmiarmiut (August 9th) and at Skjoldungen (July 18th) he saw

a few Ravens. As VAHL and GRAAH (cf. WINGE, Meddelelser om Grønland, XXI, 1898, p. 272) found it everywhere on the south part of the east coast, the species is evidently widespread on the entire east coast, south of Scoresby Sund too.

Anthus pratensis (LINNÉ).

Alauda pratensis LINNAEUS: Syst. Nat. Ed. X, I, 1758, p. 166.

Anthus pratensis (L.). WINGE: Meddelelser om Grønland, XXI, 1898, p. 275.

Two skins had the following measurements:

No.	Sex	Locality	Date	Wing length mm	Culmen mm	Tarsus mm
111	♀ juv.	Sea off Kap J.A.D. Jensen.	28.8.1933	78.5	11	20.5
130	♂	Kûngmiut, Angmagssalik . . .	6.9.1933	81	10	21

The Meadow Pippit is known on the east coast from the Angmagssalik region, where HELMS (Meddelelser om Grønland, LVIII, 1926, p. 262) states that there it is a scarce breeding bird which PETERSEN did not see every year. CHAPMAN (Geographical Journal, LXXIX, 1932, App. VI, p. 495) found it breeding on June 28th west of Sermilik Fjord at lat. 65°38' N. and long 38°38' W., and BERTRAM, LACK & ROBERTS (Ibis, 1934, p. 818) saw a specimen at Kap Dalton on August 20th, 1933, apparently breeding; this is the most northerly occurrence known on the east coast.

On September 6th, 1933, MØHL-HANSEN shot a male at Kûngmiut, north of Angmagssalik, and on August 28th another as far north as in the sea off Kap I. A. D. Jensen on Blossville Kyst.

Oenanthe oenanthe leucorrhoa (GMELIN).

Motacilla leucorrhoa GMELIN: Syst. Nat. I, 2, 1789, p. 966.

Saxicola oenanthe (L.). WINGE: Meddelelser om Grønland, XXI, 1898, p. 284.

Twenty-one skins brought home by MØHL-HANSEN had the following measurements:

No.	Sex	Locality	Date	Wing length mm	Culmen mm
141	♂	Kungmiut, 65°52' N.	8.9.1933	100	12
145	♂	Kungmiut, 65°52' N.	8.9.1933	107	12
157	♂	Kungmiut, 65°52' N.	10.9.1933	99	12

No.	Sex	Locality	Date	Wing length mm	Culmen mm
133	♂	Kûngmiut, 65°52' N.....	6.9.1933	107	12.5
152	♂	Kûngmiut, 65°52' N.....	12.9.1933	104	12
143	♂	Kûngmiut, 65°52' N.....	8.9.1933	101	12.5
156	♂	Kûngmiut, 65°52' N.....	10.9.1933	102	12.5
28	♀ ad.	Sermilik Fjord, east side ..	24.7.1933	98	13
150	♀ juv.	Kûngmiut, 65°52' N.....	11.9.1933	98	11.5
142	♀ juv.	Kûngmiut, 65°52' N.....	8.9.1933	104	12
140	♀ juv.	Kûngmiut, 65°52' N.....	8.9.1933	97	12
151	♀ juv.	Kûngmiut, 65°52' N.....	11.9.1933	100	12
155	♀ juv.	Kûngmiut, 65°52' N.....	9.9.1933	100	12
153	♀ juv.	Kûngmiut, 65°52' N.....	10.9.1933	100	12
73	pull.	Angmagssalik.....	4.8.1933	..	..
74	pull.	Angmagssalik.....	4.8.1933	..	..
18	♀ pull.	Angmagssalik.....	22.7.1933	..	..
27	♀ pull.	Sermilik Fjord, east side ..	24.7.1933	..	..
10a	♂ pull.	Finnsbo, Skjoldungen	18.7.1933	..	..
10b	♂ pull.	Finnsbo, Skjoldungen	18.7.1933	..	..
64	♂ pull.	Kûngmiut, 65°52' N.....	28.7.1933	..	..

SALOMONSEN (Ibis, 1927, p. 202) placed the Greenland Wheatear of East Greenland to a new race set up by him: *Oe. oe. schiøleri*, which he said was also to be found in Iceland and the Faroes, whilst the West Greenland Wheatear was rightly placed to *Oe. oe. leucorrhoa*; on the latter the length of wing for males was given as lying between 102 and 110 mm, whereas on *schiøleri*, an alleged intermediate form between *leucorrhoa* and the typical race for Denmark, it was only between 98 and 102 mm for males. Now that more complete material has been secured, this division of the Wheatear for West and East Greenland could not be upheld, and SALOMONSEN (L'oiseau et Rev. franc. d'ornithol., 1934, p. 229) after further examination has himself come to the conclusion that both West and East Greenland are inhabited by the same race, *Oe. oe. leucorrhoa*.

And it will be seen that the seven males brought home from Angmagssalik by MØHL-HANSEN have a wing length of between 99 and 107 mm, so that beyond all doubt they must be placed to *leucorrhoa*; two males brought back by DEGERBØL and MØHL-HANSEN (Meddelelser om Grønland, Bd. 104, No. 18, 1935, p. 26) from Ravns Fjord and Kangerdlugssuaq in fact revealed the same, for their wing lengths were 104 and 105 mm. Accordingly, the wing length of the males of *leucorrhoa* must lie between 99 and 110 mm.

ALW. PEDERSEN (Meddelelser om Grønland, LXVIII, 1926, p. 347) found the species breeding everywhere in Scoresby Sund, though without

being numerous there; as a matter of fact it is not rare on the east coast up to 75°, and it has been met with right up to lat. 78° N. DEGERBØL and MØHL-HANSEN encountered it breeding in the bay at Kap d'Aunay and in Ravns Fjord.

According to ALW. PEDERSEN (l. c.) it is a common breeding bird at Kangerdlugssuaq. CHAPMAN (Geographical Journal, LXXIX, 1932, App. VI, p. 496) found it breeding generally on the coast between Kangerdlugssuaq and Angmagssalik. In Angmagssalik the species (HELMS, Meddelelser om Grønland, LVIII, 1926, p. 264) is one of the commonest birds, and the greater part of the skins brought back by MØHL-HANSEN in fact came from there. On July 22nd and 24th he saw fledged young in pure juvenile plumage there (Nos. 8 and 27); on August 4th they had on the underside some reddish-brown feathers, belonging to the autumn dress. He also found that the species bred at Skjoldungen, where on July 18th he shot two just fully fledged young. Finally, VAHL mentions it as common on the most southerly part of the east coast at Nanûseq (cf. WINGE l. c., p. 287), so that the species must be assumed to breed at suitable places all along the east coast from Scoresby Sund to Kap Farvel.

Carduelis flammea rostrata (COUES).

Aegiothus rostratus COUES: Proc. Acad. Nat. Sc. Philad., XIII, 1861, p. 378.

Cannabina linaria (L.) var. *rostrata* COUES. WINGE: Meddelelser om Grønland, XXI, 1898, p. 289.

Fourteen skins secured by the Seventh Thule Expedition had the following measurements:

No.	Sex	Locality	Date	Wing length mm	Culmen mm	Tarsus mm
128	♂ ad.	Kûngmiut, NE. of Angmagssalik	6.9.1933	81	8.5	16.5
63	♂ ad.	Kûngmiut, NE. of Angmagssalik	28.7.1933	78	9.5	17
9	♂ ad.	Finnsbo, Skjoldungen	18.7.1933	76	9.0	16.5
147	♂	Kûngmiut, NE. of Angmagssalik	9.9.1933	80	8.5	16.5
160	♂	Kûngmiut, NE. of Angmagssalik	10.9.1933	79	9.0	16.5
19	♂ juv.	Sermilik Fjord, 2nd E. Fjord . .	24.7.1933	76	..	..
20	♂ juv.	Sermilik Fjord, 2nd E. Fjord . .	24.7.1933	82	..	..
158	♂ juv.	Kûngmiut, NE. of Angmagssalik	10.9.1933	78	..	..
127	♂ juv.	Kûngmiut, NE. of Angmagssalik	6.9.1933	72	..	..
81	♂ juv.	Finnsbo, Skjoldungen	9.8.1933	81	..	..
21	♀ ad.	Sermilik Fjord, 2nd E. Fjord . .	24.7.1933	74	8.5	17
125	♀ ad.	Kûngmiut, NE. of Angmagssalik	6.9.1933	79	8.5	16.5
126	♀ juv.	Kûngmiut, NE. of Angmagssalik	6.9.1933	75	..	..
159	♀ juv.	Kûngmiut, NE. of Angmagssalik	10.9.1933	80	..	..
124	juv.	Kûngmiut, NE. of Angmagssalik	6.9.1933	75	..	..

All these skins, collected between July 24th and September 10th, judging from their dark colour, small wing measurement and sparse plumage, must be placed to *C. f. rostrata*, that is to say the race that is widespread as a breeding bird in the south part of Greenland.

There would seem to be some difference in time in the breeding season of the Greenland Redpoll; at any rate, seven young birds secured at Kûngmiut on July 24th, August 6th and between September 6th and 10th are all in pure juvenile dress, but fledged, whereas four young birds taken on July 24th and September 6th to 9th, were already in full autumn dress.

C. f. rostrata is, according to SALOMONSEN (Vid. Medd. D. Nat. Foren. Bd. 86, 1928), widespread on the east coast up to the region south of Scoresby Sund; ALW. PEDERSEN (Meddelelser om Grønland, LXXVII, 1930, p. 497) accordingly found that the Redpolls commonly breeding in the inner parts of Scoresby Sund belonged to Greenland's northern race, *C. f. hornemanni* (HOLBØLL), which in Northeast Greenland is common between 70° and 74°, and actually has been met with right up to lat. 78° N., and perhaps even 82°.

DEICHMANN (Meddelelser om Grønland, XXIX, 1909, p. 155) found the species on July 24th to 27th in Turner Sund, but does not distinguish between the races.

DEGERBØL and MØHL-HANSEN, as far north as in Ravn Fjord on July 26th, 1932, shot a female adult which—and justly, I think—they refer to *rostrata*; it was together with juveniles and apparently on its breeding ground; in Kangerdlugssuaq, too, on August 20th they saw a specimen. According to HELMS (Meddelelser om Grønland, LVIII, 1926, p. 266) *C. f. rostrata* is one of the commonest breeding birds in the Angmagssalik district; MØHL-HANSEN also encountered it numerous both in Sermilik Fjord and at Kûngmiut. At Skjoldungen, too, on July 18th he saw two or three pairs and brought home the skin of a male adult, which in its stomach had seeds and spiders.

Calcarius lapponicus lapponicus (LINNÉ).

Fringilla lapponica LINNAEUS: Syst. Nat. Ed. X, I, 1758, p. 180.

Emberiza lapponica (L.) WINGE: Meddelelser om Grønland, XXI, 1898, p. 297.

Calcarius lapponicus groenlandicus (BREHM) SCHIØLER: Danmarks Fugle, II, 1926, p. 48.

Calcarius lapponicus subcalcaratus (BREHM) SALOMONSEN: Ornith. Monatsberichte, 39. Jahrg., 1931, p. 112.

Nine skins brought home by MØHL-HANSEN have the following measurements:

No.	Sex	Locality	Date	Wing length mm	Culmen mm	Tarsus mm
8	♂ ad.	Finnsbo, Skjoldungen	18.7.1933	93	11.8	23
57	♂ ad.	Kûngmiut, Angmagssalik . .	28.7.1933	98	11.2	23
58	♂ ad.	Kûngmiut, Angmagssalik . .	28.7.1933	?	11.0	21
61	♂ juv.	Kûngmiut, Angmagssalik . .	28.7.1933	93	9.7	21.5
22	♀ ad.	Sermilik Fjord, 2nd E. Fjord	24.7.1933	91	10.9	23
59	♀ ad.	Kûngmiut, Angmagssalik . .	28.7.1933	86	10.5	21
132	♀ juv.	Kûngmiut, Angmagssalik . .	6.9.1933	91	9.5	20
60	♀ juv.	Kûngmiut, Angmagssalik . .	28.7.1938	87	9.1	21
62	juv.	Kûngmiut, Angmagssalik . .	28.7.1933	97	9.7	22

SCHIØLER (l. c., p. 48) in 1926 separated the Greenland Lapland Bunting as a race for itself, *C. l. groenlandicus* (BREHM), which he said was much larger than the Scandinavian typical race, whereas there was no difference in its colour. SALOMONSEN (l. c., p. 112) in 1931 arrived at a similar result, but considered it should rather be called *C. l. subcalcaratus* (BREHM), and also found that the race was recognizable by having lighter coloured feather edges on the back, and paler chestnut brown bands on the neck. HØRRING (Report of the Fifth Thule Expedition 1921—24, Vol. II, No. 6, Birds, 1937, p. 123), after comparisons with a large number of skins (61 Greenland male adults and 20 Scandinavian male adults) arrived at the conclusion that the difference between Greenland and Scandinavian Lapland Buntings was too little, and too varying, to warrant their separation into two races¹⁾.

Now that I had a slightly larger Greenland material at my disposal, I considered it most correct to make another check of the measures of these skins, as by repeated comparisons, especially of the bills, I had received the impression that the Greenland Lapland Bunting after all in some cases really had a slightly longer and more slender beak, especially at the point.

The culmen length is rather difficult to measure exactly on account of the somewhat indistinct proximal limit; but as SCHIØLER used this measurement, I have also tried using it and not as previously (l. c.) the distance between nostril and point of bill. I then found that the

¹⁾ A printer's error by the way, on p. 122 at the bottom, makes matters less clear, as the average bill length of 61 Greenland males from nostril to point is given as being 9.45 mm, whereas it should have been 9.10 mm. This incorrectly makes the difference from the 20 Scandinavian measurements (8.35 mm) more than 1 mm, whereas it is only 0.75 mm.

bill length of 72 Greenland males lies between 10 and 12 mm, with an average value of 11.13 mm, whereas 20 Scandinavian had 9.4 and 11.0 mm with an average of 10.20 mm. Put up graphically the breadth of variation of the measurements will show that the curves half overlap and the difference in the bill length, which is thus about 10 per cent., seems to me to be too little to form the basis of a race difference.

As regards the length of wing, which SCHIÖLER found to be about 5 mm greater on an average for the Greenland males, I ascertained that for 67 completely coloured males from West and East Greenland it lay between 90 and 100 mm, with an average of 95 mm, whereas 16 Scandinavian male wing measurements lay between 90 and 96 mm, averaging 93.1 mm, or barely 2 mm shorter; to me this difference seems quite insignificant. I have not been able to see any constant difference in the colour of back and neck any more than SCHIÖLER did, and as the slight difference in the length of the bill is consequently not supported by other differences, I still consider the Greenland Lapland Bunting to be of the typical race.

Regarding the distribution of the Lapland Bunting, especially on the south part of the east coast, we have the following information:

ALW. PEDERSEN (Meddelelser om Grønland, LXXVII, 1930, p. 497) only once saw it breeding in Scoresby Sund, viz. at Kap Hope on July 10th, 1929, and north of there LACK (Ibis 1934, p. 818) saw it breeding "six miles inland from Constable Pynt". In Northeast Greenland it is sporadic in its occurrence, observed only at Sabine Ø, Shannon Ø, and its most northerly observation was by MANNICHE at Lille Koldeway Ø, in lat. 76°40' N., cf. LÖPPENTHIN (Meddelelser om Grønland, Bd. 91, No. 6, 1932, p. 106). DEGERBØL and MØHL-HANSEN (Meddelelser om Grønland, Bd. 104, No. 18, 1935) did not see this species on Blossville Kyst, nor does DEICHMANN (Meddelelser om Grønland, XXIX, 1909) mention it on the stretch from Kap Dalton to Scoresby Sund. CHAPMAN (Geographical Journal, LXXIX, 1932, p. 496) saw no Lapland Buntings breeding between Sermilik and Kangerdlugssuaq. According to HELMS (Meddelelser om Grønland, LVIII, 1926, p. 271) it is "a fairly common breeding bird" at Angmagssalik, and eight of the skins brought back by MØHL-HANSEN came from that region. Previously the species had scarcely been encountered on the east coast south of Angmagssalik, but MØHL-HANSEN saw a few near the Norwegian station at Skjoldungen, whence he secured a male adult.

Plectrophenax nivalis nivalis (LINNÉ).

Emberiza nivalis LINNAEUS: Syst. Nat. Ed. X, I, 1758, p. 176.

Emberiza nivalis L. WINGE: Meddelelser om Grønland, XXI, 1898, p. 301.

Plectrophanes nivalis subnivalis (BREHM) SCHIÖLER: Danmarks Fugle, Bd. II, 1926, p. 48.

Twenty-one skins collected by MØHL-HANSEN had the following measurements:

No.	Sex	Locality	Date	Wing length mm	Culmen mm	Tarsus mm
23	♂ ad.	Sermilik Fjord, 2nd E. Fjord	24.7.1933	111	12.5	23
24	♂ ad.	Sermilik Fjord, 2nd E. Fjord	24.7.1933	106	10.5	21.5
26	♂ ad.	Sermilik Fjord, 2nd E. Fjord	24.7.1933	106	12	20
68	♂ ad.	Angmagssalik	5.8.1933	107	12	21.5
5	♂ ad.	Finnsbo, Skjoldungen	18.7.1933	102	11	22
154	♂	Kûngmiut, Angmagssalik . .	11.9.1933	108	11	22
129	♂	Kûngmiut, Angmagssalik . .	6.9.1933	110	11	22.5
131	♂	Kûngmiut, Angmagssalik . .	6.9.1933	110	10.5	23
66	♂ juv.	Kûngmiut, Angmagssalik . .	5.8.1933	106	12	22.5
6	♀ ad.	Finnsbo, Skjoldungen	18.7.1933	99	12	22
12	♀ ad.	Angmagssalik	22.7.1933	100	10	21.5
13	♀ ad.	Angmagssalik	22.7.1933	102	10.5	21
148	♀ juv.	Kûngmiut, Angmagssalik . .	11.9.1933	106	10	22
146	♀ juv.	Kûngmiut, Angmagssalik . .	8.9.1933	106	10.5	22
149	♀ juv.	Kûngmiut, Angmagssalik . .	11.9.1933	99	11	21.5
15	♀ juv.	Angmagssalik	22.7.1933	Juvenile	plumage	..
14	♀ juv.	Angmagssalik	22.7.1933	Juvenile	plumage	..
25	♀ juv.	Sermilik Fjord, 2nd E. Fjord	24.7.1933	Juvenile	plumage	..
7	♀ juv.	Finnsbo, Skjoldungen	18.7.1933	Juvenile	plumage	..
17	♂ juv.	Angmagssalik	22.7.1933	Juvenile	plumage	..
16	♂ juv.	Angmagssalik	22.7.1933	Juvenile	plumage	..

Greenland Snow Buntings were separated in 1926 by SCHIØLER (l. c.) as a distinct race *P. n. subnivalis*, recognizable by a greater length of wing, averaging 110.5 mm, in comparison with the 105 mm of the typical race. SALOMONSEN (Ibis, 1931, p. 57), after a renewed examination of a very large number of skins, came to the conclusion that skins from Northeast Greenland should, not on account of the insignificant difference in the length of the wing, but owing to their more white pattern, be placed to a separate race *P. n. subnivalis*, whereas Snow Buntings on the west coast were if anything an intermediate form between these two races, but he preferred to place all Greenland Snow Buntings to *P. n. subnivalis*, whose terra typica would thus be Northeast Greenland. HØRRING (Report of the Fifth Thule Expedition, 1921—24, Birds, 1937, p. 116) after a further consideration of a large number of skins, formed the opinion that the Snow Buntings of West Greenland are indistinguishable from those of Scandinavia, and therefore should be placed under the typical race, whereas those of Northeast Greenland may possibly be a separate, usually slightly paler race.

SALOMONSEN (l. c.) with good plates accounts for the distinguishing

marks between the two races, and, if we take his race characters as a basis, there is no doubt that all the skins brought home by the Seventh Thule Expedition, secured at Angmagssalik and Skjoldungen, must be placed to the typical race. None of the fully-grown males had entirely white rump and upper tail coverts, though it must be taken into consideration that they were collected in July and August and therefore are in an advanced stage of moulting. The white markings on the tail feathers are limited to the three extreme rectrices and part of the outer web of the fourth, just as in the case of the typical race. On the other hand, none of the skins collected by the Seventh Thule Expedition conform to the rather darker Icelandic race *P. n. insulæ* SALOMONSEN.

DEGERBØL and MØHL-HANSEN (Meddelelser om Grønland, Bd. 104, No. 18, 1935, p. 27) secured a number of skins on Blosseville Kyst, where the species was particularly common; in accordance with SALOMONSEN they place them to *P. n. subnivalis*, but in my opinion there is no difficulty in referring them to the typical race, so that the latter's range on the east coast seems to extend at any rate up to Kap Dalton.

The species is common in Scoresby Sund and on Liverpool Kyst (ALW. PEDERSEN: Meddelelser om Grønland, LXXVII, 1930, p. 498) and on the whole is widespread in Northeast Greenland, at any rate up to lat. 83°30' N. Already in Scoresby Sund it seems to be a little lighter in colour on the whole and would seem to be justly referable to *P. n. subnivalis*. At Angmagssalik it is extremely common, according to HELMS (Meddelelser om Grønland, LVIII, 1926, p. 267); MØHL-HANSEN, too, reports it as numerous there, for on July 24th, 1933, he saw it commonly on the luxuriant south slopes in Sermilik Fjord and on July 28th on the fell sides in the terrain behind Kûngmiut. The most southerly place at which he saw this species was at Skjoldungen, July 18th and 19th, where again it was common. A specimen secured there had small beetles and spiders in its stomach.

On the south part of the east coast (cf. WINGE, l. c., p. 305) the bird was observed by GRAAH, and VAHL in the summer of 1829 saw it everywhere in rather large numbers, i. a. at Nunûseq in lat. 60°28' N. NANSEN observed it at Anoritôq (61°30') on July 29th, 1888, and on August 31st, 1888, he saw one ten miles in on the inland ice west of Umîvik, 64°20'.

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