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Birds from Arctic North-America.

Ornithological Results of the Fram-Expedition 1898—1902 and the Gjøa-Expedition 1903—1907.

With 1 Map.

By

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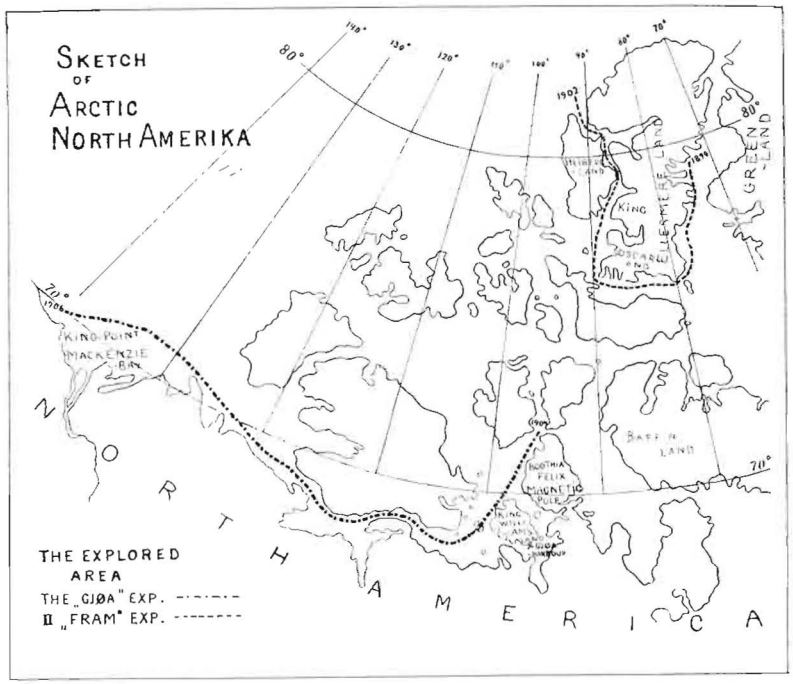
In the Zoological Museum of the University in Oslo a couple of ancient, hitherto unpublished collections of Ne-Arctic birds have been stored. The material has been brought together partly by the Second Norwegian Arctic Expedition in the "Fram" under the leadership of captain Otto Sverdrup in the regions round Ellesmere Land (1898—1902), partly by the expedition in the "Gjøa", conducted by Roald Amundsen, in the surroundings of the Magnetic pole on the Boothia Felix Peninsula, and in King Williams Land and westwards to the Mackenzie Bay (1904—06). During the last years this material, mainly consisting of total birds preserved in alcohol, partly also of prepared skins and a lot of eggs and nests, all was forwarded to the Stavanger Museum for determination. Owing to the fact that both collections mostly originate from the same geographical area, viz. the Arctic region of North America, between 70°—80° N. lat. and about 70°—140° W. long, they have — for practical reasons — been treated together in this little work.

The collections comprise a total number of 218 of which 131 birds in skin and alcohol, 68 clutches of eggs, and 19 nests. As it will appear from the list below 40 different species of birds are represented.

	Number of specimens	
	Collected by the "Fram"	Collected by the "Gjøa"
1. Acanthis linaria linaria (L.)		1 skin + 5 eggs + 1 nest
2. Spizella monticola ochracea (Brewster)		2 skins + 5 eggs + 1 nest
3. Calcarius lapponicus lapponicus L.		7 skins + 18 eggs + 4 nests
4. Plectrophenax nivalis L.	1 skin + 2 juv. + 1 nest	2 skins + 10 eggs + 4 nests
5. Eremophila alpestris hoyti (Bishop)		3 skins + 8 eggs + 2 nest
6. Anthus spinoletta pensilvanica (Latham)		1 skin + 3 eggs + 1 nest
7. Dendroica coronata (L.)		1 skin
8. Scolecophagus carolinus (Müller)		1 skin
9. Oenanthe oenanthe oenanthe (L.)		2 skins + 3 eggs
10. Nyctea scandiaca (L.)		3 skins + 2 juv. + 17 eggs (4 clutch)
11. Falco peregrinus anatum Bonaparte		1 skin
12. Triorchis lagopus sancti-johannis (Gmel.)		6 eggs (2 clutch)
13. Branta canadensis hutchinsii Richard.		1 skin + 4 eggs
14. Branta bernicla hrota Müller	8 nestlings	1 skin + 4 eggs
15. Dafila acuta tzitzihoa Vieillot		1 skin
16. Clangula hyemalis (L.)	3 eggs + nestdown	
17. Somateria mollisima borealis (Brehm)	2 eggs	
18. Somateria spectabilis (L.)		3 skins + 19 eggs + 4 nests
19. Mergus serrator L.		1 skin + 9 eggs

20. Colymbus adamsi Gray		1 skin
21. Colymbus arcticus pacificus Lawrence		2 skins
22. Colymbus stellatus Pontoppidan	2 eggs	2 skins + 2 juv. + 3 eggs (2 clutch)
23. Uria grylle mandtii Lichtenstein	2 eggs	
24. Sterna paradisaea Brünnich	1 nestling + 5 eggs (3 clutch)	1 skin + 1 juv. + 3 eggs (1 clutch)
25. Xema sabini (Sabine)		3 skins + 6 eggs (2 clutch)
26. Larus hyperboreus Gunnerus	1 egg	3 eggs (2 clutch)
27. Stercorarius parasiticus L.	2 eggs (1 clutch)	1 skin + 6 eggs (3 clutch)
28. Stercorarius longicaudus Vieillot	1 skin (part)	3 skins + 2 nestl. + 3 eggs (2 clutch)
29. Charadrius dominicus dominicus Müller		3 skins + 11 eggs (4 clutch)
30. Squatarola squatarola squatarola L.		1 skin + 3 eggs (1 clutch)
31. Arenaria interpres morinella L.	2 skins	4 skins + 3 eggs (1 clutch)
32. Calidris fuscicollis Vieillot		1 skin + 1 nestling
33. Calidris bairdii Coues	1 skin + 4 eggs (1 clutch)	4 skins + 4 nestling + 17 eggs (5 clutch)
34. Calidris canutus L.	2 skins + 4 nestlings	
35. Calidris maritima maritima Brünn.	5 skins	1 skin + 4 eggs (1 clutch)
36. Ereunetes pusillus pusillus L.		1 skin + 4 eggs (1 clutch)
37. Tryngites subruficollis Vieillot		3 skins + 4 eggs (1 clutch)
38. Phalaropus fulicarius L.		4 skins + 4 nestl. + 9 eggs (3 clutch)
39. Lagopus lagopus albus Gmelin		9 skins + 9 nestl. + 9 eggs (2 clutch)
40. Lagopus mutus rupestris Gmelin	1 nestling	5 skins + 7 eggs (1 clutch)



1. *Acanthis linaria linaria* (L).

1 specimen (No. 1, preserved in alcohol), King Point, Mackenzie Bay, July 5, 1906.

1 clutch of 5 eggs (No. 2 preserved in alcohol), King Point, Mackenzie Bay, July 5, 1906.

1 nest (No. 2 a), King Point, Mackenzie Bay, July 5, 1906.

The specimen No. 1 is a female bird in typical breeding plumage. Length of wing 70 mm, bill 8 mm, tarsus 15 mm.

The eggs, apparently having been quite fresh, have the following measurements in mm: 16.0×12.2, 16.8×11.8, 16.8×12.2, 17.0×12.3, 17.5×12.2.

The nest has mainly been built up from white vegetable wool, with an inner layer of delicate brownish black animal wool and above this again a thick layer of white vegetable wool. Moreover, some mice hairs, one single "downy" bud of Salix, and a bigger, soft-quilled feather. Exteriorly it is covered with a quite thin layer of dried vegetable fibres.

2. *Spizella monticola ochracea* (BREWSTER).

2 specimens (Nos. 3 and 4, in alcohol), King Point, Mackenzie Bay, July 12, 1906.

1 nest 5 eggs (No. 4 a), King Point, July 12, 1906.

The two specimens (Nos. 3 and 4) are a male and a female (bird) in breeding plumage, and belong to the nest with 5 eggs.

The measurements in mm are:

Ad ♂: length of wing 77, bill 9, tarsus 21.

Ad ♀ » - » 73, » 10, » 21.

The colour of the eggs is pale green, mottled and spotted with bright reddish-brown and a few purplish-grey spots. The measurements in mm are:

19.0×14.2, 19.1×14.1, 19.2×14.0, 19.2×14.1, 19.3×14.0.

The nest has been built of delicate dried straws, the upper edge of coarse, dead stalkes of plants and weaved in with moss. Interiorly it is lined with grouse feathers and some reindeer hairs.

3. *Calcarius lapponicus lapponicus* L.

2 specimens (Nos. 5 and 6, in alcohol), King William Land, May 8, 1904.
1 specimen (No. 7, in alcohol), King William Land, May 28, 1904.
2 nests with 4 and 5 eggs. King William Land July 1 and 10, 1904.
1 Adult ♀ with nest + 4 eggs. King William Land June 26, 1905.
1 Adult ♀ » » + 5 eggs. King William Land July 6, 1905.
2 specimens (Nos. 8 and 9, in alcohol), Mackenzie Delta, June 4, 1906.

The 3 specimens Nos. 5, 6 and 8 are all *Adult* males in summer plumages. The numbers 6 and 9 are *Adult* females, both decidedly *brighter* on the upper parts than the Norwegian specimens. On the other hand the hind neck in all three males is *darker* chestnut, just as the black feathers of the hind part of the cap are partly white tipped (Nos. 5 and 8). The long stay in alcohol (ca. 25 years) may perhaps have affected the intensity of the colour. The seven birds have following measurements in mm:

Ad. ♂	(8/5 1904:	length of wing	94,	bill	10 ,	tarsus	21
»	»	(28/5 1904:	»	-	»	95,	»	11 ,	»	23
»	»	(4/6 1906:	»	-	»	96,	»	10.5,	»	21
»	♀	(4/6 1906:	»	-	»	86,	»	10 ,	»	21

Ad. ♀ (8/5 1904: length of wing 87, bill 10 , tarsus 22
» » (26/6 1905: » - » 90, » 10 , » 22
» » (6/7 1905: » - » 92, » 11 , » 21

Measurements in mm of 17 eggs [average 21.8×15.2].

Clutch of:

4 eggs (1/7 1905)	5 eggs (10/7 1904)	4 eggs (26/6 1905)	4 eggs (6/7 1905)
21.2×14.9	20.2×15.2	21.1×15.0	21.3×15.0
22.0×15.3	21.7×15.7	21.2×14.6	21.7×15.5
22.0×15.4	22.2×15.0	21.5×15.2	22.0×15.5
22.2×15.2	22.5×15.2	21.7×15.1	23.0×15.8
	22.5×15.2		

All the 4 nests have been built of dried straws, and interiorly more or less lined with feathers. In one nest, however, reindeer hairs had mainly been used instead of feathers.

4. *Plectrophenax nivalis* L.

1 specimen (No. 10, in alcohol), Winter Harbour, Ellesmere Land (79° N. lat.), June 8, 1899.

2 specimens (Nos. 11 and 12, in alcohol), Rice Strait, Ellesmere Land, July 21, 1899.

1 nest, Ellesmere Land, June 28, 1902.

1 specimen (No. 13, in alcohol) King William Land (69° N. lat.), May 27, 1904.

1 nest with 2 eggs, King William Land, July 8, 1904.

1 *Adult* ♀ + nest with 5 eggs, King William Land, July 2, 1905.

1 nest with 3 eggs, King William Land, July 3, 1905.

The specimens Nos. 10 and 13 are *Ad.* ♀ and *Ad.* ♂ respectively, both in full summer plumage, whereas the specimens Nos. 11 and 12 are nestlings, nearly fledged.

The birds have the following measurements in mm:

Adult ♂ (27/5 1904): length of wing 111, bill 10, tarsus 22
Juv. ♂ (21/7 1899): » - » 68, » 8, » 21
Adult ♀ (8/6 1899): » - » 106, » 10, » 22
» ♀ (2/7 1905): » - » 101, » 10, » 21
Juv. ♀ (21/7 1899): » - » 44, » 7, » 18

Measurements in mm of 10 eggs: [Average 22.5×16.6].

Clutch of:

5 eggs (2/7 1905)	3 eggs (3/7 1905)	2 eggs (8/7 1904)
22.8×16.6		19.6×15.7
23.1×16.6		20.0×16.3
23.2×16.5		
23.3×16.6	22.6×17.0	
23.3×16.7	23.2×16.8	
	24.0×16.8	

The nests have been built of delicate straws, and all are more or less perfectly lined with reindeer hairs, mice hairs, and grouse feathers. The nest from Ellesmere Land is lacking reindeer hairs, but instead of these hare wool has been used.

5. *Eremophila alpestris hoyti* (Bishop).

2 clutches of eggs inclusive nests. King William Land, June 28, 1904.

3 specimens (Nos. 14, 15 and 16, in alcohol), King William Land, June 8—10, 1905.

All the specimens with white superciliar stripe. No. 15 is an *adult* female, the rest are *adult* males in full summer plumage, with the following measurements in mm:

Ad. ♂ (10/6 1905): length of wing 110, bill 12, tarsus 22.5
» - (10/6 1905): » - » 114, » 12, » 23.0
» ♀ (8/6 1905): » - » 106, » 11, » 22.5

Measurements in mm of 8 eggs: [average 22.3×16.2].

Clutch of:

4 eggs (28/6 1904	4 eggs (28/6 1904)
21.0×16.2	22.5×16.5
21.1×15.7	23.3×16.0
21.4×16.4	23.4×16.8
21.7×16.0	23.8×16.3

6. *Anthus spinoletta pensilvanica* (Latham).

1 specimen (No. 17, in alcohol), King William Land, June 18, 1905.
1 nest with 3 eggs, King William Land, (not dated).

The bird is an old individual in typical summer plumage. Length of wing 81 mm, bill 11.5 mm, tarsus 21.5 mm.

In the collection from King William Land is also an undated clutch of 3 eggs, which I believe belongs to this species. The measurements in mm of these eggs are:

19.8×14.5, 20.1×14.7, 20.4×14.5.

The nest exclusively consisted of dry straws.

7. *Dendroica coronata* (L).

1 specimen (No. 18, in alcohol), Gjøa Harbour at King William Land, July 7, 1904.

Probably this specimen is an *adult* male in full summer plumage.

Length of wing 70 mm, bill 9.5 mm, tarsus 18.5 mm.

The range of this species in North America follows the limit of treegrowth between Labrador and Western Alaska.

8. *Scolecophagus carolinus* (MÜLLER).

1 specimen (No. 19, in alcohol). King Point, Mackenzie Bay, June 24, 1906.

The specimen is a male bird in not fully developed summer plumage, probably a younger individual. Length of wing 117 mm, bill 19 mm, tarsus 33 mm.

9. *Oenanthe oenanthe oenanthe* L.

2 specimens (Nos. 20 and 21, in alcohol), King Point, Mackenzie Bay, June 24, 1906.

1 clutch of 3 eggs (No. 22, in alcohol), King Point, Mackenzie Bay, June 24, 1906.

The two specimens are a male and a female in summer plumage, and belongs to the nest with 3 eggs.

Measurements in mm:

Ad. ♂ ($^{24}/_{6}$ 1906): length of wing 97, bill 15, tarsus 27.5
Ad. ♀ (» »): » - » 98, » 14, » 28.5

The clutch of eggs: 20.0×15.7, 20.4×15.7, 21.7×15.8.

10. *Nyctea scandiaca* (L).

2 specimens (Nos. 23 and 24), King William Land, June 23, 1904.
1 specimen (No. 25), King William Land, June 24, 1904.
1 clutch of 4 eggs (No. 25 a), King William Land, June 26, 1904.
2 clutches à 3 eggs (No. 23 b and c), King William Land, June 1904.
2 specimens (Nos. 26, 27), King William Land, August 18, 1904.
1 clutch of 7 eggs, King William Land, June 29, 1905.

The three specimens (Nos. 23—25) are adult birds, whereas the last two (Nos. 26—27) are big, nearly fully feathered nestlings, with fully coloured feathers of the back, wings and tail; the head and underparts, however, have a dusky brownish-grey downy plumage. The feathers of the head are tipped with grey, the throat and the space round the eye are white, the bill brushes mainly white, tipped with black.

Measurements in mm of birds:

Ad. ♂ ($^{23}/_{6}$ 1904): length of wing 370, bill (defective), tarsus 62
» ♀ —»— : » - » 450, » 37 |culm. 28|, » 66
» » $^{24}/_{6}$ 1904: » - » 422, » 36 » 26, » 63
Juv. » $^{18}/_{8}$ 1904: » - » 260, » 32 » 23, » 45
» —»— : » - » 305, » 36 » 24, » 51

Measurements in mm of 17 eggs: |Average 55.8×44.4|.

Clutch of:

7 eggs ($^{29}/_{6}$ 1904)	3 eggs (June 1904)	4 eggs ($^{26}/_{6}$ 1904)	3 eggs (June 1904)
54.4×44.3	52.8×43.8	58.2×45.1	53.0×44.4
54.6×45.0	53.3×44.0	58.7×45.0	54.0×44.0
55.2×44.2	57.0×43.0	58.9×45.6	55.5×44.2
55.6×44.3		59.3×45.5	
55.7×44.2			
55.8×44.3			
55.9×44.2			

11. *Falco peregrinus anatum* BONAPARTE.

1 specimen (No. 28), King Point, Mackenzie Bay, May 31, 1906.

The bird is an old male in fully coloured plumage. The malar stripe broad, the neck and the breast nearly unspotted.

Length of wing 327 mm, bill 20 mm, tarsus 48 mm.

12. *Triorchis lagopus sancti-johannis* (GMEL.).

2 clutches à 3 eggs, King Point, Mackenzie Bay, June 13 and 19, 1906.

Measurements in mm of 6 eggs: |Average 56.1×43.7|.
Clutch of:

3 eggs (13/6 1906)	3 eggs (19/6 1906)
55.2×42.8	54.5×43.3
56.3×44.2	55.4×44.0
57.3×44.2	57.6×43.8

13. *Branta canadensis hutchinsii* (RICHARDSON).

1 specimen (No. 85), King William Land, July 6, 1905.
1 clutch of 4 eggs (No. 85 a), King William Land, July 6, 1905.
1 clutch of 4 eggs (No. 85 b), King William Land, (no date) 1904.

The specimen no. 85 is an old female bird in typical breading plumage, and belongs to the clutch of 4 eggs No. 85 a. The whitish yellow cheek and throat of the bird are divided by a narrow band, spotted with black, along the middle of the throat. Number of rectrices 16. Length of wing 430 mm, bill 37.5 mm, tarsus 75 mm.

Measurements in mm of 8 eggs. |Average 78.9×50.5|.
Clutch of:

4 eggs (6/7 1905)	4 eggs (1904)
77.0×50.3	76.6×51.4
77.8×51.0	78.8×49.2
79.4×50.3	79.6×50.4
81.0×50.5	81.2×50.6

14. *Branta bernicla hrota* MÜLLER.

2 specimens (Nos. 86 and 87, in alcohol), »The Little Sandbar« Ellesmere Land, July 11, 1900.

6 specimens (Nos. 88—93, in alcohol), Winter Harbour, King Oscars Land, July 21, 1901.

1 specimen (No. 94), King William Land, June 23, 1904.

Only the latter specimen (no. 94) is an *adult* individual in summer plumage. The forehead and the throat has a strong brownish tinge; abdomen white with a faint tinge of brownish grey anteriorly; the vent and the tail coverts quite white. Length of wing 307 mm, bill 29 mm, tarsus 59 mm.

The rest of the specimens are nestlings, of which Nos. 88—93 constitute a clutch of 6 in number, about 9 days old. These nestlings has thus been hatched about July 12; length of bill 12 mm, tarsus 28 mm.

15. *Dafila acuta tzitzihoa* VIEILLOT.

1 specimen (No. 95). King Point, Mackenzie Bay, June 5, 1906.

The bird is an *adult* male in splendid plumage, which does not seem to differ the least from the main species *Dafila acuta acuta*. The reddish brown edge of the speculum of the longest wing-coverts has a width of 8 mm, the wing-spot area of the uncovered secondary remiges, inclusive of the white tipped feather edges, 53 mm. (Measured along the feather shaft to the tip). Length of wing 275 mm, bill 56.5 mm, tarsus 44 mm. Total length of the tail 170 mm; the median pair of rectrices extending 60 mm beyond the others.

16. *Clangula hyemalis* (L).

1 clutch of 3 eggs (with nestdown?). "Indre Eide". Ellesmere Land, July 21, 1901.

The 3 eggs have the following measurements in mm: 51.1×37.5, 51.5×37.4, 51.8×38.5.

17. *Somateria mollissima borealis* (BREHM).

2 eggs. "Archers Halvø". Ellesmere Land, July 22, 1901.

The only two eggs measure 74.3×47.5 mm and 76.3×50.3 mm.

18. *Somateria spectabilis* (L.).

1 specimen (No. 96), Arctic Coast of North America (not dated).

2 specimens (Nos. 97 and 98), King William Land, June 24—25, 1904.

3 clutches à 5 eggs (with nestdown), King William Land, July 9, 14 and 19, 1904.

1 clutch of 4 eggs (with nestdown), King William Land, July 18, 1904.

All the specimens are old birds, 1 *adult* male (No. 97) and 2 *adult* females with the following measurements in mm:

Ad. ♂ (24/6 1904): length of wing 289, bill 32, tarsus 47
Ad. ♀ (not dated): —»— 269, » 32, » 45
Ad. ♀ (25/6 1904): —»— 258, » 33, » 45

Measurements in mm of 19 eggs: [Average 65.4×44.4].
Clutch of:

5 eggs (9/7 1904)	5 eggs (14/7 1904)	4 eggs (18/7 1904)	5 eggs (19/7 1904)
63.0×44.8	64.0×45.5	63.7×45.6	62.7×43.8
65.3×43.7	64.4×44.5	64.3×45.3	63.3×43.0
66.3×43.2	65.5×43.7	65.0×44.8	66.3×44.7
67.5×43.2	66.8×45.0	65.4×45.0	66.3×45.0
68.0×43.2	67.0×45.0		68.0×45.3

19. *Mergus serrator* L.

1 specimen (No. 99), King Point, Mackenzie Bay, June 26, 1906.
1 clutch of 9 eggs, King Point, Mackenzie Bay, June 26, 1906.

The specimen is an old male in advancing summer plumage. Length of wing 247 mm, bill 56 mm, tarsus 45 mm. Breadth of bill (at the basis) 13 mm.

Measurements in mm of clutch of 9 eggs: [average 58.8×42.3].

56.6×41.3	58.4×42.7	59.3×43.0
57.2×41.5	59.0×42.8	60.0×43.3
58.3×42.2	59.3×41.5	61.0×42.5

20. *Colymbus adamsi* GRAY.

1 specimen (No. 100). Arctic coast of North America (not dated).

21. *Colymbus arcticus pacificus* LAWRENCE.

2 specimens (Nos. 101 and 102), King William Land, July 2, 1904.
1 clutch of 2 eggs (No. 102 a), King William Land, July 2, 1904.

This two specimens form a pair, shot at the nest which at that time contained 2 eggs. The size of body is considerably smaller than in the proper species *Colymbus arcticus arcticus*, just as the colour of the nape and hind neck is brighter, more *yellowish grey*, whereas the jugulum is darker, more *blakish blue* with a fainter tinge of violet. The measurements in mm are:

Adult ♂ (2/7 1904): length of wing 308, bill 58, tarsus 79.
Adult ♀ (2/7 1904): —»— 297, » 51, » 71.
Clutch of 2 eggs: 78.0×47.5 and 77.5×47.3.

22. *Colymbus stellatus* PONTOPPIDAN.

1 Specimen (No. 103). Arctic coast of North America (not dated).
1 clutch of 2 eggs. "Indre Eide" by "Gåsefjord", Ellesmere Land July 21, 1901,
1 clutch of 1 egg, King William Land, July 9, 1905.
2 specimens (No. 104 and 105, in alcohol), King William Land. August 5, 1905.

The specimen No. 103 is an *adult* individual in typical summer plumage. Length of wing 275 mm, bill 54 mm, tarsus 67 mm.

The last specimens (No. 104 and 105) constitute a brood of nearly fresh hatched nestlings, with length of bill 11 mm, tarsus 22 mm.

The two clutches of eggs measure in mm:

2 eggs 21/7 1901	1 egg 9/7 1905
72.0×43.5	78.0×43.7
73.0×46.7	

23. *Uria grylle mandtii* LICHTENSTEIN.

1 clutch of 2 eggs, "Båtodden", North Devon, Ellesmere Land, July 27, 1901.

Measurements in mm, 59.5×38 and 60.0×39.0.

24. *Sterna paradisaea* BRÜNNICH.

1 specimen (No. 39, in alcohol), Ellesmere Land, August 3, 1901.
1 single egg (No. 39 a), Ellesmere Land, August 3, 1901.
2 clutches à 2 eggs (No. 39 b and c), "Winter Harbour", Ellesmere Land, Juli 15, 1901 and July 1902.
1 clutch of 3 eggs, King William Land, July 8, 1904.
1 specimen (No. 40, in alcohol), King William Land, August 5, 1905.
1 specimen (No. 41), King William Land, July 8, 1904.

The two specimens Nos. 39 and 40 are both young ones. One of them (No. 39) is a nestling about four days old with a length of bill 13 mm, tarsus 13 mm, median toe without claw 14 mm. The second (No. 40) is a half feathered young with a length of bill 14 mm, tarsus 14 mm.

Specimen No. 41 is an *adult* bird in worn breeding plumage. Length of wing 283 mm, bill 35 mm, tarsus 14 mm, outmost pair of *rectrices* 157 mm, median ones 73 mm.

Measurements in mm of eggs:

3 eggs (8/7 1904)	2 eggs (15/7 1901)	1 egg (1901)	2 eggs (July 1902)
39.2×28.7	39.3×30.1	40.6×31,0	38.2×30.3
39.2×29.5	40,3×29.8		38.8×29.2
40.6×28.2			

25. *Xema sabini* (SABINE).

1 specimen (No. 36), King William Land, June 26, 1904.
1 specimen (No. 37), King William Land, August 28, 1904.
1 specimen (No. 38), King William Land, July 5, 1905.
2 clutches a 3 eggs (Nos. 38 a and b), King William Land, July 5 and 6, 1905.

Of the above mentioned 3 specimens Nos. 36 and 38 are fully coloured individuals; in the latter which belongs to the clutch of 3 eggs (No. 38 a), is the length of wing 277 mm, bill 24 mm, tarsus 35 mm, and the outmost pair of rectrices are 23 mm longer than the median one.

The specimen No. 37 is a young one, hatched in the same year with the forehead and the total underparts white, the occiput and the upper parts bluish grey, with brownish grey feather edgings. The tail white with a broad, brownish black band across the tip. The outer web of the outmost pair of rectrices quite white, the tip of the remaining rectrices partly edged with white, the median pair also with quite white shaft towards the tip. First to sixth remiges black with an inner web broadly edged with white, the third to sixth remiges, moreover, narrowly tipped with white, the remaining primary remiges and all the cubitals white, the median part of the two innermost cubitals bluish grey. The longest secondary coverts tipped with white, primary coverts black, the longest ones with brightly greyish tips. Length of wing 245 mm, bill 21 mm, tarsus 32 mm, outmost pair of rectrices 17 mm longer than the median pair.

Measurements in mm of 6 eggs:

3 eggs (5/7 1905)	3 eggs (6/7 1905)
47.0×32.6	45.4×33.4
48.3×33.0	45.4×33.4
49.1×32.2	45.5×32.8

26. *Larus hyperboreus* GUNNERUS.

1 single egg (blue var.), Ellesmere Land, June 25, 1901.
1 clutch of 2 eggs, King William Land, July 10, 1904.
1 single egg, King William Land, July 17, 1905.

Measurements in mm of 4 eggs:

1 egg (25/6 1901)	2 eggs (10/7 1904)	1 egg (17/7 1905)
78.0×51.7	78.5×53.4	74.8×52.5
	82.0×52.5	

27. *Stercorarius parasiticus* (L).

1 clutch of 2 eggs, "Renbukt", Ellesmere Land, Juli 8, 1901.
2 clutches à 2 eggs, King William Land, July, 1904.
1 specimen (No. 29), King William Land, July 7, 1904.

The specimen No. 29 is an *adult* individual representing the phase with a brigth abdomen. Length of wing 331 mm, bill 31 mm, tarsus 46 mm. Length of tail 200 mm; the median prolonged pair of rectrices extending 66 mm beyond the others.

Measurements in mm of 6 eggs:

2 eggs (8/7 1901)	2 eggs (July 1904)	2 eggs (July 1904)
63.4×41.6	62.5×39.0	61.3×40.3
63.4×40.9	62.2×41.2	58.0×39.6

28. *Stercorarius longicaudus* VIEILLOT.

1 specimen (only head and legs, No. 30, in alcohol), West coast of Ellesmere Land, 1899.
1 specimen (No. 31), King William Land, June 11, 1904.
1 single egg, King William Land, Juli 8, 1904.
2 specimens (Nos. 32 and 33, in alcohol), King William Land, July 30, 1904.
1 specimen (No. 34), King William Land, September 2, 1904.
1 clutch of 2 eggs (No. 35 a), King William Land, July 8, 1905.
1 specimen (No. 35), King William Land, July 8, 1905.

The specimens Nos. 30, 31 and 35 are all old fullgrown individuals of which the last belongs to the clutch of eggs No. 35 a. This specimen is also considerably darker than the others, the abdomen and the under tail coverts being dusky ashy grey, whereas the underparts in specimen No. 31 are almost plain brightly brownish grey. The tail is also considerably longer in the latter specimen, viz. 310 mm, whereas in specimen No. 35 it only amounts to 274 mm.

Of the remaining specimens Nos. 32 and 33 are nearly fresh hatched nestlings, whereas No. 34 is a young bird in its first autumn plumage. Length of tail in this specimen is 137 mm, the tip of the median pair of rectrices extending 20 mm beyond the others. The first and second remex with white shafts, the rest of the remiges with yellowish brown shafts.

The measurements in mm will appear from the following table:

Adult spec.	(1899):	length of wing (wanting),	bill	27.0,	tarsus	44
—»—	($^{11}/_{6}$ 1904):	—»—		308,	»	29 5,	»	40
—»—	($^{8}/_{7}$ 1905):	—»—		325,	»	30.0,	»	45
juv. spec.	($^{2}/_{9}$ 1904):	—»—		294,	»	26.0,	»	46
nestlings	($^{30}/_{7}$ 1904):	length of bill 14—15, tarsus 23—22.						

Clutch of 2 eggs ($^{8}/_{7}$ 1904)	1 egg ($^{8}/_{7}$ 1904)
58.5×39.8	53.0×39.6
55.0×39.4	

29. *Charadrius dominicus dominicus* Müller.

2 specimens (Nos. 42 and 43), King William Land, June 26 and 30, 1904.
2 clutches à 3 eggs (Nos. 42 a and 43 a), King William Land, June 26, 1904.
1 clutch of 2 eggs (No. 43 b), King William Land, June 28, 1904.
1 clutch of 3 eggs (No. 43 c), King William Land, July 7, 1904.
1 specimen (No. 44), Kings Point, Mackenzie Bay, May 27, 1906.

All the specimens are old birds in typical summer plumage. No. 42 is an adult male, which belongs to the clutch of 3 eggs No. 42 a.

Measurements in mm of birds:

Adult ♂	($^{26}/_{6}$ 1904):	length of wing	179,	bill	21,	tarsus	43
Adult	($^{30}/_{6}$ 1904):	—»—	181,	»	22,	»	42
Adult ♀	($^{27}/_{5}$ 1906):	—»—	178,	»	22,	»	39

Measurements in mm of 11 eggs: [Average 48.3×33.8].

3 eggs ($^{26}/_{6}$ 1904)	3 eggs ($^{26}/_{6}$ 1904)	2 eggs ($^{28}/_{6}$ 1904)	3 eggs ($^{7}/_{7}$ 1904)
51.0×34.8	49.5×33.5	49.2×33.3	48.3×33.4
48.5×34.5	48.6×34.6	47.6×33.4	47.9×31.8
48.2×34.4	47.0×34.0		45.0×33.9

30. *Squatarola squatarola squatarola* (L.).

1 specimen (No. 45), King William Land, June 28, 1904.
1 clutch of 3 eggs (No. 45 a), King William Land, July 13, 1905.

The specimen is an adult male in full summer plumage; the forehead quite white, and the crown densely spotted with brownish black.

Length of wing 187 mm, bill 29 mm, tarsus 45 mm.

Clutch of 3 eggs ($^{13}/_{7}$ 1905) measure:

53.5×36.0 mm.
52.5×35.8 »
51.8×35.4 »

31. *Arenaria interpres morinella* (L.).

3 specimens (Nos. 46, 47 and 48) Arctic Coast of North America (not dated).
1 specimen (No. 49, in alcohol), Boothia Felix, July 13, 1905.
1 clutch of 3 eggs (No. 39 a), Boothia Felix, July 13, 1905.
2 specimens (Nos. 50 and 51, in alcohol), Cape Rutherford, Grinnel Land (79° 20′ N), August 3, 1899.

Of this material the three first mentioned specimens are adult individuals in summer plumage, but without further information. No. 49 is also an adult specimen in fully coloured summer plumage, and belongs to the clutch of 3 eggs No. 49 a. The specimens Nos. 50 and 51 are, on the other hand, both young birds, the latter indeed being of such demensions as to render it questionable whether it ought to be referred to the race *morinella*.

The size of the specimens will, however, appear from the following measurements in mm:

Adult (not dated):	length of wing	150,	bill	24,	tarsus	26
Adult (not dated):	—»—	146,	»	22,	»	26
Adult ($^{13}/_{7}$ 1905):	—»—	144,	»	20,	»	26

Adult (not dated): length of wing 142, bill 22.5, tarsus 26
Juv. (3/8 1899): —»— 161, » 24, » 28
Juv. (3/8 1899): —»— 144, » 20, » 25
Clutch of 3 eggs (13/7 1905):

44.0×28.5, 43.2×28.4, 42.2×28.4.

32. *Calidris fuscicollis* (VIEILLOT).

2 specimens (No. 52 and 53, in alcohol), Gjøa Harbour, King William Land, June 12 and August 3 respectively, 1905.

The former specimen (No. 52) is an old individual in typical summer plumage. Length of wing 121 mm, bill 24 mm, tarsus 25 mm. The shape of the bill is, moreover, quite characteristic, due to its extreme height and breadth at the root (7×7,5 mm), compared with the bill in the other species of the genus *Erolia*. The colour of the bill is brownish, with yellowish base, where the edgings of feathers are bordered by a narrow, elevated fold of the skin.

The specimen No. 53 is a half feathered young, about 10 days old, with a length of bill 16 mm, tarsus 22 mm.

33. *Calidris bairdii* (COUES).

1 specimen (No. 54, in alcohol), Hayes Sound, Ellesmere Land, July 1899.

1 clutch of 4 eggs (No. 54 a), "Stordalen", Ellesmere Land, June 20, 1900.

2 specimens (Nos. 55 and 56), King William Land, June 24 and July 7 resp., 1904.

2 clutches à 4 eggs (Nos. 55 a and 56 a), King William Land, June 24 and July 7 resp., 1904.

5 specimens (Nos. 57—61, in alcohol), King William Land, Juli 17, 1904.

2 clutches of 4 and 3 eggs, King William Land, 1904.

1 specimen + 2 single eggs (No. x), King William Land, June 26, 1905.

The 3 first specimens (Nos. 54—56) are all old birds in typical breeding plumage, of which No. 55 and No. 56 belong to the clutches of eggs No. 55 a and 56 a. The five specimens (No. 57—61) constitute a family of 4 nestlings + one of the parents (No. 57), and specimens No. x of 2 single eggs + the breeding bird.

Measurements in mm:

Ad. specimen (7/7 1904): length of wing 127, bill 23, tarsus 23.5
Ad. specimen (24/6 1904): —»— 125, » 23, » 24
Ad. specimen (17/7 1904): —»— 125, » 23, » 23
Ad. specimen (July 1899): —»— 125, » 24, » 23
Ad. specimen (26/6 1905): —»— 123, » 21.8, » 21.8

The nestlings have a length of bill = 9 mm, tarsus = 20 mm.
Measurements in mm of 14 eggs [average 33.6×23.8].
Clutch of:

4 eggs (20/6 1900)	2 eggs (26/5 1905)	4 eggs (7/7 1904)	4 eggs (24/6 1904)
34.9×24.3	34.6×24.3	34.0×23.0	33.2×23.8
34.5×24.2	34.5×24.5	34.0×23.0	33.1×24.2
34.4×23.7		33.0×23.7	33.0×24.0
34.0×24.0		33.0×23.4	32.8×23.8

34. *Calidris canutus* (L.).

1 specimen (No. 62, in alcohol), Goose Valley, King Oscar Land (76° 30′ N, 89° W), June 12, 1900.

1 specimen (No. 63, head in alcohol), Winter Harbour, King Oscar Land (76° N, 89° W), July 21, 1901.

4 specimens (Nos. 64—67, in alcohol), Winter Harbour, King Oscar Land (76° 30′ N, 89° W), July 21, 1901.

Owing to the long stay in alcohol it is hardly dicidable with certainty, whether the above specimens represent the main species or the race *rufa*. The specimen No. 62 is an old individual in full summer plumage. Length of wing 169 mm, bill 33 mm, tarsus 31 mm. The rest of the material constitute a family, consisting of 4 nestlings, and the head of one of the parents (No. 63) with a length of bill = 29 mm.

The 4 nestlings are upwards of 4—5 days old, with length of bill 9 mm and tarsus 26 mm. The down of the upper parts is greyish brown interspersed with chestnut and black spots, tipped with white; nape greyish white, forehead and cheeks white with 5 black median stripes, legs bluish grey. The under parts white.

35. *Calidris maritima maritima* (BRÜNNICH).

3 specimens (Nos. 68—70, in alcohol), Goose Valley, King Oscar Land (76° 30′ N, 89° W), June 9—12, 1900.

1 specimen (No. 71, in alcohol), Winter Harbour, King Oscar Land 76° 30′ N, 89° W), September 15, 1901.

1 specimen (No. 72, in alcohol), Goose Isthmus, King Oscar Land (76° 30′ N, 89 W), June 22, 1902.

No. 71 is a young in autumn plumage; the rest are all old individuals in breeding plumage. As to the specimen No. 72 it is stated, moreover, that it has been shot at a nest containing eggs.

Measurements in mm:

Ad. specimen	(12/6 1900):	length of wing	134,	bill	34,	tarsus 24
Ad. specimen	(22/6 1902):	» —	127,	»	30,	» 24
Ad. specimen	(12/6 1900):	— » —	126,	»	30,	» 24
Ad. specimen	(9/6 1900):	— » —	120,	»	30,	» 24
Juv. specimen	(15/9 1901):	— » —	131,	»	30,	» 24

36. *Ereunetes pusillus pusillus* (L.).

1 clutch of 3 eggs, King William Land, July 8, 1904.

1 specimen (No. 73, in alcohol), King Point, Mackenzie Bay, June 4, 1906.

The specimen No. 73 is an old individual in summer plumage. Length of wing 92 mm, bill 17 mm, tarsus 21 mm.

The clutch of 3 eggs measure in mm:

31.5×21.2, 30.4×21.1, 30.4×21.0.

37. *Tryngites subruficollis* VIEILLOT.

3 specimens (Nos. 74—76), King William Land, June 24 and 30, 1904.

1 clutch of 4 eggs (No. 75 a), King William Land, June 24, 1904.

All the specimens are in typical breeding plumage. The specimen No. 75 belong to the clutch of 4 eggs (No. 75 a).

Measurements in mm:

Ad. specimen	(30/6 1904):	length of wing	140,	bill	20,	tarsus 33
Ad. specimen	(24/6 1904):	— » —	134,	»	19,	» 31
Ad. specimen	(27/6 1904):	— » —	130,	»	18.5,	» 31

The clutch of 4 eggs measure:

39.7×27.0, 38.2×26.7, 38.2×26.7, 37.8×26.8.

38. *Phalaropus fulicarius* L.

2 specimens (Nos. 77 and 78), King William Land, June 24, 1904.

1 specimen (No. 79), King William Land, June 26, 1904.

1 specimen (No. 80, in alcohol), King William Land, July 26, 1904.

4 specimens (Nos. 81—84, in alcohol), King William Land, July 26, 1904.

2 clutches of 4 and 3 eggs, King William Land, July 7 and 9, 1905.

2 single eggs (not dated).

The 3 first specimens are old birds, male (No. 77) and 2 females in fully coloured summer plumage, whereas the remaining specimens constitute a family consisting of the old male (No. 80) + 4 nearly fresh hatched nestlings (Nos. 81—84).

Measurements in mm:

Ad. ♂	(24/6 1904):	length of wing	130,	bill	22,	tarsus 22
Ad. ♂	(26/7 1904):	— » —	124,	»	21.5,	» 21
Ad. ♀	(24/6 1904):	— » —	136,	»	23.5,	» 21.5
Nestlings	(26/7 1904):	— » —	-	»	8,5,	» 19

Clutch of:

3 eggs (9/7 1905	4 eggs (7/7 1905)	2 eggs (not dated)
31.3×22.0	30.0×21.2	33.2×23.8
31.3×21.7	29.4×21.3	32.7×23.7
30.8×22.5	29.0×21.2	
	28.7×21.1	

39. *Lagopus lagopus albus* (GMELIN).

9 specimens (Nos. 106—114, in alcohol), King William Land, July 21, 1904.

8 specimens (Nos. 115—122), King William Land, shot during the spring (April 10—June 26), 1904.

2 single eggs, King William Land, July 12, 1904.

1 specimen (No. 123), King William Land, July 15, 1905.

1 clutch of 7 eggs (No. 123 a), King William Land, July 15, 1905.

The first 9 specimens of the above material (Nos. 106—114) constitute a brood of nearly fresh hatched nestlings. Shape of bill strongly conical: 5×5, culmen 6 mm, tarsus 18 mm.

3 of the remaining specimens (Nos. 115—117) appear in full winter plumage, 2 specimens (Nos. 118—119) are in transition plumage, and 4 specimens (Nos. 120—123) in summer plumage.

Measurements in mm:

	Length of wing	Length of bill in front of nostrils	Length of bill in front of chin angle	Height of bill
No. 117: Ad. ♂ (12/6 1904)	220	11.0	9.5	11.0
No. 119: Ad. ♂ (10/4 1904)	220	10.5	9.2	12.7
No. 120: Ad. ♂ (17/6 1904)	217	8.5	9.0	9.6
No. 118: Ad. ♂ (29/5 1904)	216	10.5	10.2	10.2
No. 121: Ad. ♂ (26/6 1904)	215	10.0	9.0	10.7
No. 115: Ad. ♂ (10/4 1904)	205	9.8	8.2	10.4
No. 122: Ad. ♀ (25/6 1904)	215	10.5	9.0	9.0
No. 116: Ad. ♀ (7/5 1904)	212	10.0	8.8	9.5
No. 123: Ad. ♀ (15/7 1905)	197	9.2	8.0	9.2

Clutch of:

7 eggs (15/7 1905)		2 eggs (12/7 1904)
45.8×30.8	43.0×30.7	42.2×30.3
44.2×30.6	42.7×30.5	42.0×31.8
43.2×30.9	42.4×30.9	
43.2×30.3		

Average of 9 eggs = 43.2×30.8.

Practically all the specimens have the primary remiges with quite white shafts, only in 3 specimens a brownish black colour is partly indicated towards the tips of the shafts, though exceedingly faintly, as for instance in the example No. 118 on the first 6 remiges, in the example No. 117 on remiges 2—6, and in the example No. 116 on the second remex. The rectrices, however, are black straight from base nearly in all specimens.

The moult of the white winter-feathers seems to take place very unequally. Thus an old male (No. 117) appears in full winter plumage as late as June 12, whereas 2 other males (Nos. 118 and 119) have both the checks and the lower neck quite brown as early as May 29 and June 12 resp. in the same year, just as the male No. 120 has assumed its full splendid plumage, head, neck, and upper breast quite chestnut, on June 17.

Of the females at hand the example No. 122 appears in full summer plumage even of June 25, 1904, as is also the

case with the specimen No. 123, which belong to the clutch of 7 eggs (No. 123 a). The latter specimen, moreover, presents a plumage highly diverging from that of the type (and that of the specimen No. 122), the reddish brown portions of the feathers of the upper parts having a more tawny tinge. Thus the upper parts of this specimen attain a rather close resemblance to that of the ptarmigan (Lagopus mutus rupestris). This fact combined with its inconsiderable size (length of wing 197 mm) might suggest that it is, perhaps, a hybrid, but it is probably more likely that the resemblance is due to an abnormal pigmentation (Erythrism-Xanthochroism), the outher web of all the rectrices being also light reddish brown ("chocolate-coloured") to a distance of more than 2/3 of its length from base, whereas the very tip of the tail is dull brownish black.

40. *Lagopus mutus rupestris* (Gmelin).

1 specimen (No. 124, in alcohol), Hayes Sound, Ellesmere Land, July 1899.
1 specimen (No. 125), King William Land, March 14, 1904.
2 specimens (Nos. 126 and 127), King William Land, June 22 and 29, 1904.
1 specimen (No. 128), King William Land, July 7, 1904.
1 specimen (No. 129), King William Land, July 4, 1905.
1 clutch of 7 eggs (No. 129 a), King William Land, July 4, 1905.

The specimen No. 124 is a nestling, about to days old, length of bill 6.5 mm, tarsus 17 mm. Of the remaining material one specimen (No. 125) probably is a male in nearly full winter plumage, the black lores, however, being rather faintly marked, the hind part of the crown with single interspersed feathers striped with yellowish black, all the primary remiges with dusky brown shafts, claws black. The specimens Nos. 126 and 127 probably both are females in their white-mottled transition plumage, No. 127 still with almost totally white under parts and mainly white upper parts. On the other hand the specimens Nos. 128 and 129 are both females in fully assumed summer plumage; the latter specimen having in contrast to the others all the shafts of the primary remiges quite white; this bird belongs to the clutch of 7 eggs (No. 129 a) July 4, 1905.

Measurements in mm:

	Length of wing	Length of bill in front of nostrils	Length of bill in chin angle	Height of bill	Tarsus
Ad. ♂ (14/3 1904) . . .	183	8.2	7	7	34
Ad. ♀ (4/7 1905) . . .	198	10	9	10	32
Ad. ♀ (29/6 1904) . . .	195	8.5	7	7	34
Ad. ♀ (7/7 ») . . .	186	8	7	7.5	33
Ad. ♀ (22/6 ») . . .	184	9	7	7	33

Clutch of 7 eggs (4/7 1905)

45.4 × 30.4 44.8 × 30.7
45.3 × 31.0 44.2 × 30.6
45.0 × 30.8 44.0 × 31.0
45.0 × 30.8

Average of 7 eggs = 44.8 × 30.8.

Appendix I.

Chronological Extract of the Ornithological Notes in Captain Otto Sverdrup's Report on the Second Norwegian Arctic Expedition in the "Fram" 1898—1902.

August 1898. *Melville Bay* (78° N): Crowds of Black Guillemots and little Auks migrating from the north observed.

August 12, 1898[1]. *Foulke Fjord* (78° 20′ N): Eiders and Little Auks in abundance.

August 21, 1898. *Rutherford Peninsula* (78° 50′ N): More than 50 Ptarmigans shot.

August 21, 1898. *Hayes Fjord* (79° N): Snow-Buntings, Eiders observed, one Ptarmigan shot.

October 13, 1898. *Nore Sound* (79° 5′ N): A flock of Eiders observed outside an old eskimo dwelling.

May 4, 1899. *Nore Sound*: The first Gulls of the year observed.

[1] On August 12 Mogstad, one of the expedition staff, writes in his diary: (About 81° N). An incredible number of small auks (Alkekonger, Alle alle). All day long we cruised through their immence crowd, mainly of young birds. Everything goes to show that we shall soon meet with open water. (Cfr. H. Schalow: Die Vögel der Arktis 1905, pg. 93).

June 5, 1899. *Nore Sound*: Thousands of birds observed: Eiders, Longtailed Ducks (Clangula hyemalis), Black Guillemots, Brünnicks Guillemots, and the omnipresent Gull.

June 6, 1899. *King Oscar Land* (78° 30′ N): 4 Glaucous Gulls (Larus hyperboreus) observed in a lake at "Braskerudflyen".

June 12, 1899. *Hayes Fjord*: Chirping of birds and a cackling Ptarmigan cock heard, and a flight of Ptarmigans observed.

June (first fortnight), 1899. *"Fram" Harbour*: Several seabirds shot, especially Little Auks, and simultaneously secured, among other things, 17 Eider-eggs, and 29 Gull-eggs.

June (in the course of), 1899. *King Oscar Land*: Daily observed on the inland-ice Snow-Buntings (Plect. nivalis), and on the "bare land" at Bay Fjord also Wheatear (Oenanthe spec.), Ptarmigans, strand-snipes (Calidris spec.), and shot 2 Longtailed skua (Stercorarius longicaudus).

July 4, 1899. *Hayes Fjord*: Some seabirds shot, and the first Ptarmigan chicks of the year observed. (Pg. 203 Sverdrup writes: "The Polar-Grouse is a variety or rather more varieties of our common Ptarmigan (Lagopus mutus), a little bigger and with somewhat diverging summer plumage").

July 24, 1899. *Smith Sound* (78° 30′ N): More than 100 Little Auks, some Black Guillemots, Brünnicks Guillemots, Eiders, and many Gulls shot.

August 24, 1899. *Jones Sound* (76° N): Flocks of Brünnicks Guillemots in abundance, Black Guillemots, gulls and eiders observed.

August 25, 1899. *"Fram-Fjord", Cone Island* (76° N): Crowds of seabirds observed.

September (first week), 1899. *Stordalen at Havnefjord*: Several Ptarmigans, 5 eiders and 8 big gulls (Larus hyperboreus), 7 of which are young individuals, shot.

September 8, 1899: Several broods of eiders with young ones observed.

September 12, 1899: 10 eiders and 2 big gulls (Larus hyperboreus) shot.

October (first week) 1899. *Bådsfjord* (76° N): 34 Ptarmigans, 1 Black Guillemot, 8 eiders, 4 gulls shot.

March 13—24, 1900. "*Bjørneborg*": Often visited by a couple of raven (Corvus corax principalis).

March 22, 1900. "*Bjørneborg*", *Moskusfjord* (76° N): 1 Ptarmigan shot.

March 24, 1900. "*Helvedesporten*": Many Black Guillimots and eiders observed.

April (medio) 1900. *North Kent* (76° 30′ N). Heard the Ptarmigan cock for the first time this year. Schei writes (in Sverdrup: "Nyt Land", Vol II pg. 20): The Ptarmigan has its haunt in the screes, where the nests are placed on mossy patches between the stones among heather of Cassiope and bushes of Salix. Not until later in the year, when the snow begins to fall in the hills, the fledged broods emigrate downwards to forage on the barren ridges along the rivers, whereas its main habitat throughout the year is in the screes.

May (last week) 1900. "*Helvedesporten*": Crowds of seabirds observed.

May 28, 1900. "*Norskebukten*" (78° N): Gulls and robber gulls (Buffons Skua) migrating northwards.

June 7, 1900. *Hvalrossfjord* (76° 30′ N): The first skein of geese this year observed migrating northwards.

June 20, 1900. *Stordalen*: Eggs of a snipe (Calidris bairdi?) secured.

July 2—3, 1900. *Havnefjord*: Crowds of eiders, Black Guillemots, and gulls obs.

July (in the course of), 1900: Several broods of Ptarmigan with chicks observed.

August 1, 1900. *Skreia* (76° 30′ N): A colony of Arctic Tern (Sterna paradisaea) with big young ones observed.

August 8, 1900. *Cape Vera, Archer Peninsula* (76° 15′ N): A big colony of breeding Fulmars (Fulmarus glacialis) observed.

October (in the beginning of) 1900: *Norskefjorden* (77° N): A single eider observed in a lane of water.

March (medio) 1901. "*Bjørnekaplandet*", King Oscar Land: A big flight of Ptarmigan observed.

April (medio) 1901. "*Vendom Fjord*": Some Ptarmigans shot.

May 6, 1901. *Greely Fjord* at Isfjellodden (80° 20′ N): Several Ptarmigans observed.

May 7, 1901. *Schei Island* (80° 30′ N): Several flocks of Ptarmigan obs.

May 16, 1901. *Louise Fjord*, Ringnes Land (79° N): A couple of Ptarmigan obs.

May 25, 1901. *Heiberg Land* (79° N): A cackling Ptarmigan cock heard (at Eureka Sound).

May 27, 1901. *Heiberg Land*: 2 big gulls (Larus hyperboreus) and a skein of geese observed.

May 29, 1901. *Heiberg Land*: A flock of snipes observed.

May 30, 1901. *Grethas Island* (79° N): A flock of 6 snipes (as big as a trush) observed at 10 degrees below sero and in surroundings quite winterly.

June 1. 1901. *Grethas Islands*, Bay Fjord: A big flock of "Rapgjæs" observed; in the Gletcher Fjord (Heiberg Land) one goose of a bigger flock, and a pair of Ptarmigan shot. In Skare Fjord (Heiberg Land) numerous migrating flocks of younger big gulls (Larus hyperboreus) observed.

June 5, 1901. *Norskebukten* (77° N): The first skein of geese this year observed by Isachsen.

June (the whole first week) 1901. "*Bjørnekapplandet*": Enormous crowds of migrating geese.

June 15, 1901. *Fuglefjord*, King Oscar Land (77° 10′ N): Enormous crowds of skua and geese everywhere, besides eiders, Long-Tailed Ducks (Clangula hyemalis), and several species of gulls.

June 18, 1901. *Gåsefjord*: Several eiders observed.

June 24 (and a fortnight onwards), *Archer Peninsula*: Several geese and seabirds shot; in Gåsefjord several eiders and geese shot.

June 25, 1901. *Gåsefjord*: Eggs of gulls, ready for hatching, observed in "Måkeberget".

July 5, 1901. *Gåsefjord*: Several Ptarmigans shot.

July 20, 1901. "*Ytre Eide*": A Gyrfalcon (Falco rusticolus sacer Forster?) shot in "Falkberget".

July 21, 1901. "*Indre Eide*": Eggs of a couple of seabirds found, not previously taken by us.

July 22, 1901. *Archer Peninsula*: On the summit of the lime-stone island "St. Helena" gulls are breeding; in the clefts Black Guillemots (Uria g. mandtii), and down on the foreland, sheltered by the mountain walls, the nests of the eiders are placed in long rows, mostly in old, small stone houses, previously built by the eskimos. Still many fresh eggs, but majority are ready for hatching.

July 23, 1901. *Cape Vera*: A big colony of Fulmars (Fulmarus glacialis) obs.

July 25. *North Devon*: "*Båtodden*": A colony of Black Guillemots, comprising thousands of birds, besides eiders observed.

August 23, 1901. "*Gåsefjord*": Several Ptarmigans shot.

September 10, 1901. "*Nordstrand*": Several Ptarmigans shot, and a big skein of geese observed.

September 26, 1901. "*Ytre Eide*": A raven shot (Corvus corax principalis).

May 1, 1902. *North Devon*: Several Fulmars (Fulmarus glacialis) observed migrating westwards.

May 24, 1902. *Bay Fjord* (79° N): The first goose of the year observed.

June 4, 1902. *Eureka Sound*: Ptarmigans observed.

June 8—10, 1902. "*Norskebukt*": The first geese this year shot out of a big skein.

June 13, 1902. "*Nordstrand*": A big gull (Larus hyperboreus) observed.

June 26, 1902, "*Gåsefjord*": Several seabirds observed.

July 18, 1902. "*Gåsefjord*": Several geese, Ptarmigans and seabirds shot.

Appendix II.

Chronological Extract of the Ornithological Notes in Roald Amundsen's Report on the "Gjøa"-Expedition. ("Nordvest-passagen" Kristiania 1907).

September 9, 1903. *King William Land*: Big skeins of geese observed.

October 5, 1903. 5 Ptarmigans shot, the first of the season.

March 12, 1904. The first Ptarmigan this year observed.

April 7, 1904. A raven observed.

May 12—18, 1904. Several Ptarmigans observed, crowds of Snow-Buntings arrived.

June 3—10, 1904. Numerous flocks of ducks, geese, and swans observed, migrating northwards, several Ptarmigans shot.

June 18, 1904. Eiders observed, 2 Ptarmigan cocks shot.

June 20, 1904. Crowds of eiders, swans, divers, "little birds", and geese observed.

June (ultimo) 1904. A Snowy Owl shot, and the nest containing 6 lemmings observed, besides nests with eggs of eiders, divers and geese.

August (primo) 1904. 13 unfledged geese secured.

October (1st half). Also the Ptarmigans were now passing us, migrating southwards in big flocks.

April 16, 1905. *Victoria Land*: The first Snow-Bunting of the year, besides 2 Ptarmigans observed.

April 20, 1905. *Victoria Land*: 1 Ptarmigan shot.

May 7, 1905. *Victoria Land*: 2 Ptarmigans shot.

May 13, 1905. *Victoria Land*: Several Ptarmigans observed.

June 15, 1905. *Victoria Land*: Ptarmigans and eiders obs.

July 4—9, 1905. *King William Land*: Several eiders shot, and 40 eggs secured.

September 2, 1905. Several ducks observed at Cape Sabine.

September 5, 1905. *King Point, Mackenzie Bay*: Several Ptarmigans shot.

September (1st half). *King Point*. Several ducks, geese, and Ptarmigans shot.

April 4, 1906: "*King Point*: The first harbinger of spring was a raven".

April 12, 1906. *King Point*: 5 Ptarmigans shot.

April 22, 1906. "Now the Ptarmigans appeared in big flocks. The hills seemed to be living, where they were sitting in dense masses, but so shy that they were almost impossible to approach to within shooting distance."

May 20, 1906. "All migratory birds had arrived."

Stavanger Museum, March 1931.

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FOR

NATURVIDENSKABERNE

BIND 73

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DEN LETTERSTEDTSKE FORENING

REDAKSJON:
W. C. BRØGGER, B. LYNGE
HOVEDREDAKTØR
B. LYNGE

OSLO
A. W. BRØGGERS BOKTRYKKERIS FORLAG
1933