The ringing of Barnacle Geese in Greenland in 1961

R. Marris & M. A. Ogilvie

Summary

A SMALL expedition spent July and August 1961 in Jameson Land, East Greenland. The main object was the ringing of Barnacle Geese. 450 adult and 119 young Barnacle Geese were ringed, and a further 40 birds, previously ringed in the same area in 1955, were recaught. Six Pink-footed Geese were also marked. The last geese were ringed on 4th August and, though more geese were seen, including many Pinkfeet, their moult was over and none were caught.

The equipment and techniques used, including coloured neck bands, are briefly described. The birds caught were sexed and weighed. Estimates were made of the total numbers of the two species of geese in the areas visited and suggestions are put forward concerning the distribution of breeding and non-breeding birds between the two major valleys. Breeding success was very poor, except in Enjørningens Dal and Fleming Dal, where fewer predators were seen than elsewhere.

Notes on the status and breeding of other birds are given. A film record and a collection of plants were made.

Introduction

In the summer of 1955 a Cambridge expedition ringed 299 Barnacle Geese *Branta leucopsis* and 11 Pink-footed Geese *Anser brachyrhynchus* in Jameson Land, central east Greenland. A return to the area was planned for 1958, with the approval of the Greenland Department of the Danish Government. As a result of a kind offer by the Norsk Polarinstitutt in Oslo, stores and some equipment were carried on the M.S. Polarbjørn (which later foundered in the coastal ice) to the Norwegian hunting station at Antarctic Havn early in August, 1957. Stores were sent in advance so that a party could travel on foot to the ringing areas from Mesters Vig airstrip, near Noret, early in July, when the geese become flightless. Early arrival is essential and cannot be achieved by sea because polar pack ice delays the arrival of ships and winter ice prevents the use of small boats in the fjords.

The 1958 programme had to be postponed because transport by air for the members could not be obtained. In 1961 another expedition was assembled and space was bought on aircraft chartered by a Leicester University expedition, the Junior Mountaineering Club of Scotland expedition and Nordisk Mineselskab A/S.

The primary aim of the 1961 Cambridge East Greenland Expedition was to catch and ring Barnacle Geese and to estimate the size of the local population and its breeding success. Supplementary objectives were observations on, and the capture of, Pink-footed Geese, observations on other bird and animal life, and the collection of plants.

The 1961 Expedition consisted of Dr. R. Marris (leader), G. C. G. Argent, A. B. Hall, A. H. F. Webbe (8th to 26th July only), D. Marris (26th July to 14th August only) and M. A. Ogilvie. R. Marris had been a member of the previous expedition to the same area in 1955.

G. Argent and R. Marris made a collection of botanical specimens, now in the British Museum (Natural History). Lists of species of flowering plants and mosses are being prepared for the Greenland Department, for study in Denmark. A 16 mm. colour ciné-film record was made of the habitats, the catching technique and the marking methods. It includes close-up shots of a herd of Musk-oxen *Ovibos moschatus*. A. B. Hall has prepared a special report on observations of the Musk-ox in Jameson Land.

Five members of the expedition flew from Reykjavik, in Iceland, to the Mesters Vig airstrip on 8th July. After initial double back packing from Mesters Vig to Antarctic Havn, Flexurdal and Henrik Møllers Dal, goose-catching drives were made in the vast expanse of lower Ørsteds-Dal between 16th and 20th July. From 21st to 27th preparations for the next phase were made. While A. H. F. Webbe, *en route* for Mesters Vig and Iceland, returned to Antarctic Havn with Malcolm Ogilvie, the others took stores to the shore of inner Fleming Fjord below Rhætelv. The arrival of David Marris on 25th July was delayed a day by fog at the airfield. Four of us returned with additional stores and, after moving up Ørsteds-Dal to the foot of Alldays Dal and a goose-drive further up valley on 29th, we all set out over the pass to the camp in Fleming Fjord.

Three successful drives in Enjørningens Dal and Fleming Dal[1] between 31st July and 4th August preceded a long trek through S. W. Jameson Land, via Fegins Elv, Hall Bredning, Schuchert Flød and, finally upper Ørsteds-Dal, where we arrived on 12th August. David Marris then returned by way of Horsedal to Noret, leaving for Iceland on 14th.

In the final phase G. Argent and R. Marris visited Fleming Dal, Passagen, Carlsberg Fjord, Klit Dal, upper Ryders Elv (Hurry Fjord), and the mountain plateau to the north of Dusens Bjerg and crossed Jameson Land before returning via Hall Bredning to join Hall and Ogilvie, who divided their time between Fleming Fjord and Mesters Vig, to transport gear back to the airstrip. Hall, who had become ill, flew to Iceland on 7th September.

The fine ' heat-wave ' weather that lasted from our arrival until the third week in August, with only one short period of a rainy and two overcast days, then began to break up. The last ten days were a mixture of snow storms and fine days. This coincided with the moving of our gear back to the airfield, but we were not seriously hampered, though the upper parts of the Oksedal pass went under a foot of snow overnight. We flew out on 9th September, sharing a plane with the Leicester expedition, Danish staff and tourists from Iceland.

Acknowledgements

The generous personal help, advice and encouragement of Dr. Finn Salomonsen of the Universitetets Zoologisk Museum, Copenhagen, on behalf of the Greenland Ringing Scheme, has been given since the commencement of our Barnacle research in 1955. All ringing records and subsequent recoveries have passed through his hands. Dr. A. Melderis has given valuable assistance by naming botanical specimens at the British Museum (Natural History) colected in both 1955 and 1961.

For other help we are most grateful to the Norsk Polarinstitutt, the Danish staff at Mesters Vig airstrip, Herr V. Brinch of Nordisk Mineselskab A/S, and Messrs. J. Giæver, C. G. M. Slesser and C. H. Liddiard, Drs. Søren Richter, Lauge Koch, A. L. Washburn and his colleagues, Christian Vibe and nearly sixty people in Iceland and the British Isles who have helped to obtain information of geese ringed in Jameson Land.

Although the expedition was organised and financed at the personal expense of its members it could not have been undertaken without the loan

[1]It is understood that in a map shortly to be published by the Danish Government, Fleming Dal will be called Pingels Dal. The Norwegian name is retained because it has been used in reporting recoveries of ringed geese. (Ed.).

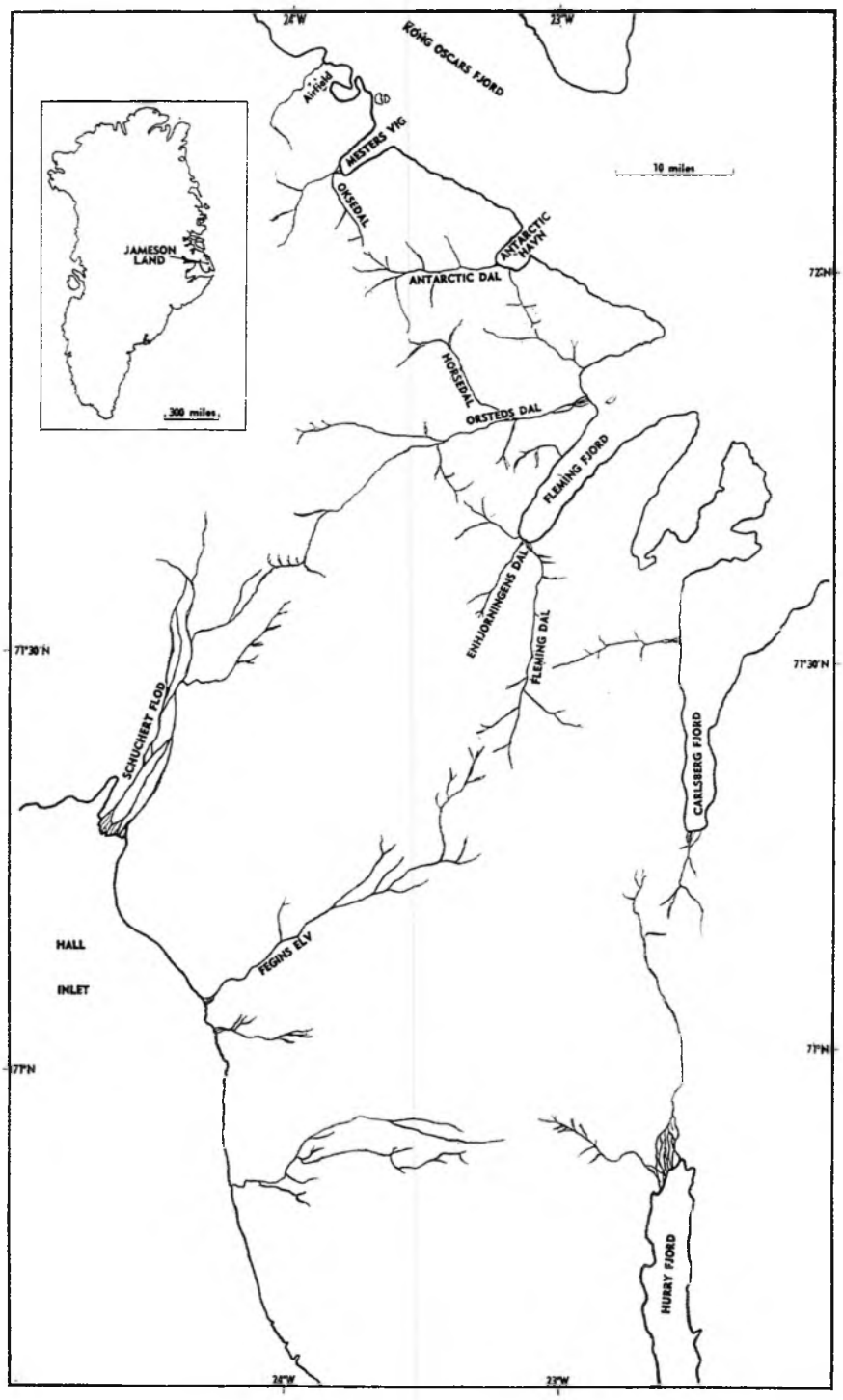
and donation of some equipment and generous benefactions of a number of business organisations. One of the authors (M.A.O.) is indebted to the Wildfowl Trust for the opportunity to take part.

Topography

In the mountainous northern part of Jameson Land, movement is restricted to the valleys and the passes connecting them. The mountains are mostly 3-4000 ft. in height and form steep or nearly perpendicular walls to the U-shaped glacial valleys. The valleys where we caught geese were Ørsteds-Dal, and the two valleys leading into the head of Fleming Fjord, Enjørningens Dal and Fleming (Pingels) Dal. With the exception of Schuchert Fløð, Ørsteds-Dal is the largest valley of the region, about 30 miles long, and three miles wide in the lower half of its length. This lower part is a flat plain of heather, tundra, bog and sand desert. The braided channels of the river are about half-a-mile wide for the last five miles and pass between sand and shingle banks. When we were there the river was fordable at about waist deep, though there were signs that during the spring thaw most of the valley goes under water. In the heather and tundra there are several pools, the largest about an acre. Around these pools, and on either side of the numerous small tributaries entering the river from the mountain wall, the ground is very boggy, forming quite extensive areas of marsh, much liked by Dunlin and Sanderling as a breeding habitat. Higher up the valley, the river runs in a fairly narrow bed, and the banks are drier and slope towards the foot of the mountain wall. Fleming Dal and Enjørningens Dal join at the mouth to form a large area very similar to the lower reaches of Ørsteds-Dal, but the valleys narrow quickly as they climb back from the fjord, with the rivers running in steep-sided gorges.

The connecting valleys are mostly quite narrow, with steep and very stony floors and little vegetation. The rivers running in these smaller valleys alternate between a gorge and wide shingle outwash plains. The only birds in these barren valleys are the ubiquitous Snow Bunting and a few Ringed Plover.

The southern part of Jameson Land is a complete contrast, with low hills and heather-clad ridges undulating gently down to the shores of Hall Inlet. The vegetation on the southward facing slopes is quite luxuriant compared with the bleaker valleys of the north. This area has a relatively warm dry continental type of summer climate with relatively little cloud cover. Hall Bredning is a branch of Scoresby Sound, claimed to be the largest fjord in the world. While we were walking along the shores of it, we never tired of looking across the water to our left, for the panorama of icebergs in the Inlet was breath-taking, with pieces of ice of all sizes and shapes gleaming blue and white in the bright sunlight. They stretched from the head of the Inlet a few miles to the north, past and behind us as far as the eye could see. They had come from glaciers in Nord Vest Fjord. The river currents in the water tend to drift the ice away to the south and then east to the sea, but the winds of the past weeks had held it back, and many of the largest bergs had run aground at the mouth of the Schuchert River which runs in at the head of the Inlet. The variety of shapes and sizes was infinite, from square-edged plateaus perhaps 150 feet high and many acres in area, to jagged slices with ' wedding cake ' decorations, to pointed and scalloped spires and pinnacles towering above low flat pancakes, barely awash. The noise of these ice giants grinding and crashing together was like a continuous thunder storm rumbling away day and night.


24°W
23°W
KONG OSCARS FJORD
Airfield
MESTERS VIG
10 miles
OKSEDAL
ANTARCTIC HAVN
ANTARCTIC DAL
72°N
JAMESON LAND
300 miles
HOESEDAL
ORSTEDS DAL
FLEMING FJORD
ENHJORNINGENS DAL
FLEMING DAL
71°30'N
SCHUCHERT FLOD
CARLSBERG FJORD
HALL
INLET
FEGINS ELV
71°N
HURRY FJORD
24°W
23°W

Just inland from the shore are many pools, some covering an acre or more, with much bog and marsh round them. In the very dry summer of 1961 many of the smaller pools were dried up, leaving patches of brighter green vegetation.

Catching Operations

Equipment and method

Our equipment, which had to be packed on our backs together with our stores, was simple. We carried one inflatable rubber dinghy, one single-seater Lilo Kayak, and two nets—one of Bridport Industries Ltd. No. 3 nylon netting, $\frac{1}{2}$" square mesh, 60 yards long x 4ft. wide with a cord along each edge; another similar but 30 yards long in No. 2 nylon netting corded top and bottom.

In the field the nets were attached with twine to holes on $4\frac{1}{2}$ ft. tubular aluminium poles set about 5 yards apart, with extra poles set in the central section forming the catching pen. The nets and poles were carried in two rolls, ready for quick erection. After use the nets were cleaned, checked and rerolled.

Normally the nets were erected on dry ground near water with two arms about 30 yards long set at an obtuse angle with a central " cul-de-sac " three or four yards wide and deep as a catching pen. Sometimes there was time to double back spare netting for use at the end of a drive to close the pen but on other occasions one of the arms was used. Bamboo poles were placed between the aluminium ones to strengthen the nets. Twice sacking was draped over bamboos to act as scarecrows and help direct the geese towards the nets.

The Samoyed method used to capture the geese was essentially the same as that previously described by Goodhart, Webbe & Wright (Goose ringing in Vest-Spitsbergen 1954. *Wildfowl Trust Annual Report* 7 : 170-6. 1955; and elsewhere).

Goose Drives

16th July. Our first goose catch was at the basalt exposure on the north side of lower Ørsteds-Dal. On the valley side of the rocks lay a group of ponds which can be approached in dead ground from Henrik Møllers Dal where we had camped. Two Barnacle flocks were sitting on the banks; one flock of broodless adults and the other, by another pond, contained goslings. One man went round on each side and the flocks sought refuge on the ponds and joined together, the goslings swimming astern. Once the two of us were guarding the possible escape routes across the valley to the main river or to the fjord, the remaining three put up the nets on a slope a short distance from one of the ponds in view of the geese. On one side were the rocks and on the other was a patch of late snow and ice. When all was ready the drive began. A family party of two adults and three goslings made good their escape across the tundra. We closed on one of the ponds and directed the birds slowly to the nets. As the flock left the water one adult winged away and before the pen was closed eight more took flight on the slope in front of the nets. It is probable that had we set the nets on level ground a few of the flying birds would have been netted. None of the birds captured could fly and only four flying adults were seen in the next few days. The birds stood quietly in the pen with numerous mosquitoes settling on them. Mosquitoes had been abundant for some time and continued so for a few more days. We marked 85

adults and 7 goslings; one more unmarked adult escaped from the pen. A similar catch was made in the same place in 1955 when the water level in the ponds was higher. The summer of 1961 was early and dry.

18th July. Having moved camp across lower Ørsteds-Dal, we made a second catch of 98 adult Barnacles, including 32 from the first catch. This round up took longer as the birds were first seen at the mouth of the river and long encircling movements had to be made to bring them up the river and on to a pool. A mirage added to our difficulties. At the crucial moment Webbe appeared running from dead ground and so the flock was halted on the raised beach terrain near the river; it now stood at the centre of a triangle of three of us who moved it on to a small pond. The nets were moved and re-erected by the pond. Once the flock had been ringed, it was driven for a short distance down the valley to avoid recapture in subsequent catches.

19th July. Hall found a flock of 20-25 unmarked adults on a small pond close to the mountain that forms Kap Seaforth. Three of us tried unsuccessfully to surround the pond and the flock escaped up the talus slope nearby. One bird was caught by hand and another ringed in 1955 was seen. Next we tried unsuccessfully to get about 100 unringed Pinkfeet and Barnacles off the Ørsted River and on to the largest pond on the south side of lower Ørsteds-Dal. We had set out for the drive before it was discovered that a flock of Barnacles was already near the pond. Later we tried to catch this flock, but an aluminium pole broke and we lost all but 10 of 55 adults, including three Pinkfeet. A most disappointing day.

20th July. We made up for this by catching 86 birds, again all adults, and including only 5 recaptures. They were on the other (north) side of the valley where there were few ponds on which to concentrate the flock and it was some time before we could get the birds to go on to a tiny pool not 20 yards square, and hold them there while the nets were brought and erected. All the poles held on this occasion and by this round-up we brought our ringing total up to 250 geese, including 23 recaptures from 1955.

29th July. Before leaving Ørsteds-Dal, the preparations for the next phase of our field work completed, a drive was made for some miles up-valley from a trapper's 'overnight' hut below Alldays Dal. A sweep high up the left side of the valley encircled a large flock of 60 Barnacles below a rocky rapid, but all but six adults and one gosling could fly and were lost during the drive down stream to the nets. 12 Pinkfeet and 30 Barnacles escaped up-stream; after a short drive it was decided not to give chase because at least sixteen of the Barnacles could fly and there were no goslings. Two Pinkfeet from a flock of non-flying adults were caught in the river by hand and another recovered bearing a British Museum ring.

Only 23 Barnacle goslings, eight of which were marked, had been found in the valley. It was realised that if catchable geese were to be found in inner Fleming Fjord then breeding adults with goslings would have to be present as they had been in 1955. The climb, for eight hours fully loaded, up and over the Alldays Dal pass brought us to our camp below Rhætelv at the head of Fleming Fjord—a journey relieved by the presence of a number of herds of Musk-oxen.

31st July. Enjørningens Dal: a flock of Barnacles including young goslings was soon discovered in a marshy depression a mile or so up-river from the outwash. One of us forded the river and made a long sweep through hillocks up the left side of the valley. Outflanked, the flock turned down-stream

to a place where the river bends and flows under a thirty foot cliff formed by a raised beach. This natural feature enabled four men to drive 27 adults and 14 goslings off the water with ease into the nets where they had been positioned on the bank behind and below the raised beach. Only two adults which flew evaded capture, including one bird banded in Ørsteds-Dal. Another recaptured bird, marked on 16th July, also flew on release. The upper valley, which was not searched, was not inhabited by geese in 1955.

1st August. From our camp we set out across the mouth of Enjørningens Dal into lower Fleming Dal, reassembling on the high ground beneath the mountain divide overlooking the river delta, which is nearly a mile wide at this point at this time of year and flows in numerous braided channels between sand banks and small islands. While David Marris crossed the river at low tide, clearing the delta area and raised beach, hillocks, and ponded tundra of several flocks on the left bank, the nets were set on an island on the inner bend of the river near the right some way up-stream. Several hundred yards above this the valley opens out into a wide plain; a large rocky outwash beyond the hillocks on the left giving way to bog and sand flats, and the main river flowing below the escarpment of the mountain divide. The main flocks had concentrated quietly in this area and others, outflanked from the left two miles or so further up-stream, came to join them; only one small flock escaped.

This phalanx of Barnacles, some 300 of them, was headed by two of us towards the nets. Some individual birds took to the wing, but the majority of those obviously able to fly seemed to find refuge in the size of the flock now advancing from the sand flats. The final stage of the drive, perhaps half-a-mile, was exciting but it became tense during the last hundred yards. These were critical moments. A false move and the geese that could fly might disrupt and panic the flock. Finally, a vertical bank on one side to guide them, the nets beyond with the far wing spread to the water's edge, and Sandy Hall plus camera and tripod blocking the stream, the geese were surrounded and ushered on to the bank. Two adult Pinkfeet led the way and the nets held whilst the pen filled to capacity. As the gate closed the flock turned and, for some hectic seconds, seemed about to force its way out again, but only a gosling and adult, both previously ringed the day before, escaped. It was 8 p.m.; after a photographic interlude and 4½ hours' ringing, we finally left the nets and returned for a well-earned sleep.

308 geese had been netted, including 3 adult Pinkfeet, and 42 repeats. 163 adult and 83 gosling Barnacles were ringed; and 17 recaptures reringed—14 from a similar drive at the same site on 6th August 1955. One unmarked adult flew from the pen, as did more than 50 others on release—some probably for the first time since moulting. The capture of adult geese capable of flight in flocks containing goslings is common, but in this case many broodless adults had been in separate flocks.

During ringing a separate pen was made for goslings which were always marked first.

On 3rd August another Barnacle ringed in Fleming Fjord in 1955 was seen in lower Fleming Dal.

4th August. Fleming Dal is divided into two by a long basalt gorge. In the upper valley we found and caught 35 adult and 13 gosling Barnacles. The presence of this flock was initially masked by flying birds which remained while the others ran off into dead ground. This behaviour often complicates

drives and flightless geese can be overlooked. Another flock of some 70 flying birds was also disturbed and this was later seen to contain a number ringed in the lower valley.

The later journeys

After continuous rain on 5th August, on 6th we moved from our camp near the Fleming Dal pass through the mountain divide, down a steep gorge and out into the lower-lying regions bordering Hall Bredning known to be a breeding place of Pinkfeet. We spent six days here searching for geese. We knew it would be too late to capture non-breeding Pinkfeet but hoped to find Barnacles with goslings. Though we saw several flocks of both Barnacles and Pinkfeet, they were all on the wing again. There were no young birds in these flocks. We saw only two family parties of Pinkfeet with two young in each on the inland ponds between Fegins Elv and Depot Elv, a breeding place discovered in 1955. We caught and ringed one of these goslings but the others evaded capture. Many old feathers round the edges of the pools we passed indicated that these were the moulting places of plenty of geese. To catch them, especially as there were few young in the flocks, would have needed a much earlier arrival in the area, earlier in fact than we could have managed having tackled the geese in the north as well.

On 12th August flocks of 80 Pinkfeet and 30 Barnacles were outflanked in upper Ørsteds-Dal but every bird could fly. Neither there nor a few days later in Klit Dal (Hurry Fjord) were any goslings seen.

Marking

The Barnacle Geese were marked in three different ways: with a numbered aluminium ring; with a coloured plastic ring of the spiral type used on poultry; and with a coloured neck band of $\frac{1}{2}$ inch PVC tape. The aluminium rings, presented to us by the Greenland Ringing Scheme, bear the address of the Zoologiske Museum, Copenhagen. The 40 Barnacles first ringed in 1955 and recaptured by us had their old rings replaced by new ones.

Neck bands have been in use in America for some years. An eight-inch length of tape $\frac{1}{2}''$ wide and 1/24″ thick is placed round the neck and one end of the strip passed through a hole in the opposite end and pulled to a point at which a notch in each edge of the tape locks it in place, to form a collar round the bird's neck with two short tails (see photograph, p. XXIII). These neck bands were used to discover by observation whether Barnacles from one breeding area in Greenland go to a particular winter haunt in Scotland or Ireland, and whether they move about during the winter. Different colours were used to distinguish birds from the various catching areas.

Table I. Summary of Barnacle catches and ringing, July-August, 1961.

Date	Ringed		Recaps	Repeats	Total Catch		
	Ad.	Pull.	from 1955		Ad.	Pull.	Total
16th July	76	7	9		85	7	92
18th July	62		4	32	98		98
19th July	9		2		11		11
20th July	73		8	5	86		86
29th July	6	1			6	1	7
31st July	26	15		1	27	15	42
1st August	163	83	17	42	207	98	305
4th August	35	13			35	13	48
	450	119	40	80	556	133	689

Only six Pinkfeet were ringed, with numbered and with coloured plastic rings. This was because we saw only about 50 in lower Ørsteds-Dal in July and we were unsuccessful in manoeuvring some of them off the river on 19th July. On 20th July they were too far away to be rounded up with the Barnacles. The Pinkfoot flocks which we saw later were, with two exceptions, broodless and had regained the power of flight. One two year old male Pinkfoot, ringed as a juvenile in Kinross, Scotland by the Wildfowl Trust in October 1959, was recovered from a flock of broodless adults in lower Ørsteds-Dal.

Observations

Table II shows that only in the two valleys leading into the head of Fleming Fjord did the Barnacles breed with any great success, while the Pinkfeet did badly in all the places covered. Fegins Elv, where failure was complete, is known to be an important breeding area for Barnacles.

Table II. Maximum numbers of geese seen in Jameson Land, July-August, 1961

Locality	Barnacles		Pinkfeet	
	adults	goslings	adults	goslings
Noret, near airstrip	100	6	15	—
Mesters Vig	30	—	32	—
Antarctic Havn	40	4	72	10
Ørsteds-Dal	450	23 (8 caught)	300*a*	—
Fleming Fjord (Enjørningens Dal + Fleming Dal)	450	111 (all caught)	200*a*	15
Fegins Elv	250	—	3	—
Hall Inlet (pools and river estuaries) ..	50-220*b*	—	450-730*b*	4+
Paselv	10	—	—	—
Klit Dal	90	—	56	—

Notes: *a* these figures include influxes in mid-August.
b observations by different parties do not tally for this region, which extends from inner Depot Elv to Schuchert Flød.

Additional records:

1. The west side of the Schuchert Delta was not visited but many Pinkfeet were heard calling there.
2. On 4th September 82 Pinkfeet were seen migrating from the north over Antarctic Havn, at 2,500-3,000 ft.; and on 5th September 50 Pinkfeet were migrating from the north at 3,000 ft. over Oksedal.

It is possible that the geese of Fleming Dal and Enjørningens Dal should be joined with the birds of Ørsteds-Dal instead of comparing the breeding success of the two areas. The two regions are separated by a mountain barrier some 6-8 miles wide, or else by a sea journey of some fifteen miles round the intervening peninsula. That this was not too much even for a gosling was demonstrated by the recapture in Fleming Dal on 1st August of one ringed near the mouth of Ørsteds-Dal on 16th July. It was judged to be one to two weeks old when ringed and sometime in the next fortnight it had crossed the three-mile wide valley of Ørsteds-Dal, and swum or walked the fifteen miles round the point and up Fleming Fjord to its head. At least eight and possibly twelve other birds ringed in Ørsteds-Dal were seen in Fleming Dal ten days to a

fortnight later. It is therefore suggested that most of the geese breed in Fleming Dal, and that failed breeders, or non-breeders from there, move to Ørsteds-Dal to moult, joining with those birds already breeding or trying to breed there.

Large numbers of non-breeding Pinkfeet have been seen in Jameson Land in previous years, as well as in 1961. Pinkfoot goslings were found in lower Fleming Dal for the first time. It is believed by some people that Jameson Land is like Hochstetters Forland in North-East Greenland, where many of the non-breeding Pinkfeet have been discovered to be sexually immature (pre-breeders) by Alwin Pedersen, a member of Danish expeditions led by Dr. Lauge Koch.

Weights

All adult geese and a sample of goslings were weighed, using a spring balance sensitive to 1/10 lb. The range of weights of adult Barnacles was 3.3-5.3 lbs. (1.50-2.40 kg.) for 256 males and 3.0-4.9 lbs. (1.36-2.23 kg.) for 234 females. (The birds were sexed by cloacal examination). Table III gives the mean weights of adult Barnacles in lower Ørsteds-Dal and Fleming Dal with Enjørningens Dal.

Table III. Mean weights (in kg.) of flightless adult Barnacle Geese caught in Jameson Land, July-August, 1961. Sample sizes given in parentheses.

	Males	Females
Ørsteds-Dal 16th-20th July	1.93 (132)	1.70 (111)
Fleming Dal 31st July-4th August	2.10 (123)	1.84 (118)

Adult Barnacles in the two flocks caught on 16th July tended to weigh more than those caught on 18th-20th July. 18 Barnacles weighed as adults in 1955 were weighed on recapture and some showed weight changes as great as the differences in the mean weights for adults in the valleys in 1961. A full discussion of these results will be included in an account of the weights of Pinkfeet, Barnacles and Pale-bellied Brent in the Arctic which is in preparation.

The Barnacle goslings in Fleming Dal were larger than those in Enjørningens Dal. The parents of the latter goslings had probably laid their eggs not less than two weeks after most of the breeding adults caught in Fleming Dal for the first time on 1st and 4th August. The goslings caught in Ørsteds-Dal on 16th July had probably hatched at much the same time as those in Enjørningens Dal. Such a difference in laying and hatching dates could be of critical importance in breeding success. A. B. Hall is trying to find out whether any particular meteorological peculiarities of the spring and early summer of 1961 can be associated with the poor breeding success of Barnacles in Jameson Land.

Other birds seen

No species new to Jameson Land were seen.

RED-THROATED DIVER, *Colymbus stellatus*

Several pairs seen throughout the area. One pair had two young on a pool near the mouth of Mesters Vig on 16th August. These were seen again nearly fledged on 6th September. Six pairs were seen in one day in southern Jameson Land on pools near the shore of Hall Inlet.

LONG-TAILED DUCK, *Clangula hyemalis*

Females with young were seen in Ørsteds-Dal, seven young on 26th July, and Fleming Fjord, five and four young on 15th August. 16 females were seen in a flock in Ørsteds-Dal on 18th July and five in Fleming Fjord on 31st July. Moulting flocks were seen in Hall Inlet: 200, 100, 50 and 50 on 9th August and a further 50 on 10th August.

KING EIDER, *Somateria spectabilis*

Three females were seen in Ørsteds-Dal on 18th July. Moulting birds were seen in Hall Inlet, 12 on 8th August and a further 24 on 9th. Two females with eight half-grown young were observed in Mesters Vig on 24th August.

RED-BREASTED MERGANSER, *Mergus serrator schiøleri*

A single female was seen in Antarctic Havn on 13th July.

GYR FALCON, *Falco rusticolis*

A single adult, of the pale phase, was observed near the airfield on 25th August.

ROCK PTARMIGAN, *Lagopus mutus captus*

A female and three young just able to fly were surprised near the head of Flexurdal on 15th July. One of the young was caught and wing-tagged.

RINGED PLOVER, *Charadrius hiaticula hiaticula*

A very common breeding bird preferring the stony upper slopes of the valleys or the sandy and shingly shores of the fjords. Many juveniles were seen on the wing in August.

TURNSTONE, *Arenaria interpres*

Small parties, up to six, were seen in Ørsteds-Dal, southern Jameson Land and near the airfield. There was no evidence of breeding.

KNOT, *Charadrius canutus*

Four pairs were seen in upper Ørsteds-Dal on 29th July. One pair had two nearly fledged young, one of which was run-down and ringed, and a second pair had a single fledged young. All these birds were on the drier tundra slopes away from the marshy areas. Two adults were seen in southern Jameson Land on 8th August and a single bird near the airfield on 16th August.

DUNLIN, *Calidris alpina arctica*

A common breeding bird of the marshy areas of the main valleys and in southern Jameson Land. A flock of about 60 adults was feeding on the shore of Fleming Fjord on 2nd August. Some young were seen during August.

SANDERLING, *Crocethia alba*

Rather less common than Dunlin, but a few pairs present in all suitable marshy habitats. Flocks of 17 on 9th August and 41 on 10th August were seen in southern Jameson Land. At least two families of young were found in Ørsteds-Dal before the end of July.

LONG-TAILED SKUA, *Stercorarius longicaudus pallescens*

Parties of up to 29 were seen in Ørsteds-Dal in July and 27 on 6th August in Fegins Elv. Groups of four to ten were more usual. These birds probably took a heavy toll of juvenile waders in Ørsteds-Dal and Flexurdal during July. It was not a " Lemming year," which probably accounts for our failure to find evidence of breeding by skuas and the Snowy Owl. No skuas or gulls were seen in Fleming Dal and Enjørningens Dal.

ARTIC SKUA, *Stercorarius parasiticus*

Seen only in southern Jameson Land where there were single birds on 7th and 9th August and three on the 8th. All birds seen were adults of the pale phase.

GLAUCOUS GULL, *Larus hyperboreus*

Up to seven were seen in all the fjords visited. All were adults and there were no signs of breeding.

ARCTIC TERN, *Sterna macrura*

Up to eleven seen in Mesters Vig and twelve in Hall Inlet. A single downy young was being fed by its parents on a small rock in a pool beside Hall Inlet on 8th August.

SNOWY OWL, *Nyctea scandiaca*

Single birds only seen in Ørsteds-Dal, Rhætelv, Antarctic Dal and Enjørningens Dal. No evidence of breeding.

RAVEN, *Corvus corax principalis*

Single birds in Ørsteds-Dal and near the airfield, a pair of Mesters Vig at the end of August, and a pair and one juvenile beside Fleming Fjord from 13th to 16th August. A party of eleven was seen near the shore of Hall Inlet on 9th August.

WHEATEAR, *Oenanthe oenanthe leucorrhoa*

Pairs in Flexurdal and Alldays Dal in July. Females with three and two juveniles in Fegins Elv in early August and a family party of six beside Mesters Vig at the end of August.

ARCTIC REDPOLL, *Carduelis flammea hornemanni*

Single birds in Antarctic Dal and Henrik Møller's Dal in July. Family parties in Horsedal on 27th July, Alldays Dal on 31st August and in Antarctic Dal and near the airfield in early September.

SNOW BUNTING, *Plectrophenax nivalis*

Very common in narrow valleys and along the shores of fjords, but not in low-lying areas nor in southern Jameson Land. Flocks began to gather in late August and 100+ were seen together in Antarctic Dal on 3rd September and 150+ near the airfield on 8th September. Most family parties seen in August had two to four young.