

change was a decrease of 0.8mm. per month from October to August/September, i.e. 8-9mm. per year, this being about 5% of the total wing length.

Possible causes for the change are

1. Abrasion
2. Drying of the feather after growth
3. Physical and/or chemical changes to the feather structure
4. Stretching which would oppose the decrease.

Subjective judgement of the feather shape through the year suggests that not all could be accounted for by abrasion and some possible evidence for structural changes has been given by a few birds caught in November and January, these obviously having failed to moult. The feathers of these were rapidly abrading and disintegrating. In addition feather keratin is an extremely complex protein and there are suggestions that it may be capable of shrinking.

Not all data has yet been extracted for retraps after a moult period but what evidence there is suggests that feather length is regained and the wing lengths from corresponding months in different years are comparable.

In summary:-

1. Knot wing lengths decrease on average 8-9mm (5%) between moults.
2. This is fairly linear and it may be possible to correct the figure for the mean wing length of a catch to give the corresponding length for birds in fresh plumage.
3. The wing length is probably returned to its level of a year previously by the new feathers at moult.
4. Shortening is probably due to a combination of abrasion and shrinking, the latter possibly being due to drying and/or changes to the keratin structure.
5. It is important to process all controls and as many new birds as possible, particularly for the lesser-ringed species, so as to give data allowing possible correction.

I would be pleased to receive any information on retraps measured on both occasions of capture for any species, so that an attempt can be made to calculate corrections.

CAMBRIDGE ICELAND EXPEDITION 1971

by Guy Morrison

Following the success of the Cambridge/London Iceland Expedition last year, when over one thousand Knot were ringed on passage to and from their breeding grounds in Greenland, a further expedition, the Cambridge Iceland Expedition 1971, was organised this summer to continue the work, and, in particular, to extend it to other species of waders. Iceland was originally selected as a suitable location for catching, since the birds are found in large flocks and may be presumed to be part of the population breeding in Greenland: both ringing and measurements data may thus be particularly useful in separating populations of waders found in Britain in areas where birds from both the Greenland and Siberian breeding grounds may be present.

10 The personnel of the expedition were all members of the Wash Wader Ringing Group, which loaned two cannon net sets. Cannon netting has been found to be a most suitable technique for the coastal sites discovered in Iceland; mist netting is almost completely ruled out as there is no darkness in Iceland during the summer from mid-May onwards, though single-shelf mist nets set over tide wrack on beach sites were found to be of some use early in the expedition. The expedition was granted a research permit by the National Research Council of Iceland to carry out the work in consultation with Dr. Finnur Gudmundsson, Director of the Museum of Natural History, which supplied the rings.

The expedition was in Iceland from 7th May until 7th June and a total of 651 birds was caught during this time (Table 1), including 9 British control Knot (see Table 2). Data obtained on the expedition will be analysed fully in conjunction with that available in Britain, and it is hoped to publish a full report of the expedition within the next few months. The expedition was successful in catching further samples of Knot, allowing a fuller statistical analysis of measurement data to be made, as well as in extending the work to other species of waders, particularly Turnstone. A preliminary account of some of these results is given below.

Early reconnaissance established that flocks of up to several hundred Knot were common around the south west peninsula, and three days at Gardskagi resulted in 272 waders being caught. Netting was only semi-dependent on the tide, as the waders spent much of the day feeding on large beds of wrack on the beaches, and catches of 50-70 could be made with some regularity in this manner. Several days were then spent at Eyri in Hvalfjordur, where last year's large catch (885) was made, and where we had seen about 4-5,000 Knot arrive on 9th May. On the first anniversary of this catch, an extensive twinkling operation brought the birds in front of the nets, which were fired by a "volunteer" who had spent four hours a few yards away hidden under some covering material in the bottom of an old rowing boat. It was most disappointing that the nets did not extend fully and only eleven Knot were caught, though it was some consolation that one of these had been ringed on the expedition the previous summer!

The bay systems to the south and north of the Snaefells peninsula formed the most important areas for waders on passage, and the largest catch of Knot was made near Grundarfjordur where 5-10,000 Knot were in residence. A most exciting catch was engineered on a rather dark and wet night on the mud flats, and produced five British controls. A further 200 birds, including a Merlin and two Arctic Terns, were caught during return visits to Gardskagi and Stokkseyri on the south coast.

Data from catches throughout the expedition showed clearly how both Knot and Turnstone were rapidly putting on weight for further migration. The average weight of Knot catches at Gardskagi rose from about 165 grams to 208 grams over a two week period, the highest weight recorded being one of 229 grams! (Average weights of catches on the Wash in autumn are around 140grams). The average weight of Turnstone rose similarly from about 140 to 180 grams over the same period of time. Six Turnstones, ringed originally on 11th and 12th May, were retrapped on 25th May, and one of these had increased in weight from 115 to 180 grams!

Measurements of the 63 Dunlin caught indicated that two populations were present, corresponding to those notes in catches of adults and juveniles made in Iceland in August last year. Smaller catches of Ringed Plover and Purple Sandpiper were also made, and the measurements will serve as a basis for comparison with data obtained in Britain. Although a special effort was put into looking for and catching Sanderling, no flocks larger than about 30 were seen at any one time.

Having made the ornithological pilgrimage to Myvatn and examined the northern fjords for waders, we returned south on 1st. June. In the next few days favourable winds and good weather saw an almost complete exodus of passage waders, and a tour around the Snaefells peninsula on 5-6th June revealed a grand total of 2 Turnstone and a few Dunlin. We were interested to see several hundred Knot flying high in a 'V' formation "towards Greenland" on 31st May.

11 During catching operations, an extensive reconnaissance of the western fjords was made and considerable information has now been built up about suitable catching sites. A further expedition is being planned for next year to continue and extend the work. With over 1,200 Knot having been ringed in Iceland during the past two summers, and certain measurement data still needing clarification, further efforts to catch Knot in Britain during the autumn and winter will be of great value. Similar efforts to catch Turnstone should also prove rewarding, as this species will be one of the targets for the expedition next summer.

It can hardly be stressed how much the value of any wader caught will be increased if its wing, bill and weight are measured.

Further information about the expedition, and copies of the Report of the Cambridge/Iceland Expedition in 1970 (price 60p including postage; Report includes all processing data) may be obtained from R.I.G. Morrison at the address shown below.

TABLE 1 TOTALS OF BIRDS CAUGHT ON THE CAMBRIDGE ICELAND EXPEDITION 1971.

<u>Species</u>	<u>Newly ringed</u>	<u>Retraps</u>	<u>Controls</u>	<u>Total</u>
Merlin	1	-	-	1
Ringed Plover	24	-	-	24
Turnstone	288	9	-	297
Redshank	2	-	-	2
Knot	201	-	10	211
Purple Sandpiper	38	-	-	38
Dunlin	63	-	-	63
Sanderling	13	-	-	13
Arctic Tern	2	-	-	2
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TABLE 2 DETAILS OF KNOT CONTROLLED IN ICELAND IN SPRING 1971

Juv	6.9.63	Dawsmere, Wash	c	Midnes	11.5.71
PJ	23.11.68	Hilbre, Dee	c	Grundarfjordur	19.5.71
PJ	16.4.69	Hest Bank, Morecambe	c	Grundarfjordur	19.5.71
Ad	10.1.70	Heacham, Wash	c	Stokkseyri	23.5.71
Ad	21.2.70	Bardsea, Morecambe	c	Grundarfjordur	19.5.71
Ad	7.3.70	Heacham, Wash	c	Grundarfjordur	19.5.71
Ad	7.3.70	Heacham, Wash	c	Gardskagi	25.5.71
Ad	2.1.71	Point of Air, Dee	c	Grundarfjordur	19.5.71
Ad	11.1.71	Aldingham, Morecambe	c	Midnes	11.5.71
Ad	15.5.70	Hvaleyn, Hvalfjordur	c	Eyri, Hvalfjordur	15.5.71

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