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Barnacle Geese in Ireland

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THE Irish population of Barnacle Geese *Branta leucopsis* is concentrated on islands off the coasts of Donegal, Sligo, Mayo, Galway and Clare. The total number of birds wintering in Ireland is between 4,000-4,500 (*Irish Bird Report*, 1961) and has remained relatively stable around this level since the survey covering the period 1946-56 which gave an estimate of 4,470-4,650 (Ruttledge & Hall Watt, 1958). The remainder of the Barnacles breeding in Greenland, some 12,000, winter on islands off the west coast of Scotland (Boyd, 1961).

By far the most important wintering area in Ireland is the Iniskea Islands, Co. Mayo, which holds over half the total Irish population (Cabot, 1962a). Here the geese are relatively undisturbed and are supported by grasses growing in the *Plantago* sward covering the islands which is characteristic of extremely exposed situations on the west coast of Ireland (Praeger, 1934). There is ample grazing provided by about 800 acres of sward. With the present population of 2,500 birds this allows three geese per acre. However, there is grazing competition from a wintering stock of cattle and sheep. In most winters there are about 30 head of cattle and 30 sheep on the islands. Rabbits are few and are not significant competitors. Geese have been visiting the islands in increasing numbers since the remaining islanders were evacuated by the Irish Government in 1932 following an unfortunate drowning disaster.

During 1961 and 1962 I visited these uninhabited islands to study the Barnacle Geese. In 1961 Michael Greer-Walker and I were resident on the islands from 19th March to 22nd April. The object of the visit was to count the geese, which had never been critically examined before. The Barnacle Goose population on the islands during this period was 2,300 ± 100 birds.

We were able to witness the departure of the bulk of the population towards the end of April. A few days before departure there was considerable restless flying around the islands and on the day of departure many of the geese had started to utter excited, higher pitched calls, somewhat resembling

the shrick of the White-fronted Goose *Anser albifrons*. A large flock of about 500 was seen leaving to the north, low over the water at 1600 hrs. on 18th April. The wind was south-east, force 2-3, with excellent visibility. The bulk of the geese departed two days later, on 20th April, with a south wind, force 3, excellent visibility.

The purpose of the 1962 expedition was to examine the geese for coloured neck bands and rings put on the geese in East Greenland by an expedition to Jameson Land in 1961 (Marris & Ogilvie, 1962). This expedition ringed a total of 450 adult and 119 juvenile Barnacle Geese in July and August. All the birds caught were given numbered aluminium rings, coloured plastic rings and P.V.C. neck bands of three different colours (31 birds were not given neck bands). The purpose of the neck bands was to aid field identification in winter haunts and to distinguish the different breeding stocks in Jameson Land. There had been one other Barnacle-ringing expedition to Greenland led by Dr. Marris in 1955, when 299 geese were ringed.

In 1962 I was resident on the islands from 10th to 18th March watching the geese more or less all day long. At this time the total population of geese was 2,500 birds. As many as possible of the birds were examined for coloured neckbands, rings, juveniles (1st winter birds), and family parties. Numerous samples were taken from all over the islands throughout the week. Some of the observations were overlapping, as the birds were continually moving around the islands.

a) *Coloured neck bands.* 273 yellow, 250 red, and 48 green neck bands were put on the geese in Greenland. Only yellow and red bands were seen on the islands. It was immediately obvious that many of the geese had lost their bands: birds wearing a spiral red ring on the right leg with a numbered aluminium on the left were seen on several occasions. In Greenland these had also been given green neck bands. At least six different yellow neck bands were seen and at least two red. There was no evidence to suggest that the neck bands were upsetting the geese in any way. Geese from the different ringing localities in Greenland (all quite close together) were evidently wintering together with free mixing and not remaining in discrete wintering areas.

b) *Ringed birds.* 34 samples including 4,821 birds were taken at different points on the islands during the week. The total number of ringed birds seen was 92, or 1.91%. One bird was wearing a much worn spiral orange ring on the left leg without an aluminium ring. This was probably a survivor of the geese marked by the 1955 Greenland expedition, which used rings of this type and colour.

c) *1st winter birds.* 1961 was a poor breeding season for Barnacle Geese in Jameson Land (Marris & Ogilvie, 1962). There were only 144 juveniles in 1650 (8.73%) geese examined in nine flocks in Greenland. Seven months later on Iniskea only 116 1st winter birds were found in 28 samples totalling 2125 geese (7.81%). This gives some indication of the relative mortality of young and old geese between the end of the breeding season in Greenland and almost the end of the wintering period in Ireland. Other samples from different localities in Ireland earlier in the winter gave higher proportions: 12.4% (14/133) at Lissadell, Co. Sligo, and 12.8% (6/47) on North Slob, Co. Wexford, but the numbers sampled were so small that the discrepancies are not necessarily important. On Islay in western Scotland (where the Barnacles are

also of Greenland stock) the proportion of 1st winter birds was 10.7% in early November 1961. This apparently poor breeding season in Greenland in 1961 was not paralleled in Spitsbergen or Siberia. There were 22.3% first-winter birds in flocks on the Solway Firth (Spitsbergen stock) and 25.5% in Holland (Siberian stock).

d) *Family parties*. Twelve different family parties were observed in which the brood size ranged from one to four young, with an average of 2.6.

Other observations on the geese. Most of the Barnacle Geese started to feed at the first light of dawn continuing throughout the day with little rest until dusk. Fast grazing flocks were composed of adults only while the family parties tended to stay together and grazed with less speed by themselves.

A Brent Goose *Branta b. hrota* was present on the islands grazing with the Barnacles all day long and was never seen in the water. A Pink-footed Goose *Anser brachyrhynchus* was also seen. This is a rare goose in the west of Ireland and this was the first certain record for Mayo. Both these vagrants were photographed in the course of filming the Barnacle Geese. The geese on the Iniskee Islands will be the subject of an intensive study conducted by myself over the next six years.

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