



BARNACLE GEESE IN WESTERN SCOTLAND, FEBRUARY 1957

by Hugh Boyd and John Radford

THE present status of the Barnacle Goose (*Branta leucopsis*) is of particular interest, because this species, of which a large proportion winter in the British Isles, seems to have decreased seriously in numbers during this century. But it has hitherto been impossible to attempt a census of the wintering population, because this is scattered over a large number of islands off the coasts of Ireland and the west of Scotland, and frequents only a few mainland localities (although the flocks found on the mainland are comparatively large ones). For a census to be reliable it must be complete and accurate. To be complete it must include counts from all the regular wintering places and from many other places which may be visited fairly frequently, and these counts must be as nearly simultaneous as possible. The problems of accuracy in determining the numbers of this species are of two kinds. On most of the islands where the geese occur they are found very close to the shore and their numbers are relatively small—a few hundred at most. In these situations the requirement is that the search should be thorough, the process of counting being uncomplicated, except for the possibility that geese may fly unobserved from one island to another. The second kind of problem arises only in those few places where large flocks, perhaps several thousand strong, occur and are liable to be scattered over a wide area, sometimes a considerable distance inland from the shore. This is the situation on Islay and on the shores of the Solway Firth.

In order to discover whether the use of an aircraft for making a census of the Barnacle Goose was practicable, the writers spent the period 11–24 February 1957 in searching parts of the mainland coast of the west of Scotland and most of the Inner and Outer Hebrides. The areas to be examined were chosen beforehand from all the reports available on the detailed distribution of the species, and included, in addition, many islands which might have held Barnacles although not known to do so. In the event, only one locality known to be a regular wintering place of the species in Scotland could not be visited. The completeness of the 'cover' achieved was a pleasant surprise, in view of the potential hazards of flying in this area in winter. The weather may have been unusually kind.

The map (Fig. 1) shows all the places where Barnacle Geese were found during the trip. The total numbers found in various areas are summarised in Table I and detailed below. This account is not intended to be a full discussion of the historical data on numbers and distribution, although it makes use of earlier published and unpublished information where this seems desirable.

TABLE I

A Summary of the number of Barnacle Geese seen in the West of Scotland, 11-24 February 1957. For those localities visited more than once, the largest daily totals are shown

Area	Maximum Number Seen
Solway	430
Argyll (except Islay)	1040
Islay	1720
Islands off Skye and Inverness	550
Islands off Wester Ross	120
Islands off West Sutherland	170
Outer Hebrides	2070
Total	6100

The main sources so used are *The Birds of Scotland*, by Miss E. V. Baxter and Miss L. J. Rintoul (1952), *The Status and Distribution of Wild Geese and Wild Duck in Scotland*, by Dr John Berry (1939), an unpublished report prepared for the Nature Conservancy by Dr J. D. Lockie in 1955, and counts submitted by participants in the Wildfowl Counts scheme.

GEESE SEEN

Localities are listed by counties excepted for the Outer Hebridean islands, which are treated together and from south to north.

CUMBERLAND. *Rockcliffe Marsh*: 130 on 11 February, 33 on 24 February. *Burgh Marsh*: 300 on 11 February, none on 23rd or 24th. *Moricambe Bay*: none 24 February.

DUMFRIES. *Caerlaverock Merse*: None 11 February, 90 on 23rd, none 24th. Searches on the ground on 21 and 24 February, by Mr Alan Walker, yielded only one Barnacle in this area, in a flock of Pinkfeet.

KIRKCUDBRIGHT. *River Nith to River Urr*: None on 11 or 24 February.

The areas mentioned above include all the regular haunts of the Barnacle on the Solway. The highest number reported from the Solway during the winter of 1956-57 was about 800, in late November and late January, largely concentrated in Kirkcudbright on both occasions. In other seasons since the war recorded seasonal maxima have varied between 300 (1950-51) and 1500 (1954-55). It is difficult at present to be sure how far changes in recorded numbers in restricted areas have been due to movements within the Solway area as a whole (as local opinion has it), or whether emigrations and immigrations during the course of the winter may be more frequent than is generally supposed. One hundred and fifty were found (from the ground) in Dumfries on 23 March 1957, despite the apparent exodus in February.

ARGYLL. *East Side of Sound of Jura*: 35 on 12 February. Up to 120 had been seen in this area in the winter of 1955-56, but no other reports for 1956-57 are available.

Islay: 1150 on 12 February, 1720 on the 22nd. On both occasions the largest flocks were to the south of Loch Gruinart (750 and 920 respectively). On the first date geese were found in four other localities, on the second in only three.

These figures are undoubtedly the most controversial obtained during the survey, because they are substantially smaller than expected. In late January 1955, Mr A. B. Duncan and Professor G. A. Swanson saw 8000–10,000 on this island, and had another 2000–4000 reported to them. And though it seems likely that the concentration at the time of their visit was exceptional, the weather on Islay being less severe than in most of their other haunts, it is probable that in most years there are at some time at least 3000. However, it must be remembered that the total recorded by the aerial survey is a count made in the several separated areas within two hours, whereas all other totals known to the writers are compiled from observations spread over several days or, in some cases, several weeks. Since much shifting about occurs and since most recorders seem to have added together maximum counts from the different localities in order to estimate the island population, it is easy for such estimates to be too large. All the recorded localities on the island were examined from the air, and two of the areas where Barnacles were found had not been recorded previously (though presumably known to some local inhabitants).

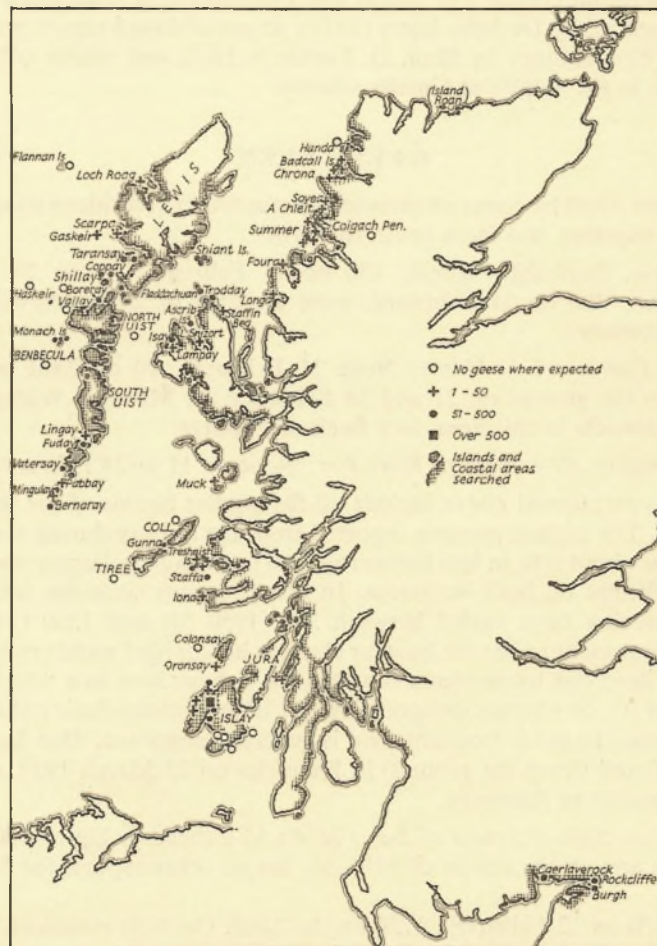


Fig. 1. Distribution of Barnacle Geese in February 1957

Jura: 38, Eilean nan Coinean, 12 February.

Oronsay: 16 on 22 February.

Colonsay: None 22 February. Mr Malcolm Clark had seen up to 76 by the end of December 1956, but could make no counts from the ground in February 1957. On 12 February 1956 the same observer saw 232. The sites suitable for Barnacles on this island are small, and it is unlikely that flocks of over 200 would remain for long.

Iona: Five flying over the cathedral, 22 February. This island is not regarded as a regular haunt of the species.

Staffa: 60 on 22 February.

Treshnish Isles: 106 on 13 February, 257 on 22nd. On the first visit there were 42 on Lunga, 2 on Fladda and 62 on Cairn a'burgh More. On the second there were 64 on Lunga, 150 on Bac Mor, 38 on Sgeir a Claitich and 5 on Cairn a'burgh Beg.

Tiree: None on 13 or 21 February. Earlier in the winter a small flock (82 the most seen) was reported roosting on Soa, in Gott Bay, and 5 were present there as late as 3 March 1957 (F/Sgt G. E. Bennett).

Gunna: 300 on 13th, 420 on 21 February. Gunna has been reported as primarily a roost for Barnacles feeding on Coll, but the two aerial inspections were made in the early and late afternoon and each time the geese were feeding on Gunna and Coll was deserted.

INVERNESS. *Muck*: 19, Eilean nan Each, 21 February.

Small islands around Skye: 130, Isay Island, 20 February; 21, Lampay, 20 February; 175, Ascrib Islands, 21 February; 18 on islets in south-east Loch Snizort, 21 February; 37, Staffin Beg, 18 February; 85, Trodday, 18 February; 60 on Fladdachuan, 18 February. Most of the suitable islands seemed to be carrying numbers as high as could be expected if the geese stay there for any considerable period.

ROSS. *Mainland*: None on the Coigach peninsula, where flocks of up to fifty are reported to occur several times a year.

Longa: 38. *Foura*: 21. *Summer Islands*: 95. (All visited 18 February.)

SUTHERLAND. *Islands off west coast*: 173, scattered on seven islands, 18 February. None on Handa, the largest island with suitable grazing for Barnacles, but they may have been recently disturbed.

Island Roan, in the Kyle of Tongue, could not be visited. It is reported to carry a wintering population of 400-500 (D. Murray).

OUTER HEBRIDES. *Berneray*: 85. *Mingulay*: 32. *Pabbay*: 42. *Vatersay*: 64. *Fuday*: 210. *Lingay*: 28. (All visited 21 February.)

South Uist: 200 west of Loch Bee, 21 February. None seen elsewhere, or on *North Uist* or *Benbecula* (14-21 February). The one flock found was on much the most suitable-looking area on any of the three islands.

Monach Islands: 190 on Ceann Iar, 140 on Stockay, 14 February. We were told on Benbecula that there were 'thousands'. 2000-2500 early in 1955 (Colonel H. J. Cator) must have been quite exceptional. The islands are too small to support a population of thousands for any length of time.

Islands in Sound of Harris: 240 on Shillay, 250 on Coppay, 14 February; none on the rest of the group (including Haskeir).

Taransay: 192, 14 February. *Gaskeir*: 41 on 14 February, none on 19th. *Scarpa*: 9 on 14 February.

Shiant Islands: 313, 18 February (78 Garbh Eilean, 125 Eilean an Tighe, 110

Eilean Mhuire). There are many sheep on the islands, and it is unlikely that the group could carry a substantially larger population of geese.

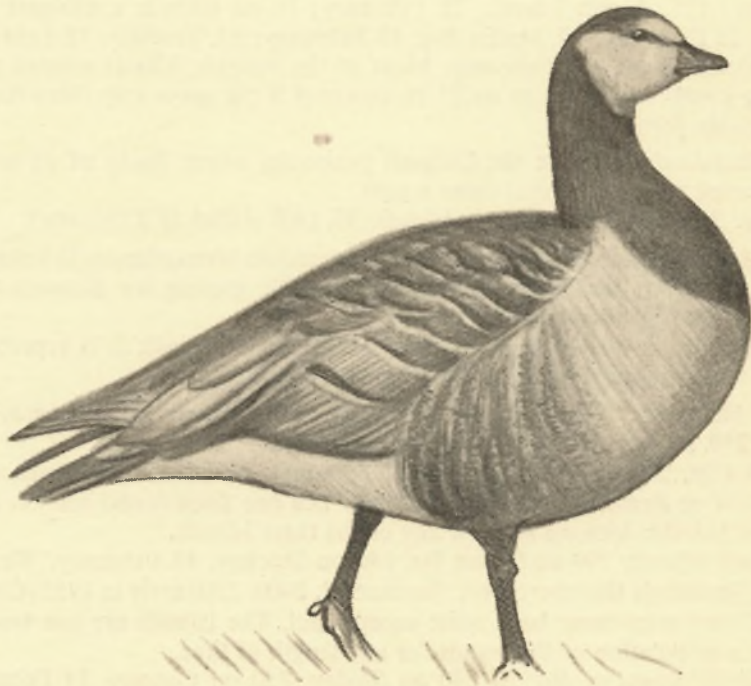
Lewis: 37 on Shiarum Mhor in Loch Roag, 14 February, were the only Barnacles seen. Very few places on the main island offer suitable conditions.

Flannan Island: None, 19 February. The vegetation looked unfavourable, and the islands are so small and exposed that they are unlikely to be a regular haunt.

The *St Kilda* group and *North Rona* were not visited. So far as is known they do not support wintering flocks of geese.

CONCLUSION

The nearly complete cover achieved by this survey within the limits set suggests that a census of the total wintering population might be achieved, although the exploration of the islands off the north-west coast of Ireland, an essential part of a census, could only be attempted with safety in very favourable weather. Even with continuous good flying weather a survey of all the important localities in Scotland and Ireland could scarcely be achieved in under ten days. Though this falls short of the ideal of simultaneous counts in all areas, an aerial survey offers much the best prospect of accurately assessing the numbers of Barnacle Geese.



Barnacle Goose