

Capture of moulting Canada Geese in the Beaully Firth

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Summary

39 of a flock of 153 flightless Canada Geese were caught near Lentrán, Inverness-shire on 3rd and 8th July, 1963. The catching procedures are described. Two of the geese had been ringed as juveniles at Ripley, Yorkshire, 260 SSE, in 1959 and 1962. Four more have been recovered in Yorkshire in October and in December, 1963. This is the first evidence of 'moult migration' by Canada Geese in Great Britain. The average weight of 12 geese was 4.65 kg. (10½ lbs.), and the average length of the exposed culmen of 21 geese was 53.1 mm., values closely resembling those from a sample of geese caught in Derbyshire in 1957.

In recent years a flock of Canada Geese (*Branta canadensis* (L.)) has visited the western end of the Beaully Firth, Inverness-shire, off Lentrán, arriving in June or July and leaving again in the early autumn. There have usually been over a hundred birds. I decided that they were probably non-breeders and that they came to the Firth to undergo their annual wing-moult. I was also fairly certain that there was no unknown breeding population in northern Scotland large enough to account for an influx of this size, so that it would be of considerable interest to catch and mark as many of the geese as possible in order to discover where they were at other times of year.

In the late summer of 1962 I had watched the Canada Goose flocks and noted that they frequently chose to spend their time at the entrance to the Moniack Burn (this and other points to be mentioned are shown on the accompanying sketch map). I decided that the best plan for catching geese would be to erect a V-shaped pen of wire-netting a mile down this stream at one low tide and then drive the flightless geese down the stream into the funnel at the next low tide.

In 1963 I first looked for the geese on 12th June, finding none then nor on the following day. When I returned from Sutherland on the afternoon of 21st June there were three flocks, of 66, 49 and 11, swimming between Lentrán Point and Phopachy. I was able to look at them again on the afternoon of 24th June, when high tide was at 3.30 p.m. There were 145 resting on a point of land sticking out into the water. Stalking close to them behind the sea-wall, and using a good telescope, I could see that about two-thirds of the flock had moulted their flight feathers. Some had odd feathers sticking out of the wings and as they flapped feathers fell out. The birds which had moulted could be picked out in the flock by the amount of white under-tail coverts which could be seen. Those that had not moulted appeared black-sterned, because their old flight feathers hid the white coverts. As soon as the tide started to fall the geese moved with it. The tide

runs out very rapidly over the shallows; if the tide line got ahead of them, the geese made a mad dash to get back into the water. They followed the tide line down to the low water mark. After they had gone we went out to the point where they had been resting and found lots of flight feathers, and also flushed two Greylags (*Anser anser* (L.)), probably pricked birds.

At my next visit, on 30th June, there were 153 Canada Geese, all apparently flightless. We also saw two Greylags, two Pink-footed Geese (*A. brachyrhynchus* Baillon) four Whooper Swans (*Cygnus cygnus* (L.)) and several hundred Shelduck (*Tadorna tadorna* (L.)).

I decided that Wednesday, 3rd July, would be a suitable day to try a round-up. High tide was to be at 10.30 a.m. which would give us all day to catch them. By this stage my plan of campaign had changed. I thought we needed eight to ten people and at least two boats. I planned to take the boats up from Inverness and shepherd the goose flock into the bay at Moniack Burn at high tide, keeping them there with the help of people wading out at Lentrán Point and to the west of the burn. When the tide had fallen the boats could be anchored, a netting pen erected on the burn and the geese driven seawards into the enclosure.

Four of us made a final reconnaissance at low tide on the afternoon of 2nd July. We found the four Whoopers. All were partly moulted and we just failed to catch three of them. The fourth when finally cornered proved to be an adult female (Z 10603) which I had ringed at Bunchrew on 11th December, 1962. One of its wings seemed to be damaged at the carpal joint. We surveyed the area. The part unshaded on the map is sand, suitable for running over. The shaded area is mud, very hard work to walk over, but it will always bear people. This mud is covered with *Zostera angustifolia* (= *hornemanniana*) in plenty and also with *Z. noltii* (= *nana*) and *Salicornia*, making ideal feeding for the geese. The area is cut by small channels and it is easier to walk in the bottoms of the streams.

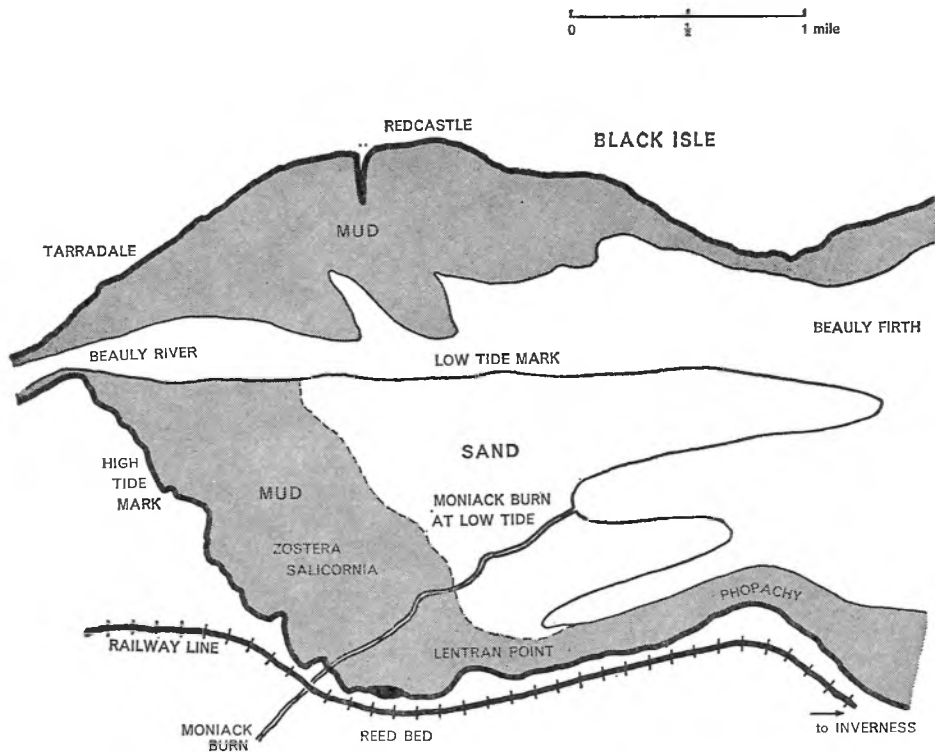


Figure 1. The Beaully Firth. The moulting Canada Geese live in the vicinity of the Moniack Burn.

About two hours after high tide it is possible to walk out from Lentrán Point, though in some places the water is up to your waist. Saltings fringe this area and there is a thick reed bed east of the burn which we found full of moulting drake Mallard (*Anas platyrhynchos* (L.)). We caught one and ringed it.

We tried to borrow two boats with out-board motors but all we could get was a highly unstable but light fibre-glass pram dinghy. After this setback I thought we had no chance of getting the Canadas. But our plans were made so I decided to carry on with this dinghy and one of Dick Fursman's canoes.

Wednesday, 3rd July was a miserable day, wind east force 2-3, cold and foggy. Five of us met at the Lentrán lay-by: Dick Fursman, Douglas Weir, Charles Cowper, Jean Spriggs and myself. We took several rolls of wire-netting with us, some rope, rings and various other tools. To our amazement, the 133 geese were in an ideal position, all feeding along the shore between Lentrán Point and Phopachy. High tide was at 10.30 a.m., so I decided to start the drive at noon. In the meantime we tried to drive some ducks out of the reed bed but only caught one. The reeds were

too thick and it was impossible to find the ducks when they hid. The geese continued to feed off Lentrán Point so I launched the dinghy just west of Phopachy by taking it over the railway line. I rowed out into the firth and let the wind and the waves take me towards the geese. They drove very well and went towards the bay. By this time the tide was going down rapidly and people from the shore ran out and cut off their retreat. After much herding, in which they tried to escape by running across the flats to the west, we managed to cut them off. To my amazement they flocked up and went up the stream – ideal – but then we made our mistake. I was still uncertain how close they would let us get before panicking, so I let them rest in the stream at a distance of 400 yards, with us ringed to the seaward side of them. We moved the netting out on to the mud and detoured to drive them into it – instead everything went wrong – the whole flock went up Moniack Burn and hid, some of them even going on up and hiding in the fields of corn. We trapped about twenty by netting this stream and driving them down under the railway bridge. This operation had taken a considerable time and it was decided that we would have to go and get the boat off the

mud because the tide was turning. It was now that we were glad that we did not have two outboard motor boats because two of us had to carry the light! fibre-glass dinghy three-quarters of a mile across the mud flats to the car. We returned to ring the geese. On our way we found that twenty more had been herded into a corner of a field by some inquisitive bullocks. But once we appeared the geese panicked and ran off into the ditches and fields.

We finally ringed seventeen and had two already ringed (137791 and 5011462). The weather conditions were fearful, pouring rain and cold, and all of us were soaked in sea water up to our chests. I found it impossible to sex the geese properly in these conditions because my hands were so cold, the rings were tricky to put on and the method of sticking them in sequence with sellotape was hopeless, because it got wet and the rings fell out of order. While ringing we found that the flimsy fencing we had made was not strong enough because the geese all panicked at once and some escaped by climbing over the backs of the others. We finished at 8 p.m. and all of us were soaked and exhausted. All the geese except a small flock of six were completely moulted and they were excellent at running, hiding and diving underwater.

After this episode, I decided to make a few adjustments to my catching plan and to try another round-up on Monday, 8th July. Our needs were: (1) only the one boat, but it must have two or three people in it, one to look after the boat; (2) more people to keep the geese in one flock; (3) to build a solid enclosure before the drive; (4) to keep some people hidden behind the railway embankment ready to stop the geese going into the reeds and fields. I decided to build the enclosure in the Moniack Burn, just inside the saltings, where the steep banks of the burn would act as sides.

I returned to the area at noon on Sunday, 7th July and found about 130 Canadas feeding in flocks one mile north of Lentrán Point.

Monday, 8th, was again cold, with some drizzle and low cloud and unfortunately the wind was west 2-3. High tide was at 2.30 p.m. We started out at 3 p.m., built the trap in the burn and left Dick Fursman, Tim Woods, Jean Spriggs and Daphne Corr spaced out along the saltings. But the geese were on the edge of the saltings well to the west and they started to move north. Derek Mills, David Payne and John Mitchell went to Lentrán Point ready to cut off the geese. Douglas Weir took myself, Billy Muir, Nicholas Brown and Norman Storie to Wester Lovat farm which is about one

mile up the Beauy River on the south bank. We launched the boat and rowed downstream, whilst Nicholas and Norman walked along the sea wall, keeping pace with us. We rounded the point of the Beauy River. The Greylags, Pinkfeet and Whoopers were on the point of the saltings. We found the Canadas just offshore and they swam very quickly south. Unfortunately the two people on the shore found the going too difficult and they could not keep up with the flock, whilst we in the boat found ourselves being blown out to sea. The geese actually cut the corner at Lentrán and I only just overtook them midway between Lentrán and Phopachy. I disembarked Billy and, with the shore group, we moved them up towards Moniack Bay; but I found it very difficult to row against wind and tide. Once I had crossed the channel off Lentrán Point, I was able to get out of the boat into two feet of water. By running and towing the boat behind me, I managed to cut them off once more and turned them into the Moniack Burn. Once here they moved upstream quite well but suddenly a group of them broke away and ran off to the north. The two people were so tired after walking from Wester Lovat that they were unable to stop this escape. Unfortunately many of the geese had their flight feathers half grown which, although they could not fly, enabled them to flap across the mud at a good speed. We herded up what was left and finally drove 22 into the Moniack trap. Some of them hid in the saltings and some even tried to hide on the open mud flats. Body, neck and head laid flat along the mud made them look quite like a large boulder.

Once more by the time we had them into the trap we were all so wet and cold that we found it hard work to ring and examine them. We weighed twelve birds but we found that the wet sack was a bit hard on their plumage. We measured length of bill from feathers of all of them. Two of them had been ringed the previous trip. As we finished with each one, I dyed its chin and cheeks with purple dye, and then put it back with the rest in the pen. We released them in a herd and they all ran off out to sea. We dismantled the trap and took it back to the car; then we carried the boat across the mud flats to Lentrán Point, where we loaded it into the Land-Rover.

I was next in the area on 18th July and by this time most of the flock of 140 were sitting up on the saltings at the entrance to the Beauy River. As the tide went out they never bothered to follow it, so they must have been flying again. Thus the length of the flightless period must have been less than thirty days.

Measurements of moulting full-grown Canada Geese

	weight (kg.)			bill, from feathers (mm.)		
	number measured	mean	range	number measured	mean	range
Beaulf Firth, 8 July, 1963						
females	5	4.36	3.9-4.8	5	51.4	49-55
not sexed	7	4.86	4.5-5.3	16	53.7	45-59
Derbyshire, 21 June, 1957						
males	36	4.88	4.17-5.41	36	56.5	50-63
females	36	4.39	3.67-4.95	41	53.7	49-58

Weights and bill measurements

Few measurements of British Canada Geese appear to have been published, so that it seems worth recording those of the small number of birds we were able to study, even though the sex of most of them was not successfully determined. Hugh Boyd has provided some comparative data from flightless geese caught at Osmaston, Derbyshire, on 21st June, 1957.

James Fisher (*Bird Recognition* vol. 2, p. 104, 1951) quotes weights for males of 6½ to 13½ lbs., average 8½, and for females of 5½ to 13 lbs., average 7 lbs. The corresponding metric equivalents are males 2.84-6.12 kg., average 3.85; females 2.38-5.90 kg., average 3.18. The source of Fisher's material is not stated. If all British, it is exceptionally variable, so that the considerable differences between his mean weights and ours are of uncertain significance.

The two samples do not differ importantly in the lengths of the bill (exposed culmen), either from each other or from a small number of eastern North American *B. c. canadensis* measured by J. W. Aldrich (*Wilson Bulletin* 58: 94-103, 1946), for which the means and ranges were 56 (53-58) for males and 53.9 (51.5-56.5) for females.

Recoveries

The combined catch, of 39 individuals in all, has already produced valuable results. 137791 and 5011462, caught by us at Lentrán on 3rd July, had both been ringed as juveniles at Ripley, near Harrogate, York-

shire, the former on 30th June, 1959 and the latter on 30th June, 1962. The remains of 137791 (with ringed 5002852 added by us) were later found at the Bay of Nigg, near Aberdeen, on 5th October 1963. Lentrán is about 260 miles NNW of Ripley, and the Bay of Nigg is 86 miles ESE of Lentrán.

5002856 and 5002865, ringed at Lentrán on 3rd July, were both shot at Little Ribston, near Wetherby, Yorkshire in October 1963 (on or about 8th, and on 2nd respectively). Little Ribston is about 270 miles SSE of Lentrán and 8 miles SE of Ripley. 5002854 and 5002860, ringed at the same time, were both shot on 26th December, 1963 at Flaxby, near Knaresborough, 265 miles SE of Lentrán.

Thus the supposition that the geese moulting on the Beaulf Firth are not solely of local origin has now been proved, by the demonstration of journeys from Yorkshire and back to it. How regular this moulting-migration may be and whether geese from other areas are involved remains to be found out. Many Canada Geese moult at or near Ripley so that not all the geese from there move to the Beaulf Firth. Moreover, the capture of a four-year-old bird at Lentrán shows that the moulting flock did not consist only of pre-breeders but contained some mature birds, though presumably none that had bred successfully in 1963.

It is to be hoped that further attempts to catch Canada Geese can be made on the Beaulf Firth, which should profit by the experience gained in 1963.