

THE HEN HARRIER ON BUTE

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McWilliam in his "The Birds of Bute" (1927) states "The Hen Harrier occurs very rarely on Bute. Mr Malcolm McKellar, the gamekeeper at Quien showed me the spot near his house where he killed two about 1918. The Hen Harrier has bred till recent years in Arran and if it were not shot down it might again establish itself in the neighbourhood of Bute. It still breeds in several parts of Scotland. Mr Alex. Fraser has informed me that though it has not bred in Arran for about fifteen years, it still occurs occasionally in Winter. Gray (Arran 1872) stated that at that time, 'Several nests were found each year in Arran.'"

Like most birds of prey, the Hen Harrier was prevented from breeding only by the keen attentions of the gamekeepers. However, the two World Wars saw a relaxation of this pressure, with the result that many populations began to increase and expand from then on. My first personal record of possible breeding on Bute was on 10.7.69, when I saw a pair with young on the wing at the north end of the Island. This is apparently the first recorded evidence of breeding for the Island (T.B.N.H.S. 17:106) but no doubt there were earlier attempts. Mr James Robertson tells me that his father, who was the shepherd at Glenmore from 1950-1972, was paid £1 per year for reporting any nests of game birds or predators he found on his patch. Apparently this included the occasional Hen Harrier.

I did not find my first actual nest on the Island until 17.6.76, when I found one with three eggs at the north end. The Hen Harrier is a bird of open country, mainly heather moors, and nests on the ground in rank vegetation, mainly heather.

Since 1976, I have found a total of thirty nine nests, broken down as follows:-

1976 - 1	1981 - 4
1977 - 1	1982 - 6
1978 - 1	1983 - 8
1979 - 2	1984 - 6
1980 - 4	1985 - 6

The apparent increase over the years is due probably more to an increase in effort and experience on my part, rather than an actual increase in the population. All the nests were found at the north end

of the Island, and although I may have missed the odd pair or two, I feel that six to eight pairs represent the average number that the ground could carry due to the gradual reduction of nesting habitat. There may be a pair or two more at the south end of the Island, but I have no records of any.

I do not concentrate on nest finding until the chicks are a week or so old, as I find it easier to locate the nests at this stage. The female does all the incubating and sits very tight, often allowing one to walk within a yard or two without taking flight. For this reason, I cannot state how many eggs were laid in each nest because eggs which do not hatch are often broken or disappear. The largest clutch I have seen consisted of 5 eggs. By extrapolating from the number of eggs and young seen in the nest, I get a **minimum** average clutch size of 3.52 for Bute. This compares with a mean of 4.8 for South West Scotland (Watson 1980). From a minimum of 136 eggs 106 hatched giving a **maximum** hatching rate of 79% which compares with 57% in Watson's study. Although I did not visit every nest to check on fledging success, most chicks were well grown when last seen and I have no reason to suppose they didn't all fledge. This gives a figure of 2.83 young fledged per successful nest which compares very well with Watson's figure of 2.85.

Young Hen Harriers can be sexed at time of ringing, mainly on iris colour and leg thickness. Of the 80 chicks I have ringed, 36 were males and 44 were females. Watson's figures were 22 and 37 respectively.

Although from this study it would appear that the Hen Harriers on Bute are doing extremely well, I hasten to add that the annual mortality rate for birds in their first year is 61% and 27% in subsequent years. Of 39 breeding pairs, I know of only 3 pairs which definitely failed, all were this year (1985) and probably due in part to the very wet summer.

It is quite normal for the odd egg or two in a clutch not to hatch and I have collected some of these under licence and sent them to the Institute of Terrestrial Ecology for analysis. The results are as follows:-

	Parts per Million Wet Weight			Dry Weight	
	DDE	Dieldrin	PCB's	Mercury	
Egg 1(1976)	1.3	0.04	1.4		
2(1978)	1.6(94)	0.03(2)	0.8(49)		
3(1981)	1.25	0.12	7.94	0.65	
4(1981)	0.60	Nil	0.01	0.41	

These residues are considered "normal" in most birds of prey nowadays. It is, however, worth mentioning that the figures in brackets for the egg taken in 1978 are parts per million in fat and the figure for the DDE was six times higher than the highest of a sample of 14 eggs from Orkney the same year and the highest ever recorded at that time.

That is not to say these pesticides were picked up on Bute, as the Hen Harrier does range quite far afield particularly in winter. Young birds usually travel furthest. Of the 80 young ringed on Bute, two have been recovered, one from near Cupar in Fife, a distance of 141 kms., seven months later. The other was from Ille-et-Vilaine, France, a distance of 921 kms., nine months later. This was the 3rd British record of a bird found in France.

On average, most nests in Bute have been about one mile apart. The two closest nests were only about 300 yards apart although separated by a series of ridges. Most pairs return roughly to the same vicinity each year although the actual nest site can vary by at least a quarter of a mile from year to year. Hen Harriers are quite prone to polygamy, especially where found at high density. I have no evidence of this on Bute, but unless one carried out an intensive study with colour marked birds, this would be hard to establish.

I do not have many records of prey taken by the birds. I have found the occasional remains of a young game bird in the nest, but the majority of records have been of young meadow pipits.

As regards the future, I see the main threat to Hen Harriers on Bute as being the destruction of nesting habitat through excessive heather burning (one regular pair was lost this year to this cause). Afforestation poses another threat.

Hen Harriers do nest in young conifer plantations in South-West Scotland but gradually desert this habitat as it thickens up. The recent appearance of mink on the Island may also present a hazard.

I must thank the Gamekeepers for apparently leaving the birds unmolested, as Bute should be proud to be host to such a beautiful and interesting bird.

Bibliography

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| Hopkins I. (1969) | Recent Sightings. |
| McWilliam J. M. (1927) | Trans. Bute Shire Nat. Hist. Soc. 17/ 106 |
| Watson D. (1977) | The Birds of The Isle of Bute (London) |
| | The Hen Harrier (Poyser) |