

BRITISH MAMMALS

THE ATLANTIC GREY SEAL

By R. M. LOCKLEY

(From an illustrated lecture to the International Union for the Protection of Nature, Copenhagen, 27th August, 1954.)

In the preparation of a book on the Atlantic grey seal,¹ *Halichoerus grypus*, some rough figures of its population were obtained. These show an alarming decrease everywhere, except in British waters where numbers have been maintained and even increased in the last decade.

From the latest information, and thanks partly to figures given me by delegates to this conference from Norway, Sweden, Finland, Denmark and Canada, I have drawn up rough estimates of the world population of adult grey seals, that is seals over six months old.

Gulf of Bothnia (Sweden-Finland)	. . .	5,000
Western Baltic-Kattegat (Denmark)	. . .	100
Norway	. . .	400
Faroes-Iceland	. . .	3,000
Gulf of St. Lawrence (Canada)	. . .	5,000
British Isles	. . .	20,000
Total world population	. . .	<u>33,500</u>

In the Gulf of Bothnia and the whole of the Baltic all seals are totally unprotected, and hunted vigorously, both over the ice in winter and by motor boats in summer. Scandinavian naturalists are alarmed at the present situation. Formerly the grey seal was numbered in many thousands. It recovered a little during the war, but the returns of the seals taken in Sweden show that, since then, there has been a significant fall. This is in spite of or because of vigorous hunting by fishermen, sportsmen, and skin hunters, and is taken to indicate a decline in population.

Year.	<i>Phoca hispida.</i>	<i>Phoca vitulina.</i>	<i>Halichoerus grypus.</i>
1943	991	118	850
1944	1,355	86	1,345
1945	1,171	80	625
1946	1,016	88	783
1947	876	84	615
1948	949	104	733
1949	637	99	707
1950	406	86	480
1951	221	88	397
1952	174	69	290
1953	273	56	203

(By courtesy of Zoological Department, Nordiska Museet, Stockholm.)

¹ *The Seals and the Curragh*, Dent, London, November, 1954. 15s.

In Denmark it is doubtful if this seal, formerly numerous on the island of Anholt, breeds at all, and I am told that the figure of 100 (non-breeding) adults in Danish waters is probably a maximum to-day.

In Norway, home of the mythology of this seal, it is so reduced that only about 400 or less exist, chiefly in a coast area near Trondheim which has now been set aside as a complete reserve.

In the Faroes and Iceland this seal is not protected, but is taken in late autumn when it comes to land to breed in caves and on skerries. Formerly it was killed for its blubber, oil, skin and meat, but often now it is shot for sport or by fishermen who regard it as a competitor. Its body is seldom recovered.

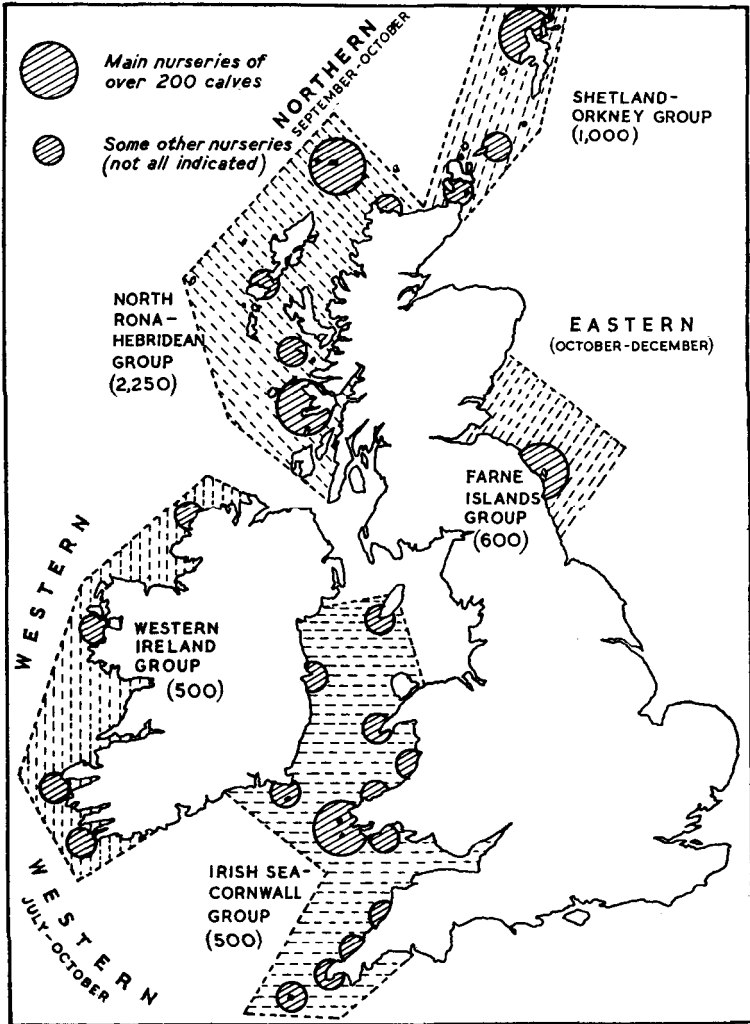
In Southern Greenland this seal was apparently always rare and its occasional appearance may be the result of wanderings or migrations between Iceland or Canada.

In the Gulf of St. Lawrence this seal was and is hunted along with the harp and other seals, and until recently was considered to have been reduced to scarce and residual populations. Recent field work by the Canadian Fisheries Department has, however, established that some not inconsiderable herds still exist; these are at present being studied by the ringing method. Like the harp seal, the Atlantic grey calves on the winter ice in the Gulf, and it is therefore accessible to seal fishers.

The figures for the British Isles were gathered from various observers and by personal visits to many of the breeding-grounds. As the map shows, there are three main breeding units, each with a slightly different calving season, although how self-contained these are has not been proved. In Wales and the south-west calving takes place from June to October; in the Faroe Isles from October to December.

It is safe to say that at least 5,000 calves are produced annually in the British Isles. This is the minimum output from 5,000 breeding cows. To arrive at the total British population (excluding calves) we must add 5,000 adult bulls, since examination of calves during marking suggests that the sex ratio is equal. In addition, observation of herds of immature and non-breeding individuals has indicated that the non-breeders are about as numerous as the adult breeders, and so the round figure for British waters may be about 20,000, or double the figure of the population outside British waters.

Apart from the small protected group in Norwegian waters, this seal is protected by law in Great Britain only, for in 1932



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Estimates of calves produced (autumn, 1953) in five principal British groups, with times of calving on western, northern, and eastern coasts.

[From the *Seals and the Curragh*. Messrs. Dent, London.

the Grey Seals Protection Act made it illegal to kill it between 1st September and 31st December. The law was enacted principally as the result of agitation to save the late-breeding Farnes

Isles colony; it only half protects the Welsh and Irish seals, which begin calving at midsummer. A forward extension of the period of protection is necessary to cover all British herds and I hope it may be possible for the British Home Office soon to make an order to this effect. To protect gravid cow seals on their approach to the breeding grounds, the close season should begin on 1st June and continue to 31st December, thus covering the seven months of the long, irregular British calving season.

A world population of at most 40,000 individuals, of which only one quarter are effective breeding females, is surely dangerously low in a marine species. It is lower, I believe, than that of any other northern hemisphere seal to-day. And I sincerely hope that the grey seal will soon receive protection in Scandinavian and Canadian waters, by an adequate close season during its calving period.

Recent work on the grey seal has revealed a life-history pattern resembling that of the other *phocid* seals. There is almost certainly delayed implantation of the ovum, as in common seal, elephant seal, roe-deer, stoat and weasel. Perhaps correlated with delayed implantation, there is an interesting spring assembly in British waters, although it is seldom witnessed. Cow and bull seals move freely in the sea, performing their "water-dances", part of the spring mating ritual. Mating takes place but there is no rivalry for beach territory, for the cows have no calves with them. Mating in autumn, however, is a territorial affair, each master bull dominating a beach or cave occupied by nursing cows.

We know little of the winter movements or migrations of this seal, but in West Wales it is present throughout the year, and I suspect there are but local migrations. However, we have now begun to ring-mark this seal in large numbers (several hundreds in 1954), and we may soon have confirmation or otherwise. In the British Isles seal-marking is to be centralized under the Mammal Society of the British Isles.

Results of ringing both here and in Canadian waters should be specially interesting in this species with its curiously variable calving season, which begins in June in Wales, but does not take place until January in Canada, and until February in the Gulf of Bothnia.