OBSERVATIONS ON THE GREY SEAL (*HALICHOERUS GRYPUS*) AT LUNDY

By N. A. Clark and C. C. Baillie

Introduction

The nature of the population of Grey Seals (*Halichoerus grypus*) on Lundy is not established though the use of the island by these animals is well known. Land-based aggregations of Grey Seals tend to be connected with breeding or fishing, or in the Spring with moulting. Hewer makes the distinction between breeding groups (a 'rookery' with associated peripheral groupings) and "fishing haul-outs" (or other haul-outs where the nature of the gathering is unknown). Records of breeding on Lundy are few and only well documented (to our knowledge) in the case of those recorded by Hook in "Seal's Hole" 1954-1957. There has therefore been very little information collected about the Lundy seals and the significance of their presence is open to enquiry.

Our period of observation in 1974 was from 27th August until 24th September, we were part-sponsored by the Lundy Field Society to whom we are most grateful. Severe gales interrupted observation considerably but we were able to gain some significant information. Undoubtedly the majority of seals present on Lundy at this time of year are non-breeders, but we are concerned largely with the possibility of there being a distinct breeding group, either for one season, or more regularly.

Observations

Observations were made to compare with our records of individual identities (and expand them) in order to check for individuals recorded in previous years (the system records pelage markings). Periods of observation were undertaken in areas well-used by the seals, and searches made for pups. We tried to minimize disturbance though this was not always possible—especially when entering caves.

We were able to positively identify four individuals (one bull and three cows) that were recorded last year. An individual with some blue nylon netting embedded firmly in her neck that was seen by people previous to our visit was almost certainly the same individual that we recorded in 1973.

A total of five pups were found. Of these two were found floating dead on September 6th at the North-East part of the Island following severe Westerly gales. They were probably three weeks old or younger (Davies estimated a loss of approximately 10% of seal pups in a normal year on Ramsey due to heavy seas.) A living pup (and apparently healthy) was located in Halfway Wall Bay, in a small cove almost filled by high tide and with access only by sea. This pup was probably two to four weeks old and was found on 16th September. On 19th September we entered "Seal's Hole" and found two pups (living) aged probably three weeks or less with three cows present.

We believe it possible that there were other pups born along the East Coast in caves to which we did not gain access. Along the coast between Halfway Wall Bay and Gannet's Bay there were two or three groups apparent, consisting of groups of cows with single bulls. However, enough data was not collected to ascertain whether or not these were possible breeding groups. Harrison Matthews points out that some caves may be used for hauling-out but not breeding. This could possibly be the case in the large 'Puffin Gully Cave', as, when we entered the cave, no pups were present. However, the entire floor of the cave accessible to seals had been washed by considerable waves during the recent storms and the two dead pups seen on the 6th September almost certainly came from this cave, the one a little to the east (No. 3 in the Report on Caves, 1974), or Virgin Springs. A recently dead bull found inside the cave had bled from the nose a little, but was not externally damaged.

In accordance with observations made on Ramsey (Hewer) the (presumed) mother of the pup in Halfway Wall Bay was observed to remain off-shore during the lower parts of the tide (access to the cove would be difficult for a seal except at higher tide). From Hewer's observations on Ramsey it is likely that suckling would take place twice a day, using the incoming tide for access. On one occasion

the cow was observed to be attended by an adult bull which was constantly by her side then later was sleeping near her. Here a comparison of behaviour is interesting. The bull slept by "bottling" (standing upright in the water while floating such that the head and much of the neck is above the surface). The cow however used that method of sleeping involving sinking for periods of some minutes the bull patrolled the vicinity on and below the surface and then moved off northwards; the cow continued to "sleep-dive". Later a larger cow arrived from the north and sighting the "resident" cow at the surface approached her. The "resident" cow showed some aggression with "flippering" and vocalisation. The encounter (at least above water) was brief and both seals dived. After two or three minutes the "resident" appeared about 130 yards to the south, floating upright and alert. After four to five minutes she returned to her station outside the cave. This inter-action is interesting and is the only time we have seen aggression between cows in open water. Within a minute the bull returned. After a brief "roll-swim" together, a quick look round and some "surface bubble blowing" (an item of behaviour often accompanied by grunting) the bull again moved northwards, the cow following him at about 25 yards to the edge of the bay and then returning to her station. These interactions indicate that the cow would probably soon be ready to mate. During these observations no other seals were seen in the bay.

Another cow-bull interaction of special note was that of copulation. Neither animal was fully mature: it seems unlikely that the cow would have carried young and the bull was too small to compete effectively with fully mature bulls for territory. Copulation usually occurs about two weeks after the birth of a pup, however the problem of how virgins become impregnated is unsolved, this observation may be significant).

Discussion

We have added four definite (probably five) records of individuals occurring at Lundy in different years. This brings the total to six (or seven) and could indicate some degree of localisation during the Autumn, though more data needs to be collected to investigate this possibility. In dividing the British breeding population of grey seals, Hewer points out that on present information it is not possible to separate a group smaller than that containing all those on the South and West coasts of Ireland, the Irish Sea, West Wales and Cornwall (including Lundy), the Isles of Scilly and Ushant. He does, however, suggest the possibility of there being a Lundy, Pembrokeshire, Cardiganshire group or even a sub-division within that.

It seems that breeding may occur more often on Lundy than has been generally supposed though more observation is needed. Undoubtedly the majority of seals present during late Summer and Autumn are non-breeders and it seems likely that many are passing through on their way to other breeding groups. However, births have been recorded on Lundy in and between the first week of July and the first week of October. Thus our observation period of four weeks may not account for all weeks in which pups were born. Likewise, as Lockley observed in Wales, bulls may replace each other in territories. Cows need to be at the breeding site only for a little under three weeks in order to pup, nurse and mate. Much more data needs to be collected, but present indications are interesting.

References

Britton, R. W. (1969). Report on the Seal Count on July 5th 1969. *Rep. Lundy Fld. Soc.*, **20.**

Clark, N. A. and Baillie, C. C. (1973). Observations on the Grey Seal (*H. grypus*) Populations of Lundy. *Rep. Lundy Fld. Soc.*, **24.**

Darling, F. F. and Boyd, J. M. (1964). *Natural History of the Highlands and Islands.* 2nd Ed., London: Collins.

Davies, J. L. (1949). Observations on the Grey Seal (*H. grypus*) at Ramsey Island, Pembrokeshire. *Proc. Zool. Soc. Lond.*, **119,** 673.

Hewer, H. R. (1974). *British Seals.* London: Collins.

Hook, O. (1957). Grey Seals (*H. grypus*) at Lundy. *Rep. Lundy Fld. Soc.*, **8.**
Lockley, R. M. (1954). *The Seals and the Curragh.* London: J. M. Dent & Sons.
Matthews, L. H. *British Mammals.* London: Collins.

A Post-script to last year's report is that on September 27th 1973 a seal pup was sighted at the north-east from an aeroplane, by members of the Seals Research Unit to whom we are grateful for helpful correspondence.

BRIEF VISITS TO THE SEA-LEVEL CAVES ON THE EAST SIDE OF LUNDY

By C. C. Baillie and N. A. Clark

During our study of the Seals of Lundy this year we found some apparently unknown caves between Kittiwake Gully and Half-way Wall. Between these points there are at least 18 caves ranging from a few feet in depth to 200+. Only one of these was mentioned by Mills in the 1968 L.F.S. Report. Unfortunately all the notes taken have been mislaid. These were, in fact, brief, apart from the notes on Puffin Gully cave.

The bracketed numbers below refer to those on the map of the North of the Island.

(1) This is a short cave 30-40 yards to the east of Kittiwake Gully. It is approximately 60 ft. long with a bolder floor which is only dry at low water. It is 10-15 ft, wide and 20-30 ft. high, the roof being made up mainly of boulders wedged into the walls, formed by an eroded dyke.

(2) This is probably one of the largest caves on the Island with the possible exception of Virgin Springs. This was the first cave that we found and stimulated our interest. Its entrance is at the base of Puffin Gully and is about 15 feet wide and 30+ ft. high.

Our first attempt at entry was not very successful. We arrived at the entrance with R. W. Britton half-an-hour before low tide expecting that there would be no swell as on the previous day when the storm was just subsiding and the swell was only slight. However, there was about two feet of swell and we found that we would have to swim about 10 ft to enter the cave, so we climbed into our wet-suits and started to climb along the edge towards the entrance. Chris. went first and I followed. Bob had decided to stay on dry land with a rope in case there was any trouble. Chris. swam into the entrance first, only to find 4 seals coming in the other direction! Luckily there was a large boulder he could get behind. Just after the seals had gone the tide must have changed as I was swept off the rock I was on by, to say the least, an unexpectedly large wave. Luckily the only casualty was the light from the hurricane lamp which did not like the swim. When we penetrated the cave further we were amazed at its size—it made Seal's Hole look insignificant. It is fairly straight so one can see the whole of the floor of the cave (200—250 feet). It varies from 15 to 30 feet wide and is widest about 100 feet in. We arrived at a pool about 60 feet in and were just about to go round when we heard shouts from Bob. These aroused some seals who were further in, so we returned to the entrance only to find that there was a large bull seal swimming a few yards out from the entrance. He was showing great interest in our activities and was not very worried about Bob's attempts to scare him. The swell had also noticeably increased. A seal on land is one thing, but in the water it is quite another! We did not remain long in the water and scaled the slippery rock in record time. No less than 21 seals came out making a total of 25 in the cave. Again it made the 4 or 5 occupants of Seal's Hole look trivial.

We were more successful on our second visit when Nigel Scriven accompanied us. On arrival we found that because of the Spring tides we could walk in without getting our feet wet. We got three seals out before we went in and when we reached the pool we saw an enormous bull-seal at the back of the cave. When