NEWS AND VIEWS

Seal Hunting

In her article on page 1237, Mrs E. G. Simpson describes the efficient way in which, under United States administration, the Fur Seal of the Pribilof Islands, Alaska, is hunted and killed. These observations are a happier story than the previous report (*Nature*, **214**, 1274; 1967) of the killing of the Harp Seal in the Gulf of St. Lawrence, when Mrs Simpson concluded that "a large percentage of the hunted animals die in a manner which is of doubtful humanity". At the Pribilof Islands the United States government is itself responsible for the killing of seals, whereas in the Gulf of St. Lawrence the hunting of seals is the prerogative of commercial organizations which are supervised, as far as possible, by government inspectors.

Humanitarian issues apart, the ecology of the two seal populations is also affected by the different government policies. At the Pribilof Islands, the stock of the Fur Seal has grown from an overhunted population of about 200,000 at the beginning of the century to its present value of one million. This seems to be the optimum population size, above which the natural mortality rate rises. The control and exploitation of the Fur Seal is recognized as a classic example of how an animal population may be conserved with maximum economic value and minimum ecological damage. In contrast, the Harp Seal population of the Gulf of St. Lawrence is under no such rigorous control. Its numbers are estimated to have fallen from about 3 million in 1950 to 1 million ten years later. Since 1965 the Canadian Government has fixed a quota of 50,000 on the number of young seals which may be taken in each year. This applies only to firms operating from ships and aircraft, and Mrs Simpson estimates that a further 30,000 seals may be taken by firms operating from the land. The Canadian Department of Fisheries has carried out population surveys and believes that at its present numbers the Harp Seal is in no danger of extinction. But the level at which an animal population ceases to be self-sustaining is difficult to determine, and not all zoologists share the Canadian Government's optimism. The USSR, for example, has prohibited the hunting of the Harp Seal in the White Sea since 1930, when numbers had declined to dangerously low levels.

The argument is often put forward, both by seal hunters and fisheries, that because seals are voracious predators of fish, the severe culling of their numbers enables fish populations to increase so that more fish can be caught. There is no evidence, however, that seals materially affect the stocks of fish in the sea, which are subject to large fluctuations caused by several factors of which the size of the seal population is only one. Harp Seals are also vectors of the codworm nematode in one stage of its life cycle, but here again the information upon which an assessment of economic damage might be made is not forthcoming.

In fairness to the Canadian Government it should perhaps be emphasized that the hunting of the Harp Seal is much more difficult to control than that of the Fur Seal in the Pribilofs. Only the young Harp Seal, the fur of which is still white, has economic value, although a small but unrestricted number of adult pelts are also taken for leather. The young seals are distributed over a large area of the ice and cannot be herded together as can the bachelor males of the Fur Seal. But under these circumstances, it might be argued, ecological studies should have been seen to be all the more necessary.

Chromosome Deletion in Action

A team under the leadership of Professor W. M. Davidson of King's College Hospital, London, has produced what may be the first pictures of somatic autosomal deletion in man not induced by mutagens, viruses or irradiation. (Day, E. J., Marshall, R., MacDonald, P. A. C., and Davidson, W. M., *The Lancet* (i), 1307; 1967.) A child was admitted to hospital with multiple somatic anomalies and died within three months. Lymphocyte cultures from both father and child showed partial deletion of the long arm of chromosome 18, the mother's karyotype being normal. Both father and mother are phenotypically normal, so that it is to be expected that the father has a balanced translocation, though no normally large chromosomes could be detected. At the same time one fifth of the cells of the father's lymphocyte culture showed progressive fragmentation of the short arm of chromosome 16. This chromosome is known to be polymorphic, the sizes of its arms varying between individuals and even in the same tissues of the same individual, but fragmentation of this kind has not previously been noted. The extent of the abnormality varied from cell to cell in such a way as to suggest that deletion was in process of developing.

The team hints at the possibility that some process which first affected chromosome 18 may now be starting to act on chromosome 16. It is also possible that the abnormality is hereditary, but there is as yet no evidence to support this. The team is now working on cell cultures of the skin of the father. If chromosome 16 is found to be normal in these and other cultures of the father's tissue, then it is unlikely that the man inherited the defect from his parents; the hypothesis that the chromosome fragmentation in the lymphocyte culture represents the beginning of deletion will therefore be greatly strengthened.

Stellar Diameters Observed

The first results have now been published (*Monthly Notices of the Royal Astronomical Society*, 137, No. 4; 1967) of the measurements of stellar diameters carried