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REPORT ON THE 1929 EXPEDITION AGAINST SEA LIONS ON THE
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REPORT ON THE 1929 EXPEDITION AGAINST SEA LIONS
ON THE COAST OF BRITISH COLUMBIA

For a number of years, organized destruction of sea lions has been carried on by the Department of Marine and Fisheries. This has been done primarily at the request of fishermen working in the vicinity of Smith's and Rivers Inlets, who claim that the sea lions in this vicinity are very destructive to both fish and nets. Recently, protest against this killing has been raised by societies interested in the protection of wild life, on the grounds that there is insufficient evidence of the destructiveness of the animals. These organizations have asked that the matter be fully investigated. Consequently, as a preliminary move, the writer was asked by the Biological Board of Canada, following representations by the Fisheries Branch, to accompany the C.G.S. "Givenchy" on her annual expedition against sea lions in June 1929, chiefly to investigate the food of the animals killed at that time.

Of the two species of sea lions found on the Pacific coast of America, only one, the Stellar (*Eumetopias stelleri*), is found as far north as Vancouver island at the present time. Both the Virgin and Pearl groups of rocks serve as rookeries, though the latter is used more as a "hauling out ground". It has been mainly on these two groups of rocks that operations have been carried on for the last eight years. In that time it has been estimated that 8428 adults and 5326 pups, a total of 13,754 of these animals, have been destroyed.

What the effect of this destruction has been on the number of animals on these two rookeries the writer is not prepared to say, as this was his first visit to them. No satisfactory count has been made of the individuals appearing annually on these rocks. However, the statements of several members of the crew of the ship to the effect that the sea lions "seem to be as numerous as ever, this year" may probably be taken as indicative of the true state of affairs. The

number of animals destroyed on these two rookeries each year is possibly almost, if not completely, offset by the natural increase in the herds occurring along the whole coast, migration from other rookeries restoring the herds on the Virgin and Pearl rocks after their annual decimation.

It is difficult to obtain a correct census of the animals on a large rookery on account of the movement of individuals. In addition to this, many are obscured by rocks, or their color blends so closely with the background that it is difficult to distinguish them. This last is particularly true of the pups. Bennet ("Report on the Seals and Sea Lions of California", state of California Division of Fish and Game, Fish Bulletin No. 14, 1928) has found that he can make fairly reliable counts by photographing rookeries and hauling out grounds during the middle part of the day, and checking estimates or counts made at the same time with the number seen in the photos. Between the hours of 10 A.M. and 3 P.M. practically the whole herd is ashore.

The usual method of conducting operations against the sea lions has been for a firing party of about five or six men armed with rifles to make a landing by the ship's launch. Taking up positions on various parts of the rocks they commence firing simultaneously.

As may be expected, the animals soon make for the water. In fact, even on the approach of the launch, about half of the herd can be expected to leave the rocks. At the commencement of firing most of the other adults follow, and soon only a few cows remain with their pups. Unless brought down by the rifles, these also will eventually leave as the shooting continues.

While an estimate of the number of sea lions destroyed has been made each year, it is very doubtful how nearly the figures given come to being correct. Of the pups an exact count can be made, as they are all killed on the rocks and remain there. In the case of the adults, though, only a very rough estimate of

the number actually killed can be made. Animals wounded on the rocks usually manage to reach the water, whether the wounds be slight or fatal. Even when death is practically instantaneous, the bodies usually slide into the sea on account of the precipitous nature of the rocks. Shooting continues at the animals in the water as they show themselves above the surface. On hearing the report of a shot, or on being hit, the animals immediately dive under the water. If the shot is fatal, the body usually sinks at once from sight. Thus it will be seen that it is almost impossible to be sure, in many cases at least, whether an animal has been killed or not. No doubt many seriously wounded animals soon drown.

Each man acting as his own scorekeeper, pride of his own ability as a marksman may have a very marked effect on the totals reported.

After one or two visits to a rookery by a firing party, the animals become so frightened that nearly all of them will take to the water on the approach of a boat. This makes it increasingly difficult to stop them on the rocks. In fact, about the only way to obtain animals for examination is to shoot them in such a way as to cause their instantaneous death, in places where the bodies cannot roll into the water. Only five were so stopped in accessible places while the writer was with the expedition in 1929.

The stomachs of these five were examined for food material. It is generally accepted that during the pupping season the sea lion ceases to feed. Examination of the stomachs of the four cows and one large bull showed no food material whatever in them. One contained some yellowish mucous material. The others all contained a small amount of watery fluid with some colorless mucous secretion. One carried a round stone about the size of a base-ball in its stomach. In all there were parasitic worms in large numbers.

According to Captain Henderson of the "Givenshy", the conditions just described are quite typical for that season of the year. In previous years, members of the crew of the "Givenshy" have opened the stomachs of a number of these animals, and invariably during the breeding season the result was the same,- an empty stomach, or one containing only a few stones. As soon as the pups are able to take to the water the adults begin feeding again.

From the foregoing it will be seen that no first hand information was obtained by the writer regarding the sea lion's destructiveness of marketable fish.

Investigation of the stomachs and feeding habits of the sea lion should be made at other places and other times than on the rookeries during the pupping season.

Those who have visited the Virgin and Pearl rookeries will realize that to investigate this matter thoroughly throughout a whole season would be a sizeable task. The Virgin and Pearl rocks are both located in quite exposed positions some miles from shore. A boat of sufficient size to withstand fairly severe weather would be necessary. Landings can be made only from a small boat, and even in the calmest weather, this may be difficult on account of the prevalent swell from the open Pacific. On each of these rookeries, the best landing place is on somewhat precipitous rocks, where one must climb from ledge to ledge. One man must be left in charge of the boat, for it cannot be hauled ashore. A launch which can be quickly and easily manoeuvred is preferable to a row boat. To avoid frightening the animals from the rocks, the motor exhaust should be well muffled.

If animals are to be stopped on the rocks for examination, unnecessary shooting must be avoided. A marksman who is a "dead shot" should select, one

at a time, individuals perched where they cannot readily slide into the sea, and endeavour to kill them instantaneously. Keeping the shooting down to a minimum would prevent the whole herd taking to the water, and many which did so would return to their pups ashore. In this way, many specimens would be obtainable for examination.

Personal conversation with fishermen has revealed that while many are in favor of the continued destruction of sea lions, others feel that the losses caused by these animals are comparatively small--at least no greater than the normal allowance made by any business man for losses in the conducting of his own business. Many consider that the sea lion is being blamed for depredations for which the fisherman himself is really responsible.

It has already been suggested that the expeditions of the last eight years may have resulted only in removing the normal natural increase in the number of sea lions along our coast. Nevertheless, before continuing the slaughter of these animals, it should be made certain that such action is justifiable and necessary for the conservation of the fisheries and the welfare of the fishermen. To this end, a thorough investigation should be made.

The possible results of the removal or reduction of a species already naturally established should be given thorough consideration before action towards such end is taken. In the case of the sea lion, there is evidently no desire on the part of anyone to have the animal exterminated, but whether action should be continued against it or not, and the extent of any action that may be taken, should be based upon carefully assembled data.

Before closing this report, I wish to express my thanks to Captain Henderson, the officers, and the crew of the "Givenchy" for their hospitality and assistance during my recent trip with them.