

1923.

Sealing Research
Falkland. 1922/23
No. 319/23

C.S.

Govt. Naturalist.

SUBJECT.

1923

21st April.
Previous Paper.

525/22

Report on operations from the
28th October 1922 to the 6th March 1923

M P 95/24

MINUTES.

Minutes from Govt Naturalist 21 April 1923
Report by - do-

(1)
(1a)

Y.E.
Submitted
G.M.B.
O.S.P.S.O.
21 April 1923

Draft despatch here with.
G.M.
24 April 1923

Despatch to S. of S. no. 59 of 26/4/23. Encl. (2)

Y.E. Submitted.
G.M.B.
O.S.P.S.O.
27 April 1923.
G.M.
28 April 1923.

Subsequent Paper.

0115/25
174/25

Note
In a report of a visit in 1918. Mr. James Wilson
estimated that there were at least 10,000 seals
under observation at Stephen James McKay & that
there was an abundance of others which could not be seen.
It was after this report the view was taken that
it would be "inconvenient" on the part of the Government
for publication of fur seal work: even on commercial
"expenses" as fur seal appears on much more
numerous than had been believed hitherto.

M.P.
634/18

28 April 1923

Letter from Asst. Naturalist, 20th Dec. 1923.

V.E. Submitted
O.H. 17
O.H. 18
22 Dec 1923

Please put up a copy of the instructions
left by Mr. Hamilton for Mr. Bennett

22 Dec '23

Copy of ~~Instruction~~ Programme of work in connection
with Fur Seal 1923/24 (4)

V.E. Submitted
O.H. 17
O.H. 18
24 Dec 1923

Extract from Enclosure to S of S despatch
no. 95 of 29th October, 1923. Encl. (5)
M.P. 95/24

Inside Minute Paper.

Y.E.

Submitted

G.R.H.'s

piece

17 Jan 1924

Refer these papers to Mr. Bennett
Please

TTTTT

10 Jan 24

14 Feb 24

Mrs. A.G. Bennett

Deferred.

G.R.H.'s

piece

1st Feb 1924

Dear C. C. S.O.

Read, a Point not clear in my mind, is the locality occupied by the "Batchelor" He is probably "Pelagic" & further North most commonly so perhaps, as winter comes on.

There are undoubtedly spots around the coast where the Sea Lion should not be allowed to assemble, Tursock Islands that are formed as fodder for animals & fur seal colonies being the principal.

The shooting off lions on the Tursock Islands in Port William has resulted in a further quantity of grass being available for Stanley. And it is not unlikely that the greatly improved quantity of fish in Stanley Harbour this summer as compared with former years

is, partly, if not entirely due to the removal of these animals.

Agg
and Nat
26-2-24

Y.P. Submitted

GRH. 13

Di. C. Sec

27 Febry 1924

Mr. J. B. Hamilton.

His Excellency has instructed that this paper should be referred to you for consideration and reports.

GRH. 13

Di. C. Sec

10 March 1924

Dear Col. Sec.

This is a duplicate of the Report dealt with in S.O.S 95/23.

M.P. 95/24 (herewith) and therefore I

have nothing to add to my comments attached therein except to state that it seems clear that the suggestion of an Imperial grant for the protection scheme would enable it to continue, whereas the present fur trade here cannot produce sufficient skins annually to defray more than an insignificant part of the cost.

(p.4)

J. B. Hamilton
Govt. Naturalist

14/3/24

Minutes from Govt. Naturalist 13/3/24

E. G.

Submitted
G.H. 1/2
Diefen

18th March 1924

(6)

Copy of Mr. Hamilton's report
for M.P. please and a copy
should be put up in up. 95

14 March '24

Vade Despatch from Govt to S. of S.
No 37 of 21 March 1924 M.P. 95/24

Telegram from S. of S. 3/4/24. (7)

Will you please attach up. 95/24

11 April

E. G.

M.P. 95/24 attached

G.H. 1/2
Diefen
11 April 1924

It would be convenient if a
copy of my despatch of 21st March
were put up in this up which should
be brought up in the 14th way

17 April '24

Copied for
Each 2 20/23
M.P. 95/24

Copy of
Despatch No 37 of 21 Mar 1924 to S. of S.
Copy of Notes by Mr. J. E. Hamilton
Copy of Notes by Mr. A. G. Bennett

(8)
(8a)
(8b)

Yr.

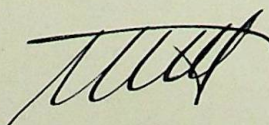
Submitted

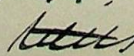
2. I have postponed action on ⑦ pending Yr's return in view of the reported increase in the fur seal herd considered in conjunction with Sir Sydney Hansen's report.

3. If the Government is to give up the protection of the rookery by means of a guard the island might be released to Mr. Hansen with a licence for killing specified numbers and ages of fur seal. The after plan could make two or three surprise patrols during the year.

4. I have suggested to Mr. Hamilton the feasibility of forming a postkey on the land opposite the Volunteers. He seemed to think the suggestion practical but it has not been worked out in any way.

5. Would Yr. be pleased to give instructions as to whether the fasa guard is now to be withdrawn.

 12 May 24

Apr 26/24 the Governor feels that the guard is to be maintained temporarily at least. P.G. 13 May 24,


Enclose to Falkland Islands Despatch
no. 59 of the 26th April, 1923.

(1a)

REPORT ON SEALING OPERATIONS IN THE FALKLAND ISLANDS

1922-1923

Operations in connection with further research on the Fur Seal were begun on the 28th. October 1922 and terminated on the 6th. of March 1923. There were five periods of work which totalled 77 days.

2. The first voyage had as its objective the Elephant Jason Rookery where a landing was effected on the 6th. November. It was quite clear that the seal had not been disturbed in any way and there was no sign of the beginning of breeding. The population of the rock, although satisfactory, was obviously less than at the height of the breeding season.

3. Since there was no other work to be done killing was started and after 16 days of it on the rock with a 303 rifle the seal were so scared on land that I resolved to experiment on killing in the water. I considered it probable that the distinction between immature males and cows could be observed and in the main this was found to be correct. Of the twelve seal shot in the water at this time two were cows and neither mature.

Operations were terminated for the time being at the end of the fourth day's work.

4. Volunteer Rocks were visited on November 10th. but few seal were hauled up. Another visit was paid to the Elephant Jason Rookery on the 2nd. of December but no pups were observed.

It was intended to work the Volunteer Rocks in December but only one attempt could be made and it was without result owing to bad weather.

5. A voyage was made to the Elephant Jason Rookery in January and the first landing took place on the 17th. I wished to inspect the herd before disturbing it by farther killing and spent the day on the rock.

6. The harems had already broken up and the pups were collected in pods of various sizes. The breeding seal were

confined

confined to the eastern part of the rock and the majority of the others to the western portion, but the bulk of the pups were a good deal farther east than had been the case at the time of my visit on the 12th. December 1919 when the harems were in existence.

The cows favoured the north side of the rock and were not all present on it.

7. The pups when not disturbed spend their time in sleeping, fighting and swimming in the pools of surface drainage which collect in hollows on the rock: the pups do not appear to object to the noisome quality of the water.

Some of the pups were making short excursions in the sea, keeping close to the land; at this age (about five weeks) they are clumsy swimmers and have little idea of suitable landing places.

When the pups are approached by man they seek shelter under ledges of rock where they crowd in very closely and keep up a continuous growling and quarelling: any attempt to seize them is strongly resented and although the milk teeth are small and blunt the bite is strong enough to draw blood.

8 The large number of Sea Lions which had taken up position on the rock for breeding purposes was a serious feature.

At the time of the October visit only three or four of this species were seen, as was also the case in December of 1919.

On the occasion of the January visit in this year ⁽¹⁹²³⁾ there were many male Sea Lions with harems of various sizes along with their pups and the usual hangers on in the form of immature and spare males. It was the height of the breeding season for this species and the harem males were distinctly aggressive.

Besides fighting among themselves they were quite prepared to attack man and sixteen had to be shot to enable the work on the Fur Seal to be carried on, as many of the carcasses as possible being removed from the rock. I did not consider it desirable to kill a great number on account of its being impossible to remove the carcasses because of the nature of the ground and the weight of the animals.

Although the presence of a few decaying carcasses may not.

not be deleterious or concious to the Fur Seal I considered that to leave many tons of rotting flesh in the immediate vicinity of their pups would be most undesirable. There was the additional objection to a wholesale slaughter of Sea Lions at this season the many Lion pups would have been left to starve to death, a consequence which could not be justified.

Fur Seal

8. There were three main pods of pups and a number of smaller groups. Where possible the pups were roused and kept moving so that a tolerably accurate count was possible, except on the east end of the rock which I was unable to reach. There was a number of pups there, but I am certain that they were not all visible from the water whence I observed them: there were also a few in the sea all the time of the count. I came to the conclusion that there were 400 pups on this rockery and have based my calculations on this figure.

10. On the next visit I began killing, using a rock rifle which had been borrowed for the purpose since the report of the 303 rifle which I had used on the previous killing had proved very alarming to the seal; the rock rifle was in every way preferable.

Killing was continued on two subsequent occasions, on one of which no landing was possible and operations on the water had to be abandoned on account of the weather, which was bad, becoming rapidly worse.

The last day was fine and killing was carried on throughout it; in addition all the pups which could be caught were branded namely 23, 10 males and 13 females.

A total of 80 skins were taken from the Elephant Jason Rockery this season.

11. Immediately on the return from this trip the Volunteer rocks were investigated and 46 skins taken. During the six days February 7th. to 11th. no less than four landings were possible

There were about 50 pups present: of which 23 were branded: here also Sea Lions were numerous.

12. On the 17th. February Afterglow left Stanley with the double object of endeavouring to reach Beauchene Island and of examining

examining Bird Island. A week was allotted to the first part of the programme but during all that period the weather was uniformly bad. During the subsequent nine days there was a certain amount of improvement and Bird Island was visited three times, on the first nothing could be done but on the third it was possible to use a boat although a heavy swell was running.

Two seal were shot but both proving to be stagey, i.e. shedding both fur and hair, killing was abandoned forthwith and since no landing could be effected on account of the surf operations were brought to a close.

13. It was intended to make a farther attempt to reach Beauchene Island if there was prospect of success on the return journey, but once more the weather prevented it.

Killing.

On shore.

14. The land killing was done with the rifle: I used two weapons and found that the 303 shooting the Mark VII bullet made a great noise and frightened the seal, although it was fitted with a "silencer" for the purpose of preventing this; besides, the striking force and penetration were so great that the skins were almost always damaged. It was clearly much too powerful for the work.

The 300 calibre rock rifle, firing an 80 grain bullet was preferable in every way; the weapon and cartridges are much lighter (a consideration when climbing on the rocks) while the report is a mere crack and the breach mechanism (side lever) makes very little sound. The cartridges were loaded with cordite but when ammunition has to pass the tropics one of the smokeless powders would probably be better.

Nearly all the rifle shooting is done at close range, a distance of 100 yards being unusual.

15. In the use of the rifle certain points must be observed.

In the first place the animal shot at must be in such a position that when it drops it will not fall into the water, either at once or if it moves; this is liable to happen if the seal is on the edge of a cliff or on or at the top of a smooth slope.

5.

The shot should be not only fatal but instantly so, since wounded seal always make for the water. The bullet therefore should strike the region of the ear with broadside shots or in the middle line at the base of the skull with fore and aft shots.

If a seal is in an unfavourable position the use of a little patience will usually result in the correct attitude occurring: it is better to permit a chance to pass than to wound a seal and then lose it: the behaviour of a wounded animal always frightens others in its neighbourhood.

Long shots are to be deprecated on account of the difficulty of placing the bullet in the proper area which is small.

16. Unless there seem to be immediate chances of other shots a seal should be examined as soon as it is shot in order to make certain that it is dead and that it is not likely to be washed into the sea.

Wounded animals may be despatched by a blow from a short club on the side of the head just above the ear, followed by the knife or the latter alone may be used.

17. The killing knife must be straight and strong with a very sharp point and two cutting edges behind the point, but one of these need not be more than two inches long. The knife which I used was $7\frac{1}{2}$ inches long, $1\frac{6}{7}$ wide and $\frac{6}{7}$ thick and single-edged. A short sword bayonet would be good for this purpose.

When sticking a seal the knife should be thrust in so that the back of the blade is presented to the neck of the animal, the point entering about the apex of the sternum and being directed backwards towards the heart and great vessels where a few jabs are necessarily fatal. The cut resulting from this operation can be embodied in the mid-ventral incision when the animal is skinned and will then disappear, but if the knife is thrust in with the flat of the blade presented to the neck of the seal an ugly notch is made in each edge of the belly of the skin. The lance is not convenient for killing wounded seal.

A gaff, as described below, is a useful adjunct to work on

the rocks.

18. It is usually advisable to boat off the dead seal as soon as possible. They may be transferred to the boat by means of a heaving line secured through a hole cut under the chin in the angle of the jaws and penetrating right through to the mouth: if it should happen that rigor mortis prevents the mouth from being opened the cut may be made between the part of the skin on which the whiskers grow and the bones of the snout. In any case the cut should run fore and aft and care should be taken that plenty of tissue is left on all sides so that the rope will not pull out.

These methods of attachment also permit of a seal being towed round a rock from the shore or behind a boat.

19. When the dead seal have been removed the hunter should conceal himself, remain quiet and wait for more seal to haul up.

Care should be taken that the wind is not blowing from the hunter to the hauling place since the sense of smell of the seal is keen. It is particularly difficult to take this precaution at the Elephant Jasons (since an off-shore wind is necessary for landing and the seal come up on the lee side.

When it is apparent that the seal have been scared from one place it should be left and others visited, a rotation being observed.

20. It is not advisable to skin seal on the rookery; although the smell of blood does not appear greatly to disturb the survivors the odour of the internal organs is alarming to them.

Seal may however be found on places such that it is not possible to avoid skinning them in situ if they are to be taken at all, when this is so the skinned carcasses should be thrown into the sea; in any case it is better not to shoot seal in such positions at all until the last day of working a given rookery.

In the water.

21. It is clear from this seasons work that killing on the land alone will not yield any number of skins, particularly since it is not possible to cut the seal off from the sea. It

therefore

therefore follows that some of the killing must be done in the water.

By the exercise of continual watchfulness the shooting of adult cows in the water may be avoided almost altogether: experience enables the not very great difference between the heads of the cow and the male of corresponding size to be observed.

Only five adult cows were killed, three of them in the water, one on land by myself and the fifth by a man who shot on one occasion and not very successfully.

22. Two 12-core shot guns were used and paper cased cartridges loaded with $1\frac{1}{8}$ ounces of BSSG shot. They were both double-barrelled, but it is probable that a single barrel would be sufficient, and larger bags should result from the use of guns shooting heavier charges of powder and shot.

Brass cased cartridges would be preferable since they are waterproof and would not swell with the damp: when carrying paper cased cartridges on Afterglow it was necessary to take precautions to prevent this happening. The cartridges should be kept in a waterproof bag in the boat and an extractor of efficient design carried.

23. Care should be taken that when a seal is fired at it is well within range and that it receives the full charge; the side of the head is the target to be preferred. It is essential to kill the animal at once and to pick it up immediately since they sink very rapidly at times.

24. For securing the dead seal a steel gaff kept at needle sharpness is necessary. That which I used has a hook of $\frac{1}{2}$ inch steel with a maximum gape of four inches and an angle of about 60 degrees between the limbs, it is tapered towards the point. It was found both convenient and effective to sharpen the point so that three cutting edges ran back a short distance from it.

The ash haft is 60 inches long and the overall length of the implement is 71 inches. I consider that the gaff might very well be two feet longer and have a larger hook, a double hook would be even better.

While hunting the gaff should be kept on the right hand of the gunner with the hook over the boat's gunnel and the shaft free for immediate use. In use the gaff should be placed under the middle of the seal with the point upwards, the animal gently raised and brought alongside the boat when it should at once be grasped by hand. No attempt should be made to lift the seal out of the water with the gaff since it is easy through hurried or careless handling to roll the seal off the gaff when it will almost certainly be lost. Iron is useless for gaff hooks.

25. It was found that the most satisfactory method of boat work was to use the ship's dingey from which to shoot and to pass over the seal when secured to Afterglow's lifeboat which transferred them to the ship when a cargo was loaded.

The small boat has the advantage of being more mobile and can therefore follow the seal better and get up quicker to those which are shot, but there are occasions when the weather does not permit of the dingey being used on account of its small size, and the lifeboat has to be employed.

26. After the first shooting over a rock shooting in the water may be carried on simultaneously with the land killing.

Skinning.

27. Skinning on the ~~part~~ vessel should not be done near the a rookery; if the sea is sufficiently smooth she should draw off for some distance and proceed with the work, but if there is much movement on the water it is preferable to leave the skinning until harbour is reached unless the number of seal is large.

28. A modification was made in the method of skinning after the first trip and adhered to for the rest of the season. The result is a slightly larger skin which includes the tail and almost the whole of the mask.

A cut is made round the snout behind the whiskers, the lower lips are taken off with the skin and a cut is made round the anus, and scrotum in the male, or vaginal opening in the female.

This incision is made continuous with two more which encircle the hind flippers at the edge of the fur and with the usual median

cut which runs right up the belly to the chin: the usual two cuts are made round the fore flippers.

The skin is removed with as much of the blubber as possible and then hung out to cool.

Flensing.

29. The cooled skin may be conveniently flensed on a board 42 inches long and 28 wide. This size could be slipped inside the cleat which runs along inside the bulwarks of Afterglow and was about the correct height. The board may be quite roughly made if it is strong enough, but the working surface must be flat and devoid of projections such as knots or nails which would raise the skin and so be the cause of cuts.

30. The knives used were strongly curved having rounded ends and an outside edge. They should be made of hard steel, and it was found that the blades of sheep shears provided satisfactory raw material for them.

In sharpening these knives the ground faces should start well away from the cutting edge so as to meet at a ^vvery acute angle the edges should be smooth and kept sharp while in use with a very finely cut steel.

31. Flensing should be started by making a horizontal incision across the blubber behind the flippers, care being taken not to cut the skin. The cut thus made forms a convenient starting place from which flensing may proceed towards the tail or head of the skin.

32. Skins are salted immediately after flensing and should be laid flesh side up until they have taken the salt, when they may be stored in pairs with the flesh sides apposed.

A bag of salt will cure about 25 skins, approximately four pounds being used for each skin, but since both the bag of salt and the skins vary in size this can be taken as only a rough guide.

It is most unwise to try to economise in salt which should be applied with a lavish hand.

If there is great pressure of work small skins may be salted with the blubber on, but I do not recommend this since the

flesh on the skins becomes very hard and there is a risk that the salt will not penetrate to the skin and in any case salted skins are inconvenient to flense since the salt grains blunt the knife very rapidly.

Life History of the Fur Seal.

33. Examination of a large number of skulls which were collected during this season has made it clear that the life stages of the Falkland Island Fur Seal are the same as those of the Pribilof Island form.

Females bear pups at the age of three years and must therefore be impregnated at the age of two years.

Males are adult at six years and then have a length of about 65 inches.

34. Few yearlings were observed, they do not greatly exceed the pups of a few weeks old in size, but have a more robust form and naturally a different coat.

35. At two years old the head of the male shows slight indications of the characteristic form of its sex, as age increases the snout lengthens and projects more over the mouth, the adult male has a distinct appearance of being snub-nosed.

The wig or mane begins to appear in the fourth year; it is short and rather curly but is never so prominent as in the Sea Lion.

37. The head of the female changes little from the yearling condition but there is a certain lengthening of the facial region.

In the water cows may be distinguished from males of the same size by the head alone and since the animals show themselves for only a few seconds at a time the most constant vigilance is necessary, even then it seems almost impossible to prevent mistakes occurring occasionally.

38. The stomach contents of the specimens examined consisted of an Anomuran Crustacean and a species of small fish, apparently a Clupeoid, but digestion was invariably too far advanced to permit actual identification of the latter.

Seal shot after midday usually have the stomach empty, from this I conclude that most of the feeding takes place at night or

in the early morning and that the animals afterwards come up on the rocks to sleep. They are certainly more inclined to leave the rookeries in the afternoon, and as was observed on Bird Island a marked liveliness appears towards evening.

Consideration of different Rookeries.

38. Elephant Jason.

As has been stated this rookery is roughly divided into two parts during the breeding season, one occupied by the breeding and the other by the non-breeding seal.

It was found that almost all the seal in the water on the south side of the non-breeding area were males, the females on the other hand preferring the north side of the rock. The unoccupied and immature males spend a good deal of their time feeding and playing in the water near the rookery, but the breeding females did not appear to do so to the same extent; it seems probable that they go off to feeding grounds where the fish they consume are to be found. The general tendency of movement from this rookery is towards the South West.

39. Volunteer Rocks.

At this place the sexes appeared to be more mixed, but this may have been due to the time of my visit being later in the season.

Only the south side of these rocks is accessible, the suitable places for landing being on that aspect; they may be approached with a wind between W and NNE but the latter must not be strong nor have continued for long. The north side of the rocks is open to the ocean and there is besides an enormous bed of kelp which leaves only a narrow strip of clear water close to the rocks.

Seal were usually to be seen feeding on the inside edge of the kelp on the north side of the rocks, but none were killed there since they could not have been secured.

40. On account of the shelter afforded by Volunteer Point this rookery is more accessible than that at Elephant Jason, but actual operations on it are a good deal more difficult. This is due to the very abrupt and broken nature of the rock surface
and

and to the swell driving through the narrow passages between the three parts of the main mass, or even breaking over parts of it.

The almost vertical inclination of the strata renders it particularly necessary to take the greatest care that a seal when shot will not fall into the water.

41. There were only about fifty pups seen, one was dead but too decomposed to permit of a post-mortem.

42. Bird Island.

It is clear that except for a few seal which might be taken from the Flats or the off-lying rocks in exceptionally good weather most of the killing would have to be done in the water.

There is a narrow and extremely rough talus at the foot of the cliffs: it has been formed by the enormous masses of rock which have fallen from above and its character is such that it seems unlikely that useful work could be done on it. The mouth of the bachelors' "cave" which was described in my report on the 1921/22 season is ^{fallen} partly blocked with stones and there are submerged rocks at the entrance as well.

C.S.O.M.P

25/22, par. 13.

Landing could only be effected in the most exceptionally favourable circumstances; at the time of my visit there was a heavy swell breaking all along the foot of the cliffs and into the mouths of the caves and gulches, but with care it was possible to go close in with the ship's lifeboat.

43. Beauchene Island.

This island lies about 30 miles SE of Bar on Island and about the same distance from Sea Lion Islands; it is approximately 45 miles from the nearest secure anchorage, Fanny Cove; Bull Road which is somewhat nearer is not a safe harbour.

The days on which landing could be effected on this exposed place in the course of a year are very few and it is clearly a much more difficult place to work than even Bird Island; it is doubtful moreover if the take of skins would compensate for the consumption of coal and time which would be inevitable.

Sea Lions in relation to Fur Seal.

44. The Sea Lion is abundant at all haunts of the Fur Seal

50: 72 193
 51351
 270 V.R. 29

4% interest

H/co 1544
 617.6
 1544
 2161.6
 2R. 29

C.S.O.M.P. adults at Bird Island in 1922: the totals have been arrived at by
525/22, par 17. using the figures in the tables of the Report on the Fur Seals
and other Life of the Pribilof Islands by Messrs. Osgood, Preble and
Parke.

I recognise that there is a difference in habitat and to some extent in habit between the two species, but their breeding habits, apart from the difference in the size of the harems, and the general course of their life history are so close that I consider that this proceeding is justifiable, particularly so if it is borne in mind that if these figures had not been used there is no other method by which an even a proximate estimate of the population in the colony could have been made. I do not consider that the figures here given for the local herd can reasonably be considered to be absolutely accurate but feel confident that they are sufficiently close to reality to be suitable for the present purpose.

Allowance has been made for the fact that previous to the season under consideration there has not been any selective killing of the colonial seal, in the absence of which the herd should contain approximately equal numbers of each sex.

P.I.R. Table
no. 1, p. 61.
M.P. 525/22,
para. 17.

47. The pups on the Elephant Jason Rockery numbered 400, those on the Volunteer Rocks 50, which numbers on a minimum estimate give totals at each place of 1544 and 193 seal respectively, the population of Bird Island was estimated as 500 at the time of my stay there, so that apart from Beauchene Island the total herd is 2237 seal, a number very much lower than any previous estimate.

P.I.R. item
C.S.O.M.P. 19
19/20, p. 4.

48. The estimated rate of increase of cows at the Pribilof Islands is 5-6% annually which in present conditions in the Falkland Islands would require an annual increase in the number of breeding males of 2½-3% annually.

P.I.R. Table
no. 4, p. 62.

On the Elephant Jason Rockery each male has only two cows, so that if there were 400 breeding cows this season the probable increase of 24 cows would require 12 additional bulls next season, in addition to an allowance of 14% to compensate for the natural death rate of adult males.

The 400 cows require 200 males and 14% of that number is 28,

which with the 12 necessary for the expected increase in the number of cows amounts to 40 bulls. The Pribilof Island Report suggests that for the benefit of the virgin cows spare bulls should be reserved in the proportion of one for every four harem bulls, which in the case of the Falkland Island Seal at the Elephant Jason would entail the presence of a farther 10, making a total of 50 bulls to be reserved for next season.

P.I. Rep. 80.

49. Now these 50 may be assumed to be derived from the pups of 1917, and since in 1922 400 pups were born it cannot be considered to be an underestimate of the population if it is assumed that this was the number born in 1917. Using the Pribilof Islands death rates it appears that if there were 200, i.e. one half, male pups in 1917, by December 1923 72 may be expected to survive.

P.I. R. Table
no. 4, p. 82.

1917	200 born.
1918, death rate, 1st year 50%	100 survive.
1919, death rate, 2nd. year 15%	85 survive.
1920, death rate, 3rd. year 10%	76 survive.
1921, death rate, 4th. year 5%	72 survive.
1922, no deaths allowed for	72 survive
1923, no deaths allowed for	72 survive.

This gives a residue at six years old of 72 adult males, and if the 50 required for breeding are deducted a surplus of 22, these represent 23 out of 70 three year old seal which could be killed without detriment to the herd. At this ratio of 23 killable seal for every 400 breeding cows the whole herd at the beginning of the season 1922/23 could have yielded 33 seal of three years old. In addition to these nearly equal numbers of four and five year olds and having made allowance for spare bulls to serve the virgin cows, ²¹⁷ ~~126~~ wigs or adult ^{might be killed} bulls, the aggregate being a trifle over 300 skins, of which two thirds, the wigs would be of inferior quality, and in future seasons the killings would have to be confined to three year olds in numbers which might be expected to increase from 33 at a rate not exceeding 8% or 2 or 3 seal annually. ^{gross} The proceeds from the sale of so

so small a number of skins would amount at normal prices for Fairland Island skins (£3) to £105 in the second year, which is little more than 2% of the estimated cost of the protection scheme for 1923 (£4494) and it is clear that even after 10 years the percentage would not be greater by any important amount.

50. The prospects offered by the establishment of an artificial polygamy may now be considered.

Nothing is known as to the maximum sexual capacity of the Fairland Island Fur Seal: on Bird Island one wig was observed with 25 females (2 with 50) so that it is probable that given the opportunity a polygamous habit would be adopted.

In the Pribilof Islands the suggested optimum number of cows (40) is known to be far below the maximum capacity of the males, and idle bulls are stated to be desirable in the proportion of one for every four barren bulls.

51. At this rate the Elephant Jason Roekery would require only 10 males for its 400 cows and 3 spare bulls for the virgin calves, making fifteen in all: with an annual death rate of 14% these would require a reserve of 2 and since cows may be expected to increase at the rate of 6% annually one more bull would be required for next season so that a total reserve of 3 males would be required for next season in addition to the bulls for the breeding cows. Even allowing a death rate of one seal in six annually from the end of the third year 70 of the 76 three year olds of 1920 at the Elephant Jason or 101 for the entire herd could have been killed; besides these a nearly equal number of three and four year olds could have been killed and 91% of the wigs, giving a total for the whole herd of 559 skins, but in the subsequent years a number exceeding 101 by only about 1/16 annually, so that in the second year 107 and in the tenth 171 three year olds could be killed. The value of the 171 skins which could be taken after ten years protection would be £513 or 11% of the cost of the protection scheme.

52. In this connection the following extract from the 11th. Edition of the Encyclopaedia Britannica may be of use: it is from

an article on Furs by Mr. Walter Sutherland Parker, Deputy Chairman of the Fur Section of the London Chamber of Commerce, and was written before the European War.

"Fur Seal-----with the exception of the pick of the Lobos
"seals the fur of the southern sea seals is very poor and
"suitable only for the cheapest market."

It does not therefore seem wise to count on a price of more than £3 for the best Falkland Island skins.

53. The patrol vessel was actually engaged on the work of sealing for 77 days during which 71 tons of coal were burned, if the cost of the Jason guard is excluded and only the cost of the vessel for that proportion of a year and only the cost of the coal actually burned on the work are taken into account the expenditure was £1627, a sum which could not be covered by the sale of seal skins even after ten years of careful management. (Coal costs about £5:16 per ton at Stanley c.i.f.)

54. This seasons work compels me to form the conclusion that there is no prospect of so small a herd of seal as that in the Falkland Islands being able to support the cost of the protection scheme within a reasonable time. At £3 per skin an annual yield of 1496 skins would be necessary and this implies a herd of over 30,000 seal and highly polygamous at that.

55. The various courses which might be pursued apart from the complete abandoning of the scheme are the following.

A. Continuation of protection without an attempt to interfere with the herd. This is not desirable even from the point of view of the seal themselves since the presence of superfluous males is obnoxious, but if the present system of restricted polygamy is to continue this or the next would seem to be the only possibilities.

B. Reversion to the old method of killing outside the breeding season. This may be calculated to produce skins equivalent in number to the expected increase of the herd if not molested, at the rate of 61,134 skins annually with a value of £40, which still leaves a very heavy

very heavy deficit, even taking into account the further sum of \$400 which the patrol vessel is estimated to earn by other work.

C. The initiation of an attempt to educate the seal to a higher degree of polygamy; this has been discussed above (para. 50 et seq.) and holds out no prospect of being financially sound.

D. The finding of other profitable work for Afterglow, of which the possibility seems problematical.

J. E. Hamilton

J. E. Hamilton.)

Government Naturalist.

20th. April 1923.

Minute.



Hon. Colonial Secretary.

I have the honour to transmit herewith my Report on the Investigation of the Fur Seal in the Falkland Islands for the season 1922/23.

J. E. Hamilton

J.E.Hamilton.

Government Naturalist.

21st. April 1923.

2.

FALKLAND ISLANDS.No. 59.

GOVERNMENT HOUSE,

STANLEY,

26th April, 1923.

My Lord Duke,

With reference to my despatch No. 110 of the 18th of September, 1922, I have the honour to transmit, herewith, a report by Mr. J. B. Hamilton, Government Naturalist, on his investigations, for the period from October, 1922, to March, 1923, in connection with the Fur Seal of the Falkland Islands.

2. These investigations show that the actual number of the fur seal population, although it cannot be stated with complete accuracy, is very much less than has been indicated in earlier reports. Hitherto rough estimates have been given of the number of seals under observation in the water and on the rookeries. Mr. Hamilton's calculations are based on a count of the pups and I am of opinion, after having visited Elephant Jason Island, Bird Island and Volunteer Rocks, that the fur seal herds at these rookeries do not exceed the numbers given in paragraph 47 of the report.

3. I beg to request that on my arrival in England I may be afforded an opportunity of discussing the question of the protection of the fur seals.

I have the honour to be,

My Lord Duke,

Your Grace's most obedient,

humble servant,

HIS GRACE THE DUKE OF DEVONSHIRE,

J. Middleton.

P.C., K.G., G.C.M.G., G.C.V.O.,

SECRETARY OF STATE FOR
THE COLONIES.



Stanley

20. December 1923

3

Sir

Following your instructions I proceeded in "Afterslow" on the 15th to inspect the Jason Fur Seal Rookery.

The Rookery was reached in ideal weather shortly after 9 am. on the 17th. On our approach great numbers of seal left the rock for the water. The boat was lowered, a breeze started from the S.E. After pulling round a landing was made on the N.W. side

At this spot two half bulls were shot to prevent accidents. So also ~~was~~^{were} all sea lions visible from this spot. On mounting the rock pups were thickly strewn protected by bulls, The cows & young males had taken to the water.

The two seals killed were got into the boat & as the weather was just starting to set bad the Afterslow whistled for our return. We got on board none too soon for the wind.

A count could not be made under the conditions, but from the mass that left the rock, & the pups & bulls that remained on the small part of the rock that I could see I feel certain that not less than 6,000 seals could be there.

To the Hon: the

Colonial Secretary
Stanley

During the trip I saw a large number of Sea Lions. From Volunteer Rocks to Salvador waters I saw along the beaches from a distance of 1-3 miles, through glasses, not less than 1,500 lions. An inspection from the land would multiply this number several times, at various places along the shores & rocks of the whole run these animals were present. The outer tussock Island in Port William swarmed with them as we passed in on the 19th on our return.

I am
Sir,

Your obedient servant

A. G. Bennett.

Asst Naturalist

Suggested Programme of Work
in connection with Fur Seal.

1923-24

1923

Dec. 1. Proceed Volunteer Rocks, survey
Rookery.

A. If breeding started, attempt to
enumerate pups, and barren bulls.
~~and kill off~~ noting number of cows (or
pups) to each bull.

Kill - spare bulls, half bulls and
? eight 3 year olds, after killing, destroy
all sea lions possible.

B. If breeding has not started
return and revisit about a week
later.

Dec. 14 Proceed Elephant Jason Rookery
and repeat process, but here
23 3 year olds may be killed.

Jan 1 Proceed Bird Island and Beau-
chêne I^o.

At Bird Island 8 3-year olds
may be killed. 6-4, 6-five and 20 pups.

Beauchêne - requires inspection.

O. C. S.

Rough notes drawn up by Mr. Hamilton for
programme of seal work. Please have few
copy typed and put up in box.

Atttt 15 Nov.

SUGGESTED PROGRAMME OF WORK IN CONNECTION
WITH FUR SEAL 1923-1924.

1923.

1st Decmbr. Proceed Volunteer Rocks, survey Rookery.

A. If breeding started, attempt to enumerate pups, and harem bulls, noting number of cows (or pups) to each bull.

Kill - spare bulls, half bulls and eight 3 year olds, after killing, destroy all sea lions possible.

B. If breeding has not started return and revisit about a week later.

14th Decbr. Proceed Elephant Jason Rookery and repeat process, but here 23, 3 year olds may be killed.

1924.

1st January. Proceed Bird Island and Beauchene Island.

At Bird Island 8 - 3 year olds may be killed.
6 - 4, 6 five and 20 wigs.
Beauchene requires inspection.

Drawn up by Mr. Hamilton 12th Nov. but not signed.

(Itld.) H.H.H.

25/11/23.

EXTRACT FROM ENCLOSURE TO SECRETARY OF
STATE'S DESPATCH No. 95 of the 29th of
October, 1923. filed in M.P. 344/22.

Fur Seals, Falkland Islands.

The new papers submitted on this subject are of considerable importance, and the reasons stated on pp.2,3 of the Director's Report, June 16, 1922 (C. 24 June 22: 35) for regarding the information as confidential still exist. Mr.Hamilton's Reports (46.c, 52c) on his own observations made during two seasons show that a considerable nucleus remains of the great herds of Fur Seals which formerly frequented the Southern seas: and in Sir Sidney's opinion, they give substantial reason for thinking that the continued growth of the herds could be encouraged by proper management. The Report state that a guard has been established on the most important locality, and that a patrol-vessel is employed in preventing poaching, of which there seems to have been no recent case.

The general result of Mr.Hamilton's observations is to confirm the view that the Southern Fur Seal resembles the North Pacific species in its habits. In his earlier report he states that it is definitely polygamous, a herd of 50 cows and 2 bulls having been observed, although the proportions of the two sexes seems to vary on different "rookeries" and at different times. There is evidence of segregation of the individuals in definite groups, the immature males, for instance, not associating with the breeding colony. the localities are as a rule difficult of access, landing being impossible on most occasions and in any case not easy.

The Fur Seal (Arctocephalus australis) can be readily distinguished from the Sea Lion (Otaria byronia), with which it associates, by its different way of diving, and male Fur Seals can be distinguished from the females of the same species, even when swimming, by a difference in the shape of the head. These are points of practical importance. The Sea Lion may also be polygamous, a harem of about a dozen cows having been observed, but it is apparently sometimes monogamous. This species occurs in great numbers in the Falklands, and Mr. Hamilton states that it damages tussock grass or renders it unfit for consumption by domestic animals. He suggests that its numbers might be reduced, and the proceeds (from the oil) might with advantage be used for the protection of the Fur Seal.

In his later Report Mr. Hamilton states that breeding of the Fur Seal had not commenced on November 6, and no pups were observed in another locality on December 2. He mentions the fact, however, that harems were in existence on December 12th during an inspection he made in 1919. On January 17 (1923) the harems had already broken up, and the pups were segregated in "pods" of varying size. The breeding colonies were in one part of the island, and the majority of the others elsewhere. The pups were mostly ashore, swimming in surface pools and readily taking refuge under ledges of rock when disturbed; occasionally making short excursions to the sea, and keeping close to land. At this age (about five weeks) they are clumsy swimmers.

The number of Sea Lions is regarded by Mr. Hamilton as a serious feature. They occupy land-sites for breeding purposes and have harems of various sizes.

sizes. The breeding males are highly aggressive. A Sea Lion was observed to chase and catch a Fur Seal pup, but no evidence was obtained that this species devours young Fur Seals. Mr. Hamilton adheres to his former recommendation that the Sea Lions might with advantage be exterminated.

By examination of skulls Mr. Hamilton concluded that females bear pups at three years, and that fertilisation must therefore occur in their second year. Males are adult at six years. Yearlings are not much bigger than pups, but can be distinguished by the character of their skins. The male can be recognised by skull-characters even in the second year.

In the course of his investigations Mr. Hamilton killed 80 Fur Seals at one rookery, by means of rifle-fire which alarmed the rest of the herd to a serious extent. A certain number of the pups were branded.

The Report concludes with a consideration of the economic aspects of the question. Calculations based on the results obtained by American observers with regard to the Fribilcf Islands herds, are given of the possible rates of increase under different conditions, and of the number (very small) of seals which could be killed annually, without injury to the Colony. Quoting the 'Encyclopaedia Britannica', he states that the fur of the Southern species is of poor quality, and that the average value of a skin cannot be estimated as more than £3. Taking this into account, he concludes that so small a herd cannot be expected to support the protective measures necessary, within a reasonable period. He thinks that it would be desirable to

encourage

encourage an increase of polygamy, if it were possible, but that a policy of non-interference with the herd would continue the present condition of a superfluity of males which interfere with breeding.

Mr. Hamilton's later Report takes a despondent view of the future of the Fur Seal colony of the Falkland Islands, but Sir Sidney is not convinced that this conclusion is warranted by the facts. The following figures may be quoted from pp. 109, 110 of the 'Report of the Interdepartmental Committee on Research and development in the Dependencies of the Falkland Islands' (1920, cmd. 657). The number of Fur Seal's taken off the South Shetlands in 1821-22 was estimated by Weddell as 320,000, and the species thereupon became almost extinct in that locality, where, however, a certain number still survived as late as 1873-74. Weddell's estimate is alone sufficient to establish the fact that the Falkland Islands and their Dependencies are capable of supporting a large population of Fur Seals, and it is most important to continue the attempt to re-establish something approaching the former conditions. It is not likely that the Fur Seal industry can be made self-supporting for some time to come, and in Sir Sidney's opinion it would be most unwise to attempt to make it so. If the expense of protecting the herd is too large to be borne by the Government of the Falkland Islands, he thinks that it should be supported out of Imperial funds. The direct cost of

attempt to increase the extent of polygamy the surplus
superfluous males. It is obvious from Mr. Hamilton's

the patrol-vessel, so far as its seal-protecting work is concerned, is estimated by Mr. Hamilton at only £1027; and although this does not represent the entire expenditure necessary, the total amount would in any case be comparatively small. It would surely be unwise to relinquish the attempt because success is not immediately in sight. A further argument which may be urged against the hunting of seals at the present time is that the attention of poachers would thus be called to the existence of the herd, in a way which might result in their participation in the industry. As bearing on this question, the Director wishes to suggest that the supposed inferiority of southern skins, as compared with those from the north, need not perhaps be accepted without further enquiry. It is well known that the fur has a finer quality in young individuals than in old specimens of the Northern Fur Seal, and it may be suggested that the average value of the Southern skins is probably based on a period when indiscriminate killing occurred. A restriction of the killing to "bachelors", as in the Pribilof Islands, might well result in an increase of the average value of a skin.

The conditions described by Weddel existed at a time when the numbers of the Fur Seal herds were controlled merely by the forces of Nature. These conditions might be re-established now, and Sir Sidney is inclined to think that the most expedient policy would be one of passive protection, without any attempt to increase the extent of polygamy by killing superfluous males. It is obvious from Mr. Hamilton's

account

account that the use of rifles seriously alarms the breeding colony, and that it might easily result in the forsaking of the rookeries. Considering the facts that Fur Seals and Sea Lions lived side by side before the Fur Seals were almost exterminated by human agency, and that the Fur Seals were not thus prevented from existing in very large numbers, it is not clear that the destruction of the Sea Lions is necessary for the recovery of the Fur Seals. It is possible that the extermination proposed would so alarm the Fur Seals as to clear them completely out of the localities which they at present frequent.

It may be hoped that some of the members of the forthcoming "Discovery" Expedition will be able to give special attention to the Fur Seal problem, and in the meantime the Director would make the following recommendations:-

(1) That the Colonial Office be urged as strongly as possible to continue, and if necessary, to extend the protective measures already in force.

(2) That the policy of hunting Fur Seals, in order to obtain funds which could be applied towards the reduction of the cost of the protective measures is to be deprecated in consideration of the small number of these animals known to exist at present.

(3) That the experimental killing be discontinued except so far as is absolutely necessary in order to provide material for scientific study.

(4) That no attempt be made at present to exterminate the Sea Lions; and that if it should be

decided

decided to reduce their numbers on the rookeries, every precaution should be taken to avoid disturbing the breeding Fur Seals.

(5) That Reports be made annually of the condition of the Fur Seal herds.

(6) That the experiment, previously contemplated, of introducing Fur Seals into localities formerly frequented by them be, if possible, carried out. It would be specially desirable to transport Fur Seals from the Falkland Islands to some of the old rookeries of the South Shetlands.

(7) That the recovery of the Fur Seal herds is unlikely to take place and to be maintained if pelagic sealing is carried out to a large extent; and that the Colonial Office be invited to give this matter their further consideration, when the time seems propitious for doing so, with the view of deciding whether it is possible to take any action for securing International agreement on the subject.

Warranted by the Director

The examination of future Annual Reports should show whether there is any sign of the increase of the breeding colonies. If this were to take place, and the rookeries in use at present were to become unduly crowded, it may be anticipated that some of the Seals would spread to other rookeries, and that the old breeding localities, even in the South Shetlands, might become re-stocked by natural means.

The Director asks the permission of the Trustees to forward a copy of this Report to the Colonial Office.

(Sd) S.F. Harmer.

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6

On the Report dated the 24th. July 1923.

Para.2. It cannot, I would suggest, be doubted that the question of international agreement with reference to the pelagic control of whaling and sealing will eventually be necessary, and that it must play a large part in the final settlement of the problems connected with the subject.

Paras 3-10. These are a digest of my reports on the Fur Seal of the Falkland Islands. Among the points dealt with is the interrelation of the fur Seal and the Sea Lion; and in this connection I would venture the remark that I have never advocated the general extermination of the Sea Lion as might be concluded from the last sentence of para.7. My opinions were expressed only in so far as this species exists on the few places where there are fur seal Rookeries.

Para.11. It is certainly clear that the Colony and Dependencies could support a large Fur Seal population if it could be established.

The estimate of £3 per skin is based on the average prices which have been obtained for Falkland Island skins in the past.

Para.12. Since for many years all sealing in the Falklands has been conducted by means of firearms and the form still persists, I would submit that serious apprehension need not be entertained that their farther use within the removal of Sea Lions would be likely to damage the fur seal rookeries.

It is stated in the Report on the Fur Seal of the Pribilof Islands (1914), that the Northern species has exceedingly strong instincts and relatively small intelligence. That this is true also of the local form is borne out by the tenacity with which it adheres to its remaining haunts in spite of almost continuous persecution for many years.

So long as present conditions continue it will not be possible to kill seal in the Colony without the use of firearms, but if these are of the proper sort and carefully used the disturbance may be minimised.

I would beg to state continued adherence to my opinion that the presence of Sea Lions actually on the same rocks as the Fur Seal and sometimes with harems in the middle of the breeding Fur Seal cannot but be detrimental to the smaller species on account of the greatly superior size and strength of Otaria.

On the letter dated the 1st. August 1923.

Para. 3. In 1920/21 11,700 barrels of Elephant Seal oil were produced in Kerguelen. On a basis of 2 barrels per seal this represents the killing of 5,850 animals.

In 1921/22 there was no killing but in 1922/23 14,000 barrels were produced from say 7,000 seal.

These expeditions are conducted by Messrs Irvin and Johnson and start from Saldanha Bay, Cape Colony, the season being

being November to March.

Additional note on the occurrence of Fur Seal in the
Dependencies (South Shetland).

I have been informed today that in 1905 the schooner Edith R. Barcom of Halifax, N.S., Rupe (rt) Balcom, Master, after a five days' run with a fair wind from Punta Arenas reached South Shetland. At that place there were secured, by clubbing, and therefore on the land, 51 Fur Seal: on account of the length and quality of the Fur a price of £11 per skin was secured when ordinary South Atlantic skins were worth 5/- each.

Government Naturalist.

13/3/24.

6

TELEGRAM.

From : The Secretary of State for the Colonies.

To : The Acting Governor.

Dispatched : 3rd April, 1924. Time. 10.55 am.

Received : 4th April, 1924. Time. 10.30 a.m.

GOVERNOR
PORT STANLEY.

.

Send A.

Your despatch 26th April last year 59 guard Jason may be withdrawn expiration of service.

Secretary of State for the Colonies.

During the trip I saw a large number of sea lions. From Volunteer Rocks to Salvador Waters I saw along the beaches from a distance of 1 to 3 miles, through glasses, not less than 1,500 lions. An inspection from the land would multiply this number several times. At various places along the shores and rocks of the whole run these animals were present. The outer tussac Island in Port William swarmed with them as we passed in on the 19th on our return.

I am,

Sir,

Your obedient servant,

(sgd) A. G. Bennett,
Asst. Naturalist.

FALKLAND ISLANDS.

No. 37.

GOVERNMENT HOUSE,

STANLEY,

21st March, 1924.

Sir,

With reference to the Duke of Devonshire's despatch, No. 95 of the 29th of October, 1923, forwarding a report by the Director of the British Museum (Natural History) on Southern Whaling and Sealing, I have the honour to transmit the attached copy of a note by Mr. J. E. Hamilton, Government Naturalist, commenting on the subject matter of the report and of the letter which accompanied it.

2. I enclose also a copy of a report written by Mr. A. G. Bennett, Assistant to the Government Naturalist, on a visit made by him to the Fur Seal Rookery at the Jason Islands recently. There appears to be little doubt, from reports received from this and other sources, that the number of the fur seal is increasing at the protected rookery; Mr. Bennett estimates that there were not less than six thousand seals there in December, as against the 2,237 estimated by Mr. Hamilton in the previous January.

THE RIGHT HONOURABLE

J. H. THOMAS, P.C., M.P.,

SECRETARY OF STATE FOR THE COLONIES.

3.

Note by Mr. J. F. Hamilton, Government
Naturalist, commenting on the Report
by the Director of the British Museum
on Southern Whaling and Sealing, dated
the 24th of July, 1924.

Paragraph 2.

It cannot, I would suggest, be doubted that the question of international agreement with reference to the pelagic control of whaling and sealing will eventually be necessary, and that it must play a large part in the final settlement of the problems connected with the subject.

Paragraphs
3 to 10

These are a digest of my reports on the Fur Seal of the Falkland Islands. Among the points dealt with is the interrelation of the Fur Seal and the Sea Lion; and in this connection I would venture the remark that I have never advocated the general extermination of the Sea Lion as may be concluded from the last sentence of paragraph 7. My opinions were expressed only in so far as this species exists on the few places where there are Fur Seal Rookeries.

Paragraph 11.

It is certainly clear that the Colony and Dependencies could support a large Fur Seal population if it could be established.

The estimate of £3 per skin is based on the average prices which have been obtained for Falkland Islands skins in the past.

Paragraph 12.

Since for many years sealing in the Falklands has been conducted by means of fire arms and the form still persists, I would submit
that/

that serious apprehension need not be entertained that their farther use in the removal of Sea Lions would be likely to damage the Fur Seal Rookeries.

Paragraph 18,
line 12 from bottom.

It is stated in the Report on the Fur Seal of the Pribilof Islands (1914) that the northern species has exceedingly strong instincts and relatively small intelligence. That this is true also of the local form is borne out by the tenacity with which it adheres to its remaining haunts in spite of almost continuous persecution for many years.

So long as present conditions continue it will not be possible to kill seal in the Colony without the use of fire arms, but if these are of the proper sort and carefully used the disturbance may be minimised.

I would beg to state continued adherence to my opinion that the presence of Sea Lions actually on the same rocks as the Fur Seal and sometimes with harems in the middle of the breeding Fur Seal, cannot but be detrimental to the smaller species on account of the greatly superior size and strength of Otaria.

Note on the letter dated the 1st of
August, 1923.

Paragraph 3.

In 1920/21, 11,700 barrels of elephant seal oil were produced in Kerguelen. On a basis of 2 barrels per seal this represents the killing of 5,850 animals.

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These expeditions are conducted by Messrs. Irvin and Johnson and start from Saldanha Bay, Cape Colony, the season being November to March.

Additional note on the occurrence of
Fur Seal in the Dependencies (South
Shetlands.)

I have been informed to-day that in 1905 the schooner "Edith R. Balcom" of Halifax, N.S., Rupe (rt) Balcom, Master, after a five days' run with a fair wind from Punta Arenas, reached South Shetlands. At that place there were secured by clubbing and therefore on the land, 51 Fur Seal: on account of the length and quality of the fur a price of £11 per skin was secured when ordinary South Atlantic skins were worth 59/- each.

(sgd) J. F. Hamilton,
Government Naturalist,
13th March, 1924.

86

Enclosure No. 2 to Falkland Islands Despatch No. 37
of the 21st of March, 1924.

Report by Mr. A. G. Bennett, Assistant to the
Government Naturalist, on his inspection of the
Jason Fur Seal Rookery.

To the Honourable
the Colonial Secretary.

Stanley,
20th December, 1923.

Sir,

Following your instructions I proceeded in
"Afterglow" on the 15th to inspect the Jason Fur
Seal Rookery.

The Rookery was reached in ideal weather shortly
after 9 a.m. on the 17th. On our approach great
numbers of seal left the rock for the water. The
boat was lowered, a breeze started from the S.E.
After pulling round a landing was made on the N.W.
side.

At this spot two half bulls were shot to prevent
accidents. So also were all sea lions visible from
this spot. On mounting the rock pups were thickly
strewn protected by bulls. The cows and young males
had taken to the water.

The two seals killed were got into the boat
and as the weather was just starting to get bad the
"Afterglow" whistled for our return. We got on
board none too soon for the wind.

A count could not be made under the conditions
but from the mass that left the rock, and the pups
and bulls that remained on the small part of the rock
that I could see, I feel certain that not less than
6,000 seals could be there.

Durine/

3. I greatly doubt whether the authorities at the British Museum (Natural History) have any conception of the excessive number of sea lions on the coasts of these islands or of the serious damage done by them to the stocks of fodder for the farms. Farmers go to great expense in planting tussac on their islands and are forbidden by law to kill these animals, which render large areas useless. The Government has been compelled, in some cases, in the interest of the stock owners, to issue permits for killing and driving off the sea lion, but the fringe only of the herds is affected.

I have the honour to be,

Sir,

Your most obedient,
humble servant,
H. Henniker-Heaton.