tain; station 2 was a few yards back from the edge of the stream directly opposite the large cavity in the talus; station 3 was at the water's edge on the opposite side of the stream from station 2, and station 4 was in the cavity at the foot of the talus. At each station the thermometers were placed on the surface of the ground in positions where they would be protected from all direct rays of the sun, and so far as possible from any influence of reflected heat. The conditions at station 4 were somewhat exceptional, but even here the thermometer was not placed under ground, but on the surface of the rocks beneath the overhanging roof of the widely open cavity. The detailed results of the readings are given the following table:

Date 1897	Hour P. M.	Station. 1	2	3	4	Water.	Sky.
Aug. 20.	1.20	72.5°				69°	Sl'tly cloudy
" "	2.15		67°	64°	58°		" "
" "	2.40			63°	57°		" "
" "	2.50			68°	59°		
" "	3.40			66°			Clouds hea'y
" "	4.00			66°	59°		" "
" "	4.30	70°					" "
" 22	1 00	75.5°					" thin
" "	1.30		72°		59°	72°	" "
" "	2.50		72°				Almost clear
" "	3.10		72°				Clear
" "	3.50				61°		"
" "	4.20	75°					Clouds thin
" 24	12.45	69°					" "
" "	1.30	71°	70°			66°	Clear
" "	2.15		70°+		60°		
" "	3.40		68°		60°		
" 30	1.30	77°				71°	Clouds dense
" "	2 20		79°		58°		" thin
" "	3.45		72°		58°		" dense
Sept. 1	2.00	74°				73°	Clear
" "	2.30		77°		58°		"
" "	3.30				58°		"
" "	3.40		74°		58°		"
" 5	2.30			67°			"
" "	3.20		75°		54°		"
" "	4.00					70°	"
" 7	1.10	88°					"
" "	2.45		80°	63°			"
" "	3.00				56°	70°	"
" "	5.40		74°		56°		"
" 9	5.00		79°	66°			"
" "	5.10				56°		"
" "	5.45		76°				"
" 11	3.00		80°	67°		73°	"
" "	3.40		80°		57°		"
" "	5.30		74°		57°		"
" 13	3.00			67°		73°	"
" "	3.30		79°		58°		"
" "	4.20				58°		"
" "	5.30		78°		58°		"
Mean.		74.6°	75°	65.7°	57.8°	70.7°	"

The readings at stations 2 and 4, being the most important to compare, are printed in heavy type. It is to be remembered that these two stations were less than fifty feet apart.

On comparing the means of the readings at stations 2 and 4 it is seen that the boreal mammals lived in an atmosphere the mean temperature of which, during the afternoon, at nearly the hottest part of the summer, was about 17° lower than that of the region occupied by the upper austral fauna. How this relationship might be altered by including observations taken throughout the day and night can only be guessed at, but I think it would remain essentially the same. The question next arises as to how nearly the means of 75° and 58° correspond with the known means, for the same season, of the upper austral zone and boreal zone respectively. Turning to the only published table of zone temperatures* we find that the range of normal mean temperature of the six hottest consecutive weeks at extreme northern and southern localities in the two zones is as follows: upper austral, 71° to 78°; boreal (Canadian), 57° to 64°. In each case, therefore, the mean temperature of the station coincided with that of the life zone to which the fauna of the station belonged.

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*Merriam, Laws of Temperature Control of the Geographic Distribution of Terrestrial Animals and Plants. *The National Geographic Magazine*, VI., pp. 229–238, December, 1894.

THE ANNUAL INSPECTION OF THE PRIBILOF SEAL ROOKERIES.

IN compliance with the Act of Congress of 1893, the U. S. Fish Commission has each year made an investigation respecting the condition of seal life on the Pribilof Islands.

This work, usually performed in connection with former duties on the steamer *Albatross*, was officially resumed by the writer during the past season in connection with the work of the Division of Fisheries.

ing the seals are still diminishing in numbers, and the seal catch on land and sea grows less from year to year. The percentage of decrease in the number of seals born on the islands becomes more noticeable as time passes, the operations of the sealing fleet producing a more marked effect on the reduced herd; in 1897 there was found a decrease of 11 per cent. over the preceding year, and during the present season a decrease of 22 per cent. since 1897. The decrease is best shown in the annual counts of seals born on all rookeries small enough to admit of counts being made. These rookeries were, with one exception, on St. Paul Island. A year ago it was not considered feasible to extend the census of pups to any additional rookeries on account of their size. This year it was found that all the rookeries on St. George Island had shrunken to such a degree that actual counts could be substituted for the various estimates hitherto employed. These counts, in connection with those made regularly on St. Paul Island, will be very useful hereafter. Since 1896 the land catch has been: 1896, 28,964; 1897, 20,890; 1898, 18,032. The pelagic catch has decreased as follows: 1894, 61,838; 1895, 56,291; 1896, 43,917; 1897, 24,322. The pelagic catch for 1898 has not yet been made known; but whether less than in 1897 or not, there is no uncertainty about the diminution of the herd.

On account of temporary difficulties, the fences built for retaining males on land were not as strong as they should have been, and many seals escaped. There will be little difficulty in making them perfect next season. Fencing is practicable, and serves the double purpose of preventing the laborious re-driving of non-killables, and keeping them at home during the presence of the sealing fleet in Bering Sea.

Some of the females branded, for the purpose of lessening the value of their skins, ...n-spicuous about the islands in midsummer.

Certain smooth rookery grounds have been covered with boulders to afford young pups shelter during the battles of the bulls, and attempts will probably be made to repair the injurious worm-infested areas.

A rational scheme of seal ranching is being developed that will practically do away with the moderate natural mortality, and facilitate such handling of the animals as is necessary. Of course, no care of the seals on the breeding grounds will save them, should pelagic sealing continue. The nucleus remaining is sufficiently strong to restore the herd in a few years.

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U. S. FISH COMMISSION.

THE NATURAL HISTORY MUSEUMS OF BRITISH COLUMBIA.

IN proportion to the population and total number of educational institutions, British Columbia has an unusual number of natural history museums. These are exceptionally well administered, considering their isolation from other scientific institutions.

The Provincial Museum at Victoria is by far the most important one in the Province. It is located in the east wing of the Parliament Building, thus having the facilities of the Parliamentary Library. The staff consists of the curator, Mr. John Fannin, a taxidermist and two floor attendants. The Museum was originated some years ago by the government, at the suggestion of Mr. Fannin, whose private collection formed the nucleus of the Museum, after having been the stimulus for its foundation.

As Mr. Fannin's special interest lies in the fauna of the Province, to the knowledge of which he has made important contributions, the trend of the Museum is in this direction, although the other departments of natural history are by no means neglected.

Special attention is now being given to