RESEARCH ON THE ALASKA FUR SEAL HERD IN 1949

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## INTRODUCTION

This report summarizes the biologists' activities under Project 80 in the field season of 1949 on the Pribilof Islands, and their subsequent studies in Seattle. A report for each major phase of the investigation has independently been issued. The present report gives a list of these and adds certain minor biological findings.

Arrangement of report. -- The chapter headings below are arranged alphabetically according to the system used in the Seattle research file of notes, correspondence, and photographs. (In certain categories there is nothing to report for the 1949 season.)

## ANATOMY, MISCELLANEOUS

<u>Blood serum.</u>--For the Serological Museum, Rutgers University, the biologists preserved three samples of serum of the fur seal and one of the Steller sea-lion. Merthiolate was used as a preservative, in place of formalin as used in 1948.

The ear.-Scheffer dissected and photographed the ear of a seal to determine, if possible, whether application of a metal ear-tag would seriously injure the animal. He concluded that it might. The external ear is essentially a furled cartilaginous tube whose opening or slit is normally closed. It appears to act like a Bunsen valve to exclude water when the seal dives. The auditory canal is surprisingly long, 2-1/2 inches, about twice the length of the external ear.

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## BEHAVIOR, MISCELLANEOUS

<u>Swimming.</u>--On 25 July 1949, Scheffer was standing on the peak of the M.S. <u>Penguin</u> travelling in smooth water at 10 knots. He saw two medium-sized fur seals at the bow. They followed a course parallel to the ship for about 20 seconds, leaping out of the water several times. They appeared to be exerting all their effort but the ship overtook them. One can conclude that the fur seal can probably swim no faster than 15 miles per hour.

#### BYPRODUCTS

Liver.--A report on 1947 studies entitled "Vitamin A in Liver of the Alaska Fur Seal" by F. B. Sanford, K. W. Kenyon, and V. B. Schaffer appeared in the April 1949 <u>Commercial Fisheries Review</u>. Another entitled "Vitamin A in Selected, Pale-Colored Livers of Alaska Fur Seals", by V. B. Scheffer, N. L. Karrick, and F. B. Sanford will appear soon.

<u>Miscellaneous.</u>--Forty flippers from 10 bachelor seals were salted down on St. Faul Island, 20 June 1949. The sample was divided in half. One half was sent on 23 August from Seattle to Peter Cooper Corporations and one to Eastman Kodak Company. At no cost to the Government, these firms analyzed the flippers for glue and gelatin content. Peter Cooper Corporations replied on 12 October 1949, as follows:

"Our laboratory has now completed tests on the seal flippers which you forwarded to us for experimentation and have the following to report. "The fresh weight of a set of flippers, four in number, averaged 2.7 lbs. These flippers were dried and salted before shipping to us. It was found that the weight of these four flippers was 3.25 lbs.

"These dried flippers, when received, were processed in the regular manner and were treated with 8% of lime based on the weight of the stock, in a water solution for 25 days. They were washed free of lime and placed in a sulfurous acid bath for 48 hours after which the acid was washed out. The glue was cooked out in three extractions, at successively higher temperatures.

"The resulting glue liquors were dark in color and had a characteristic 'fishy' odor. The glue was of low test and the percentage of glue obtained was much lower than for green salted stock obtained from cattle or other skin trimmings.

"Under these conditions, we do not believe that such seal flippers would have any commercial value for either glue or gelatine. We trust that this information is what you desire and regret that this stock is not interesting for the manufacture of either glue or gelatine."

Eastman Kodak Company replied on 28 December 1949, as follows: "We have conducted some extensive tests with this material but our experiments disclose that it has no value in our operations."

<u>Sea-lion pups.</u>--(The work plan for 1948 included the killing of 100 sea-lion pups, first, to reduce the size of the Northwest Point herd, and second, as a test of the value of sea-lion pup skins on the commercial market. In that year, the St. Paul natives had been reluctant to kill pups in early summer, the best time for this operation. The natives

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wanted to wait until fall, when the pups would be fat and tasty. As a consequence, the control experiment was postponed.)

On 4 June 1949, Kenyon and a native gang killed and salted 35 pups, including all those born to date.

On 22 June, the biologists and gang of 15 men killed and skinned 67 pups. The pups were 1-2 weeks old and their pelts were somewhat coarser than those of early June. About 150 pups were left alive on the rockery. The natives took no carcasses for food. The entire operation was carried out smoothly in two hours' time. The adult animals, except for a bull that had to be shot, moved to the water or to the edge of the rockery.

On 23 August in Seattle, Edward C. Johnston and Scheffer unbarrelled the skins, sent 100 to the Alaska Native Service for use in handicraft, and two to the U. S. Department of Agriculture for pelage study. The Washington Office advised that skins could not legally be sold by the Government as a means of sounding out the market. The biologists do not plan to continue the killings of sea-lion pups on St. Paul Island.

Bull sea-lions for leather. -- On 26 October 1948, C. Howard Baltse, acting chief, Branch of Alaska Fisheries, asked the biologists for help in obtaining a sample of sea-lion hide to be forwarded to Green, Tweed and Company, of North Wales, Pennsylvania. This firm intends to try the hide as a polishing material.

On 6 June 1949, Kenyon and a gang killed, measured, and skinned two bull sea-lions at North East Point (EDM nos. 299 and 300). One weighed 2068 and the other 2069 pounds, in addition to lost blood. From Seattle on 23 August Edward C. Johnston forwarded the skins to Green, Tweed and Company. There have been no further developments at time of writing.

## COOPERATION

<u>G. C. L. Bertram.</u>--Dr. Bertram is Director of the Scott Polar Research Institute and a zoologist of St. John's College, Cambridge, England. He spent several years in the Antarctic, where he developed an interest in seals. In the summer of 1949 he visited the Pribilof Islands under the auspices of the Arctic Institute of North America.

He worked closely with the biologists on St. Paul Island and suggested a number of useful research techniques. He submitted on 18 October 1949 a 6-page report on "Some Present Aspects of the Pribilof Fur seal Herd." His visit was most stimulating and it is to be hoped that other zoologists of his caliber will be offered an opportunity to study the fur seal herd at first hand.

## GROWTH AND MEASUREMENTS

<u>Skulls.</u>--The biologists shipped to the National Museum a large accumulation of skulls of known-age seals. Ford Wilke took measurements of some 200 skulls and will summarize his findings in late 1950 or 1951. He and Scheffer plan to issue a report on the growth of the seal from newborn to age 10. The task is long overdue. It has been postponed from time to time in favor of management research of more immediate application.

Teeth. -- The biologists collected over a thousand seal teeth in 1949, (one per seal) and from each estimated the age of the animal. The use of the right upper canine as an age index is a new technique. Its advantages and limitations are being studied. As a result of the 1949 collection,

the biologists were able to segregate adult from subadult females in the 100-cow kill of 27 October. They also used the teeth as a basis for separating 2, 3, 4, and 5-year old males in analyses of commercial kills.

#### MARKING

Pup tagging.--Kenyon and a crew of Pribilof Islanders tagged 19,960 pups on St. Paul Island in 6-1/2 working days between 29 August and 6 September 1949. They established that the first week in September is the best time for handling pups; a crew of 16 men is the optimum size; the "cattle-ear" tag is better than the smaller ones used in previous years. Yet to be measured is the efficiency of tags applied to the <u>hind</u> flipper, as in 1949. While the tags have the advantage of being easily seen, they may tear loose more easily than tags in the forearm pit. Kenyon's full report on tagging was issued on 30 September 1949.

## MIGRATION, AT SEA

Southward extension. --William H. Sholes, Jr. has reported seeing fur seals in April at a point rather far south for this late in the spring. From the U.S.S. John A. Bole on 28 April 1949 he counted 29 fur seals off San Luis Obispo and Santa Barbara counties, California.

Dr. Carl L. Hubbs, on a cruise from Scripps Institution of Oceanography, La Jolla, California, in January and February 1950, reported that "particularly interesting in some ways was the finding of Pribilof fur seals between the Coronado Islands and Guadalupe, and on the run between Guadalupe and the San Benitos. They were quite readily identifiable as such, rather than sea-lions, some of which we saw rather far from shore, though not so far out as the fur seals" (letter of 7 March

1950 to Scheffer). He also saw in these Meximcan waters northern species of sea birds and seaweeds. The biologists believe that the severe weather of February drove many northern sea animals into southern waters. Considering the fact that Pribilof fur seals range into Mexican waters, should Mexico be included in future agreements for the protection of seals?

#### MORTALITY

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Pup deaths on land. -- Kenyon has presented the results of the 1949 pup counts in his population report, page 52. On six rookeries counted, the mortality ranged from 8.5 to 25 percent, with a mean of 15. This value is considerably higher than the one recently published by the Washington Office, 1.71 percent.

Hookworm. -- A 9-page report entitled "Hookworms in Alaska Fur Seals: Investigation of Mortality on St. Paul Island, Pribilof Islands, in the Summer of 1949", by Scheffer and Kenyon, was sent on 13 October 1949 to Dr. E. W. Price, Zoological Division, U. S. Bureau of Animal Industry, Beltsville, Maryland. Also sent were soil samples, seal viscora, and hookworms. Further collections will be made in 1950.

<u>Pup mortality at sea.</u>—Up to the 10th of April 1950, no less than 26 tags of the C-series had been recovered from carcasses of "silver pups" along the Washington-Oregon coast. The stranded carcasses, tagged as well as untagged, of this year class can be estimated at 600 or more. The additional loss of pups remote from shore can only be guessed at.

In each of the years 1947, 1948, and 1949, twenty thousand pups were tagged. For each year, the number of silver pups recovered later on the northwest coast was, respectively, 3, 2, and 24. This comparison shows clearly the high mortality in the 1949 class.

The biologists examined about 20 carcasses of stranded pups in early 1950 and found them, without exception, emaciated and with empty stomachs. Shortly before the reports of carcasses began to come in from the northwest beaches, severe cold winds lashed the entire coastline A Weather Bureau report for Washington State reveals that "January 1950 was outstandingly the coldest, snowlest month in the 60 years of state climatic record." The biologists conclude that the storms of January and February prevented many young seals from feoding. The seals lost their protective layer of blubber and eventually became chilled to such a degree that they could not recover.

#### PELAGE

An abnormal bachelor was killed on St. George Island, 10 July 1949. The left flipper had apparently been bitten off in infancy and the fur had grown over the stump so tightly that, when the skin was blubbered no armhole was apparent on the left side.

#### POPULATION, METHODS OF ESTIMATING

Synthesis of counted elements in the herd. -- On 10 March 1950 Kenyon submitted a 62-page report on "Population Estimates of the Alaska Fur Seal Herd in 1949." He followed four main approaches to the solution. In his summary he stated:

"Herd size as of August 10, 1949

#### Nethod

Total herd

Balloon camera.--On 12 July the biologists took photographs with a camera suspended from a captive balloon, at Northeast Point. Panchromatic, infra-red, and Kodachrome films were used at elevations of 150-350 feet. None of the resulting negatives was satisfactory. The images were blurred, especially from twisting of the camera at the end of its 50-foot suspension line. It is likely that experimentation with this method of photography will be discontinued.

Estimating the escapement of 4-year males.--G. Donald Gibbins of the Fouke Fur Company has suggested on several occasions that a count of the 4-year olds dismissed from killing fields would serve as a basis for estimating the escapement of 3-year olds in the previous year. The biologists have been rather skeptical of the value of such a count. They have proposed the arguments that, first, the 4-year old seal is often indistinguishable from the 3, the 5, and even the 6-year old; second, that many individuals recur in drives. That is, certain rejected animals are redriven in a later round, or rounds, and are thus counted more than once. A third source of error is the dismissal of 4-year olds, <u>uncounted</u>, from the drive as it progresses from beach to killing field. As an experiment, however, the biologists arranged in 1949 to have two of the older natives assigned the task of counting male rejects thought to be 4-year olds. The results, given in Table 1, show a rather surprising correspondence between the counts of the two men. TABLE 1.--NUMBER OF ESTIMATED 4-YEAR MALES AMONG THE SEALS REJECTED IN DRIVES ON KILLING FIELDS, ST. PAUL ISLAND,

10 JUNE TO 27 JULY 1949

Round	Midpoint	Estimated by Tetoff	Estimated by Oustigoff	Mean
Pro-season	(1)	396	415	406
1	20 Juné	707	764	735
2	25 June	916	1,016	966
3	30 June	818	902	860
4	5 July	1,272	1,312	1,292
5	10 July	1,113	1,229	1,171
6	15 July	1,912	1,989	1,950
7	20 July	2,119	2,281	2,200
8	25 July	2,757	3,121	2,939
		angle and splittings	Circlesino en elle glagia	
		12,010	13,029	12,519
(1) <sub>Th</sub>	ree kills only,	10, 15, and 17 Ju	me	

Kenyon's population report for 1949 (1950, p. 38), gives the estimated number of 4-year males as follows:

Beginning of 1949		٠	٠	•	٠	٠	•	13,006
Killed in 1949	•		•	•		•	٠	5,036
As of 10 August 1949	•	٠	•	•	•	•	•	7,970

or in round numbers, 8,000

If we reduce the Texoff-Oustigoff count by one-third, to compensate for the recurrence of seals in drives, we arrive at a value approximating Kenyon's 8,000. The percentage of recurrence in drives can only be guessed at, however. The biologists prefer to wait for supporting evidence before using the Tetoff-Oustigoff count in seal population estimates. They feel, nevertheless, that the count was interesting and worth-

Waights of fur seal skins. -- As described in the 1949 work plan, there are available each summer three sets of data indicating the sizes of fur seals killed:

- 1) The field record showing the body lengths in inches.
- 2) The factory record showing the raw skin sizes as small, small-medium, and so on.
- 3) The factory record showing the finished skin sizes
- as small, small-medium, and so on.

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In 1949 the biologists explored the possibility of obtaining a fourth set of data, the weights of the freshly-blubbered skins, They hoped that a random sample of skin weights from the killing field might answer the question, "What actual ages of seals are we killing, and in what proportions?" It has been suggested that the skin weight, dependent upon length as well as girth, is a better index of the true age of a seal than is the body length alone.

The biologists decided to establish, first, a correlation between body length and akin weight. They identified sample skins on the killing field by a numbered fiber disc fastened through an armhole of each skin and bearing the same number as the field length in inches. (Later it was found that a glazed cloth tag is preferable to a fiber one. It goes through the wringer more easily.) The field length was taken by the scaler, John Hanson, in the usual manner. On the following day, the skin was weighed to the nearest tenth-pound on a Chatillon dynamometer calibrated to ten pounds by twentieths of a pound. The date recorded was the date of the kill, not of the weighing. About 50 skins for each inch length were weighed; fewer for the very small and very large seals, unimportant commercially. The total was 558 seals (Tables 2-4). In addition, during the third quarter, the biologists weighed the skins of 29 known-age, 2- and 4-year old males (Table 5).

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## TABLE 2 .-- NUMBER OF SEAL SKINS WEIGHED ON

## ST. PAUL ISLAND, ALASKA, 1949

## (Bachelors selected at random on the killing fields; skins weighed to nearest 0.1 pound after being blubbered and wrung.)

Field length of geal, inches	First quarter, 17 June- 26 June	Second quarter, 27 Juns- 6 July	Third quarter, 7 July- 16 July	Fourth quarter, 17 July- 27 July	Totals
38	l	2	1	4	8
39	9	18	10	ц	48
40	11	11	12	15	49
41	11	11	11	21	54
42	11	11	11	13	- 46
43	11	11	11	21	54
44	11	11	11	11	44
45	11	11	11	12	45
46	15	11	11	12	49
47	15	11	11	11	48
48	11	13	11	11	46
49	3	15	10	13	41
50	2	5	6	2	15
51	2	2	4	3	11
Totals	124	143	131	131	558

Field length of seal, inches N				Weig	ght of a	skin, po	unds			
		N	0bser ran	rved g <b>s</b>	Mean	SE Mean	SD	sie Sid	A	SE V
	38	8	3.2	4.2	3.7	0.12	0.33	0.08	9.1	2.25
*	39	48	3.1	4.6	3.9	0.05	0.33	0.03	8.6	0.88
	40	49	3.3	5.8	4.3	0.07	0.48	0.05	11.3	1.14
	41	54	3.7	5.0	4.4	0.04	0.31	0.03	7.0	0.67
	42	46	3.9	6.1	4.7	0.07	0.50	0.05	10.7	1.13
	43	54	4.0	6.7	5.0	0.09	0.62	0.06	12.4	1.19
	44	44	4.0	7.5	5.5	0.11	0.75	0.08	13.6	1.45
	45	45	4.6	7.2	5.7	0.09	0.59	0.06	10.3	1.08
	46	49	5.1	7.3	6.0	C.07	0.50	0.05	8.3	0.85
	47	48	5.4	7.1	6.2	0.06	0.40	0.04	6.5	0.66
	48	46	5.5	7.7	6.4	0.07	0.51	0.05	8.0	0.83
	49	41	5.2	8.5	6.7	0.10	0.62	0.07	9.3	1.02
	50	15	6.0	8.0	7.0	0.16	0.63	0.11	9.0	1.64
	51	11	6.2	8.5	7.3	0.21	0.69	0,15	9.5	2.02

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## TABLE 3 .-- PARAMETERS OF SKIN WEIGHTS



Fig. 1.--Weights of skins of known-length seals, St. Paul Island, Alaska, 1949. (Field length of seal in inches; weight of skin, blubbered and wrung, in pounds. The length of the vertical line represents the observed range in weight; the circle represents the mean weight. From data presented in Tables 2 and 3.)

## TABLE 4.-SKIN WEIGHTS BY SEASON

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# (For the number of skins sampled in each quarter, please refer to Table 2.)

## Weight of skin, pounds

Field longth	os n						
of seal, inches			I	II	III	IV	Season
38	8		3.5	3.4	4.1	3.7	3.7
39	48		4.0	3.7	3.7	3.7	3.9
40	49		4.5	4.3	4.4	3.9	4.3
41	54		4.5	4.4	4.4	4.1	4.4
42	46		409	4.7	4.7	4.6	4.7
43	54		5.0	5.1	5.3	4.7	5.0
44	44		5.5	5.7	6.0	4.9	5.5
45	45		5.5	5.8	5.6	5.7	5.7
46	49		5.9	6.0	6.0	6.0	6.0
47	48		6.3	6.0	6.2	6.0	6.2
48	46		6.4	6.4	6.3	6.4	6.4
49	41		7.3	6.6	6.7	6.4	6.7
50	15	þ	7.4	6.7	7.0	7.0	7.0
51	ц		8.1	7.5	6.7	7.2	7.3
Weighted	mean		5.4	5.3	5.5	5.1	5.3

#### TABLE 5. -- WEIGHTS OF BLUBBERED SKINS FROM KNOWN-AGE SEALS,

## ST. PAUL ISLAND, ALASKA, 19-27 JULY 1949

## (Sampled from the commercial kill and not truly representative of age classes. Thus, the sampled animals are the <u>larger</u> 2year-olds and the <u>smaller</u> 4-year olds.)

	No. da	Field 1 inc	length, ches	Skin po	Skin weight, pounds		
3	No. 11 sample	Mean	Range	Mean	Range		
Two-year-old males	23	40	36-46	3.8	3.0-4.5		
Four-year-old males	6	45	44-47	5.3	5.4-6.5		

In studying Tables 2-4 and Figure 1 you will observe great variation in the weight of skin of a seal of given length. Thus, to use the skin weight as an indication of body size, or age, one would be obliged to use the mean value of a rather large sample. The biologists have used this method in analyzing an early-season and a late-season kill (Fig. 2). You will also observe that the weight of the blubbered seal skin does not change appreciably throughout the season. This means that, in a large group of seals selected by clubbers on the basis of length, the early arrivals are no larger in girth than the late arrivals. It does not necessarily mean that they are no fatter. The weight of the blubbered skin gives little, if any, evidence as to the fatness of the animal.

## REPRODUCTION, ANATOMY

Semility in males. --With the question in mind "Why are idle bulls, to all appearances healthy, unable to capture end hold cows?", the biologists set out on 1 August 1949 to shoot ten idle bulls for study purposes. They hoped to preserve the testes for sperm counts. They found however, that they were a week or more too late, and were able to shoot only three. The idle bulls were not clearly distinguishable from haren bulls. On or about 20 July 1950 a better sample will be taken.

Premature pups. -- Three prematurely born pups were collected in 1949, the smallest only 4.3 pounds in weight, as compared with the normal of 10% or 11.

Growth of the testes and baculum. -- A manuscript by Scheffer describing studies of testes and bacula in known-age seals from newborn to age nine years will be published in 1950 in the "Journal of Mammalogy."

## Abstract:

"On the basis of the gross development of the testes and baculum, male fur seals fall into three groups: juvenile (ages 1 to 3 years), adolescent (ages 4 to 5 years), and adult (ages 6 to 18 years or more). The male reaches prime condition as a breeding animal in about the tenth year. Variability in testes weight is greatest in the third year. From adolescent seals, the testes collected in June are not significantly larger than those collected in July. Variability in baculum length is not marked. The growth of the baculum seems to progress at a steady rate, before, through, and after puberty, and to this extent does not resemble the growth of a secondary sax character. The distribution of baculum lengths is evidence of the distribution of ages in commercial killings. Indications are that baculum sampling may become an important new tool in analyzing the age composition of the killings."

Percentage of nonpregnant cows. -- A "Preliminary Report on an Experimental Kill of 100 Female Fur Seals on St. Paul Island, Alaska, 27 October 1949" revealed that 17 percent of adult rookery females had not born a pup that year. In consideration of this and other evidence, a value of 20 percent has tentatively been established for use in population studies.

## SEALING, COMMERCIAL

Ages of seals killed. -- In the era of modern management on the Pribilofs, covering a period of about 30 years, more than a million seals have been killed and individually measured in inches from snout to base of tail. The measurement of each seal has been translated into estimated age, and the collective age records have been used by the Superintendent in preparing the annual "computation" or "census" of seals. Serious doubts have been raised from time to time as to the accuracy of age determination from body length. Some objections are listed, as follows:

1. The field length is dependent to a certain extent on the position of the seal, whether relaxed or stiff, whether lying on smooth ground or on a clump of grass. The St. George fields are particularly rough.

2. The seal naturally exhibits great variation in length and weight, as verified by recent measurements of known-age animals.

3. These recent measurements show a poor degree of correspondence with the age-length standards established between 1913 and 1918. The reason has not been determined, although studies are in progress. One thought is that the average 3-year-old in the present saturated herd is smaller than the corresponding animal 30 years ago when the age standards were established. At that time, the available amount of food per seal was undoubedtly greater.

4. The biologists feel that the scaler unconsciously tends to place a slightly off-size animal into the category of a "killable". The killable class nominally includes 41- to 45-inch, whereas a 40-inch or a 46-inch animal is frequently read into the acceptable group.

5. The distribution pattern of field lengths on the Pribilof Islands should, but does not, agree with the pattern of skin sizes in the St. Louis processing plant. For example, in a year when, the factory records showed a number of "smalls" about 15 percent above normal, the killing records did not show excessive numbers of short seals.

In seeking for an index, better than body length, of the true age of a seal, the biologists in 1949 studied the skin weight and the baculum length. They sampled an early season kill and a late season kill, as shown in Table 6.

## TABLE 6 .--- NUMBER OF SEALS SAMPLED IN EARLY AND LATE

STAGES OF THE SEASON, 1949

		×	Numbers of each age (on basis of length)	Number of skins weighed	Number of bacula measured
29 on	June, T-L-K	field 2	12		
	wea	~	10×		
	Age	3	449		4
	Age	4	52		
		Total	513	513	479
26 on	July, Polov	ina field			
•	Age	2	50		
1	Ago	3	2,377		
	Ago	4	118		
		Total	2,545	500	48 <b>9</b>

The results are shown graphically in Figure 2.

## (See next page)

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Fig. 2. Size distribution of seals killed in early season and late season, and three methods of showing body size. (From Table 6. The area of each histogram represents a frequency of 100 percent and thus the histograms are comparable. For skin weights, the square roots of the observed values have been used.)







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26 JULY

## TAXONOMY

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Lectotype. -- When Jordan and Clark proposed the name <u>Callorhinus</u> alascamus for the fur seal, they did not designate a type specimen (Jordan, David Starr, and George A. Clark. 1899. The species of Callorhimus or northern fur seal. In the Fur seals and fur-seal islands of the north Pacific Ocean. Govt. Printing Office, Washington, D. C., vol. 3, p. 2). The skulls and skins which they commined, however, remained in the Stanford University Natural History Museum and have recently been studied by William V. Mayer. Dr. Mayer now proposes that one of them, the mounted skin of a femalo, no. 4455, be considered a lectotype (Journ. Mamm., v. 30, pp. 316-317, 1949). His actions will be of interest to systematic scelogists since it provides a specimen to which to tie the name "alascanus". Since, however, alascanus is no longer a valid name, the designation of a lectotype is of minor importance.