

**Article XXIV.—MAMMALS COLLECTED IN ALASKA BY
THE ANDREW J. STONE EXPEDITION OF 1903.**

By J. A. ALLEN.

The mammals obtained by the Andrew J. Stone Expedition of 1903 number 873, including about 30 large mammals (moose, sheep, bears, etc.), and represent 28 species. About 140 specimens were collected on the Bering Sea side of the Alaska Peninsula, near Muller Bay (Port Muller of most maps), and the remainder on the Kenai Peninsula, principally near Seldovia. A few bear skulls were obtained on Kadiak Island.

Mr. Stone, with his two assistants, Messrs. Malcolm P. Anderson and Belmore H. Browne, who also accompanied him in 1902, left Seattle, April 24, and after a sea voyage of about twenty days reached Sand Point, Alaska, May 14. Two hunters were engaged at Unga Island, and the head of Portage Bay was reached on the night of May 15. The next day the party (five men in all) began to transport their supplies over the portage to Herendeen Bay, this arduous work occupying four days; the snow being deep and in places soft, the work proved difficult and exceedingly fatiguing. On May 23 the first hunting camp was established, well up on Muller Bay, for the purpose of obtaining a series of the large brown bears which inhabit the Alaska Peninsula west of the tree line. The first bear was secured on the 24th, a fine large female, with two cubs, one of which was secured alive and sent to the New York Zoölogical Society, and is still (July, 1904) living in the Society's Garden. The next, a fine old male *Ursus dalli gyas*, was killed on the 29th, the skin and entire skeleton being preserved; it proved to be one of the largest bears ever taken on the Alaska Peninsula, its approximate weight being 1600 pounds. By the evening of June 12 ten fine specimens had been obtained, seven of which were fully adult; nine others were seen. This ended the bear hunt, and preparations were immediately made to return to Sand Point, which was reached on the evening of June 18.

Mr. Anderson had in the meantime devoted himself to the collecting of small mammals, of which he obtained six species, including a good series of topotypes of *Citellus stonei*.

On June 21 the party left Sand Point for Kadiak Island and Cook Inlet. A short stop was made at Kadiak Island on June 24, and Seldovia was reached the next day; on the 26th the collecting of small mammals and birds was begun and prosecuted vigorously at this point till August 3. A little collecting was done at Barabori, near Homer, August 6-8, when the work was transferred to Sheep Camp, on Sheep Creek, and continued there till September 9, and later at Upper Sheep Camp, September 12-21, and at Moose Camp from September 25 to October 8.

In order to obtain sheep, moose, and caribou it was necessary to establish a series of camps during August at suitable localities for the fall hunt for these animals, in locating and preparing which Mr. Stone was greatly indebted to the voluntary services of Mr. John Gillpatrick, "sailor and hunter," of whose efficiency Mr. Stone speaks in his report in the highest terms. On August 3 Mr. Stone, with his two assistants, three Indian helpers, and Mr. Gillpatrick, left Seldovia with the supplies for these camps, which were most judiciously selected, as shown by the results of the fall hunt—3 bears, 16 white sheep, and 6 moose, all in good fall pelage, which were preserved with special care for mounting as groups. Also several hundred small mammals and many birds were obtained at these camps. The hunt for caribou, however, proved a failure, the small band of *Rangifer stonei* supposed to be yet ranging in the Caribou Hills having crossed the country into the mountains seat of Kussilluf Lake, about twenty-five miles from their old range. Seldovia was reached on the return trip, October 10, with the camp outfit and specimens, thus ending a very successful season's work.

The following brief account of the principal localities at which collections were made is compiled from Mr. Anderson's field notes.

Herendeen Bay and Muller Bay, Alaska Peninsula, May 19—June 13.—At Herendeen Bay, May 19, "the vegetation was

just beginning to feel the effects of spring. The long grass that covers the hills was dead and matted down. The alders, which form almost the only ligneous vegetation, were just beginning to show their leaf buds. At Muller Bay, which we reached on May 22, conditions were much the same; but before we left there on June 13, new grass was beginning to show beneath the old, and the alders were in blossom."

Seldovia, June 26–August 3.—Seldovia is near the southwestern point of the Kenai Peninsula. "Here the hills are forested with spruce, with here and there a small grove of poplars. The woods are open in but few places, there being for the most part an undergrowth of alder bushes, devil club, salmonberry, and other plants that are less conspicuous."

Sheep Camp, Sheep Creek, August.—At "our upper camp on Sheep Creek, I found conditions somewhat different from those existing at Seldovia. The woods here are decidedly mixed; poplars and birches intermingle with spruces, and in the bottomland of Sheep Creek, as well as on the hillsides, there are large patches of alder bushes and willows."

Caribou Camp, September 3–9.—This camp was at timberline, and "the bare hilltops and grassy hillsides afforded a new kind of field for trapping. . . . In ascending the mountains above timberline, one passes through a belt of alders and comes out upon a comparatively level, very open country, which rises gradually and finally merges into the actual mountains. This 'level' country is cut up into little hills and hollows. The hilltops are covered with a dense mat of vegetation composed largely of 'spruceberry' (black crowberry) bushes, cranberry and blueberry bushes, and several forms of moss and lichen. The hollows and valleys have deeper soil, with grass and various other herbaceous plants."

Moose Camp, September 25–October 8.—Also at timberline. "Here, where the spruce forest ends, a region of tall grass and patches of alders begins."

The fauna of the western end of the Alaska Peninsula is of course very different from that of the Kenai Peninsula, only three of the species found near Muller Bay being taken on

the Kenai Peninsula, namely, *Marmota caligata*, *Microtus operarius*, and *Sorex personatus*.

This is the third and last of the series of expeditions to Alaska and northern British Columbia, organized under the leadership of Mr. Andrew J. Stone, to secure Arctic mammals and birds for this Museum. The means for this enterprise were provided in 1901 by friends of the Museum (see this Bulletin, XVI, 1902, p. 215), and the generous supporters of this work have every reason to feel gratified with the results. The Museum has by this means been placed in possession of the finest series of the large game animals of subarctic America anywhere extant, besides several thousands of small mammals, representing abundantly nearly all the species of the regions visited. Material of the best character has been provided for groups of the big Alaska Brown Bear, Alaska Black Bear, Alaska Grizzly, the big Alaska Moose, two species of Caribou, two species of Mountain Sheep, the Mountain Goat, and the Sitka Deer. Among the smaller mammals several new species were discovered, others previously little known have been secured in large series, and the large number of birds obtained has greatly enriched our ornithological collection.

1. ***Alce*¹ *gigas* Miller.** ALASKA MOOSE.—Six specimens, including three adult males, an adult female, a two-year-old male, and a male calf, taken in the rolling hilly country north of Chugachik Bay, Sept. 25–Oct. 2. This series includes “one of the largest and finest bulls ever secured on the Peninsula,” the whole forming as complete a group for mounting “as could be selected from a thousand.” They were prepared with special care, with a view to their use for this purpose.

2. ***Rangifer stonei* Allen.** STONE’S CARIBOU.—No speci-

¹According to Dr. T. S. Palmer (Index Generum Mammalium, 1904, p. 86) *Alce*, as a generic name for the Old World moose (elk) dates from Frisch, 1775, thus antedating the form *Alces* of Gray (1821) and of later authors, and also Blumenbach’s use of *Alce* (1799) for the extinct Irish Elk (*Megaceros hibernicus* Owen, 1844). Hence *Paralces* Allen, 1902, is a synonym of *Alce* Frisch, 1775.

mens were obtained, although a week was spent in search for them in the Caribou Hills, near Seldovia, where a small band was supposed still to range. It was found later that they had gone across into the mountains to the east of Kussilluf Lake, about 25 miles from their old range.

3. ***Ovis dalli kenaiensis* Allen.** KENAI WHITE SHEEP.—Sixteen specimens—7 adult females, 4 adult and 1 young adult rams, and 2 male and 2 female lambs; also an additional head. The four adult rams were taken in the mountains at the head of Kussilluf Lake, by Mr. Herbert, Oct. 3–5, and the others in the Sheep Mountains, at the head of Sheep Creek, Sept. 11–20. No adult rams were met with during the Sheep Mountain hunt, and a special trip later of 400 miles' travel was made for old rams. Although the localities where the sheep were taken were only five miles apart, the point where the rams were obtained could be reached only by a circuitous journey of about 200 miles and return.

These specimens are in good fall pelage and furnish the long-desired material for a group, the specimens of this species obtained on previous expeditions having all been in the short summer coat.

4. ***Sciurus hudsonicus* Erxleben.** HUDSON BAY RED SQUIRREL.—Thirty-three specimens, taken as follows: Seldovia, 4, July 4–21; Sheep Creek, 20, Aug. 14–Sept. 1; Moose Camp, north of Chugachik Bay, 8, Sept. 28 and Oct. 2–7. They are thus nearly all in summer pelage, even the October specimens having acquired but little of the winter coat.

"The Red Squirrel is rather scarce in the woods at Seldovia. Although I saw the signs of several I did not secure any till some were brought in by natives during July." On Sheep Creek they "were very common in the spruces, both in the valley and on the hills. On August 16 I shot a red squirrel from a large poplar. He was rapidly cutting the leaves from the tree, and upon examination I found that each leaf that he had cut bore an abnormal growth [gall], probably caused by the sting of an insect in laying its eggs. I opened

a number of these growths and found them filled with plant lice; one, however, had a large white larva in it. As there were many leaves on the poplar which did not have this abnormality, and as no leaves were cut which did not bear it (I examined a large number), the inference is that the squirrel desired these excrescences for food."—M. P. A.

5. ***Citellus stonei* Allen.** STONE'S GROUND SQUIRREL.—

Citellus stonei ALLEN, Bull. Am. Mus. Nat. Hist., XIX, 1903, pp. 533 and xvii, Oct. 10, 1904. Type locality, Stevana Flats, Alaska Peninsula; erroneously given in the original description as Wrangel, Alaska (corrected, *l. c.*, p. xvii).

Fifteen specimens (all practically topotypes), Alaska Peninsula, taken as follows: Herendeen Bay, 7, May 19 and 20; Muller Bay, 8, May 24–June 8.

The type was collected by Mr. Stone, in the hills north of Stevana Flats, June 7, 1902; the present series was taken in the same immediate region, and all within a distance of thirty miles along the coast at Muller Bay. They are all practically indistinguishable from the type, having been taken at the same season. The original description therefore requires no modification further than to add the measurements as taken by the collector from the fresh specimens, as follows: 5 males, total length, 361 (341–383—only one specimen above 365 and only one below 355); tail vertebræ, 94 (83–110); hind foot, 59 (56–63); ear, 15.4 (14–16): 10 females, total length, 333 (314–352); tail vertebræ, 86 (78–94); hind foot, 56 (54–57); ear, 13.7 (12–15).

Spermophiles, says Mr. Anderson, were living at Herendeen Bay "in the dryer portions of a valley which extends back from the head of the bay. In crossing from Portage Bay to the Bering Sea side of the peninsula a number were seen running about in the snow which then covered the higher parts of the trail. They were taken later at Muller Bay, where they had burrows in banks and hillsides."

6. ***Marmota caligata* (Eschscholtz).** HOARY MARMOT.—Seven skins and skulls and 3 additional skulls, Seldovia, July

17-28. A single barren female was taken at Muller Bay, where it had its burrow on a hill near the shore. No others were seen on the Alaska Peninsula, nor even signs of any. At Seldovia, where the specimens were obtained from natives, they were said to inhabit rocky hills at the head of the bay on which Seldovia is situated.

7. *Evotomys alascensis* Miller. ALASKA RED-BACKED VOLE.—Six specimens, Muller Bay, May 31-June 12.

This species differs strikingly from *E. dawsoni* in its much lighter colors, the red of the back being very much paler and the sides much lighter, the ventral surface pure light gray, and the tail rusty buff all around instead of dusky above. It is about as much lighter than late spring specimens of *dawsoni* as the late spring pelage of *dawsoni* is lighter than the late summer pelage of *dawsoni*. *E. alascensis* also differs strongly in cranial characters from the *dawsoni* group.

The two males measured respectively in the flesh, total length, 144, 146; tail vertebræ, 32, 35; hind foot, 19, 20; ear, 13, 14. The 4 females are smaller: total length, 137.5 (134-140); tail vertebræ, 33 (30-35); hind foot, 19 (18.5-20); ear, 12.9 (12-13.5).

These specimens have been compared with six topotypes of *E. alascensis*, kindly loaned me by Dr. F. W. True, Head Curator of the Department of Biology, U. S. National Museum. They differ only in the coloration of the ventral surface, which in the Muller Bay (June) specimens is clear ashy white, and in the St. Michaels (October and November) specimens is more or less buffy, a difference clearly due to difference of season.

This species was apparently rare at Muller Bay, where persistent trapping yielded only six specimens.

8. *Evotomys dawsoni orca* (Merriam). ORCA RED-BACKED VOLE.—One hundred and forty-seven specimens, taken as follows: Seldovia, 45, June 27-July 31; Barabori, 8, Aug. 6, 8, and 28-30; Sheep Creek, 5, Aug. 21-25 and Sept. 12; Caribou Camp, 7, Sept. 3-9; Moose Camp, 82, Sept. 25-Oct.

8. Of this number only about 23, or about one sixth, are fully adult. These consist of 14 females and 9 males, and measure as follows: 9 males, total length, 143 (140-149); tail vertebræ, 35 (32-38); hind foot, 19 (18-20); ear, 13 (12-14): 14 females, total length, 144.4 (137-153); tail vertebræ, 34 (30-40); hind foot, 19 (18-20); ear, 13.5 (12.5-15). Of the remainder quite a number are so young as to fall below 110 in total length, while about one third fall between 110 and 120, and another third between 120 and 130.

These statistics bear out the statement that *orca* averages distinctly larger than true *dawsoni*.

This species was found to be very plentiful at all points where trapping was done. Their haunts are "logs and mossy banks and stumps in the spruce timber, but in a number of instances they were found digging burrows in moist earth in interspaces in the timbered region. Specimens were often found with their mouths filled with the seeds of some herb."

9. ***Microtus miurus* Osgood.** ALASKA MOUNTAIN VOLE.—One hundred and twenty-six specimens, all taken at Sheep Creek, Sept. 12-21. Only 24, or about one fifth, are adult, and of these only five are males, although the sexes are about equally represented in the series as a whole. Measurements: 5 males, total length, 154 (145-158); tail vertebræ, 26 (22-29); hind foot, 19.8 (19.5-20); ear, 13.4 (12-14): 19 females, 149.7 (140-159); 29 (24-30); 19.7 (19-20); 13.2 (12-14).

According to Mr. Anderson's notes this species was found "only about the edges of some mossy swamps in little valleys between the hills." It was taken only at the "upper sheep camp," on Sheep Creek.

10. ***Microtus operarius* (Nelson).** NELSON'S VOLE.—One hundred and seventy-three specimens, collected as follows: Muller Bay, 96, May 23-June 12; Seldovia, 48, June 27-August 19; Sheep Creek, 5, August 20-22; Barabari, 4, August 24, 28, and Sept. 1; Caribou Camp, 8, Sept. 4-8; Moose Camp, 12, Sept. 27-Oct. 8.

This was the only species of *Microtus* taken on the Alaska

Peninsula, where it was abundant, and it seems to be equally abundant on the Kenai Peninsula, where it was found at all points where collections were made. There is no appreciable difference between specimens from Muller Bay and the Kenai Peninsula. There was, as would be expected, a much higher proportion of adults in the Muller Bay series, taken in May and early June, than in the Kenai series, taken much later in the season. In the former about one half were adult, and in the latter only about one fifth. The Muller Bay adults measure as follows: 20 males, total length, 174.5 (160-192, with only two above 184); tail vertebræ, 41 (38-50, with only two above 45); hind foot, 21 (20-22); ear, 12 (11-13): 18 females, 168 (155-180); 40.7 (36-50, only two above 45); 20.6 (20-21); 12 (11-13).

At Muller Bay, says Mr. Anderson, "the runways of this animal were seen almost everywhere I went, especially in the lowlands in places where the soil was not moist. . . . During our stay at Muller Bay almost every adult female obtained was found to have from six to eight embryos." In Seldovia it was found "most abundant in some coarse grass growing beside a salt-water slough near the village. In this they had burrows and long distinct runways. Their runways were also often found in the more common grass which grows in most openings, and numbers were trapped in such places."

11. *Synaptomys dalli Merriam.* DALL'S LEMMING MOUSE.—Sixty-six specimens, taken as follows: Seldovia, 40, June 27-August 3; Sheep Creek, 12, August 14-26; Barabari, 2, August 30; Caribou Camp, 5, Sept. 7-9; Moose Camp, 7, Sept. 25-Oct. 5. About one third are adults, of which only 4 are females, 15 being males. They measure as follows: 15 males, total length, 130 (124-134); tail vertebræ, 23.7 (21-25); hind foot, 19.3 (19-21); ear, 13.7 (12-15): 4 females, 132 (129-134); 25.5 (24-27), 19 (18-20), 12.5 (13-14). The females average larger than the males, but they are also obviously older than the average of the males, the difference in size being evidently due to difference of age.

At Seldovia this species was found "most frequently in

little marshy meadows, but was also sometimes trapped in timber in places like those inhabited by red-backed mice." At Caribou Camp and at Moose Camp they were also found in similar situations.

12. **Dicrostonyx nelsoni** Merriam. NELSON'S LEMMING.—Three specimens, 2 adult and 1 young, Muller Bay, June 5, 7 and 12.

"Not at all common. Their burrows were round, clean-cut holes about an inch and a half in diameter, running directly down into the earth for some inches. In most places I saw no signs of the earth which had been removed in making the burrow."—M. P. A.

13. **Fiber spatulatus** Osgood. NORTHWEST MUSKRAT.—One specimen, Seldovia, Alaska, Oct. 13. Total length, 490; tail vertebræ, 215; hind foot, 70; ear, 20. The skull is so badly crushed that it is not available for critical comparison with allied material.

14. **Erethizon epizanthus myops** Merriam. ALASKA PORCUPINE.—One specimen, Seldovia, Aug. 1, brought in by an Indian.

"Occasionally found in the neighborhood of Seldovia."—M. P. A.

15. **Lepus americanus dalli** Merriam. DALL'S VARYING HARE.—Nine specimens, of which only 1 is fully adult, 6 are about one fourth grown, and two are about three fourths grown. The adult is from Barabari (Sept. 9) and the young are all from Sheep Creek (Aug. 11–30).

This is a very dark form of the *L. americanus* group, the prevailing color in summer pelage of the adult and the two nearly grown young being blackish, and hence very much darker than *L. americanus saliens* in corresponding pelage; but there are no very obvious cranial differences between the two forms.

Lepus americanus dalli was based on a skull from the Nulato River, and the external characters of the form have

not yet been made known. These specimens are referred to it provisionally, in preference to adding a new name in this very imperfectly known group.

Summer specimens of hares of the *L. americanus* group seem difficult to capture, and very few are yet extant in museums. Mr. Anderson says of the present specimens: "The first rabbits seen on the Kenai Peninsula were those taken on Sheep Creek in August. Here they had numerous runways in the tall grass of the bottomland among the alders and willows. I succeeded in shooting a number of young, but did not secure any adults until Mr. Browne caught one in a snare. Later two [young] adults were taken in a dry, grass-grown flat near our 'Barabori' camp." At Moose Camp (at timberline), although no specimens were secured, "the number of runways was sufficient to show that they were present in numbers, showing that they range both in lowland and highland."

16. ***Phoca richardsi* (Gray).** HARBOR SEAL.—One specimen, young, with the permanent dentition not fully developed.

17. ***Vulpes alascensis* Merriam.** ALASKA RED FOX.—Two specimens, skins and skulls, male and female, Muller Bay, June 2. Male, total length, 982; tail vertebræ, 445; hind foot, 190. Female, 929, 394, 165.

18. ***Vulpes kenaiensis* Merriam.** KENAI RED FOX.—One specimen, skin and skull, Kenai Peninsula (exact locality and date not recorded).

This species was originally described from a skull, and the external characters do not appear to have as yet been described.

Compared with *V. alascensis* the coloration is much darker throughout, the golden fulvous of *alascensis* being replaced with dark rufous, with much more and deeper black on the ears and feet, tail more fringed with black and with a larger apical area of white; lower back varied with buffy gray; chin strongly dusky; throat and fore neck superficially white, the fur basally blackish; posterior part of ventral area superficially white, like the throat, the fur dingy gray basally;

rest of lower surface dark rufous, the fur blackish basally along the median line. Ears larger, and tail shorter than in *alascensis*, but much fuller.

19. ***Ursus dalli gyas* Merriam.** ALASKA PENINSULA BEAR.—One specimen, a very old male, skin and skeleton, Muller Bay, May 29.

The ten fine specimens of large brown bears taken by Mr. Stone at Muller Bay throw much light on the question of the number of species of bears on the Alaska Peninsula. Of these specimens 9 belong to the form I recently described (this Bulletin, XVI, 1902, pp. 141-143, pll. xxx, xxxi) as *Ursus merriami* and one to *Ursus dalli gyas* Merriam, based on specimens from Pavlof Bay, on the opposite side of the peninsula from Muller Bay. The two species prove to be readily distinguishable by both cranial and external characters. With the material now in hand it is evident that the type of *U. merriami* (skull) is a middle-aged male, and that the 'topotype' (skin) is an old male *U. gyas*, this skin agreeing in coloration and character of pelage with the present old male skin of *gyas*, and not with the series of skins of *merriami*.

The collector's measurements of the *gyas* specimen are as follows: Total length, 2057; tail vertebræ, 127; hind foot, 349; height at shoulder, 1068. Approximate weight, 1600 pounds. Skull, greatest length (front of premaxillaries to end of occipital crest), 447; zygomatic breadth, 260; mastoid breadth, 250. (For further skull measurements, see table, p. 290.)

Pelage short, coarse and harsh; general coloration very dark brown; claws heavy, but little curved, rather light brown, with a strongly defined longitudinal whitish streak on the convex surface.

20. ***Ursus merriami* Allen.** MERRIAM'S BEAR.—Nine specimens, skins and skulls, Muller Bay, May 24-June 12. Of these, two are adult males and four are adult females, two of which are very old; the other three are yearlings.

The pelage is very long, soft, and woolly; color of dorsal area light yellowish brown, sides and limbs dark brown. Claws short and much curved, dark brown, the color varying somewhat in different specimens.

The collector's measurements are as follows:

No.	Sex.	Length.	Tail vertebrae.	Hind foot.	Height at shoulder.
21807	♂	1880	152	330	1067
21809	♂	1981	152	381	1092
21801	♀	1702	152	318	914
21803	♀	1880	152	305	864
21808	♀	1880	152	305	991
21810	♀	1829	152	318	1016

The long, soft, woolly coat and the light yellowish brown color of the dorsal area are in strong contrast with the short, harsh, and very dark dorsal area in *U. d. gyas*.

The type of *U. merriami*, a skull, is apparently not an average example, this skull being relatively longer and narrower than any of the six skulls here referred to that species, as shown by the detailed measurements given in the subjoined table, which, for comparison, gives the measurements of (1) an old male skull of *U. middendorffi* from Kadiak Island; (2) an old male skull of *U. dalli gyas* from Muller Bay, Alaska Peninsula; (3) the type of *U. merriami*, and of the six other skulls referred to it, all from Muller Bay; (4) an old female skull of *U. kidderi* from the hills south of Kussilluf Lake, Kenai Peninsula. Nos. 19766 (*U. middendorffi*), and 21802 (*U. dalli gyas*) are very old male skulls; Nos. 21807, 21809, and 17622 (type) are middle-aged male skulls of *U. merriami*; Nos. 21810, 21808, 21801, and 21803 are female skulls of *U. merriami*, of which 21810 is very old, with all the sutures obliterated; 21803 (unfortunately imperfect) is also old, but most of the sutures are still distinct, while the other two skulls are middle-aged.

This series of specimens shows (1) that there are two distinct types of bears on the Alaska Peninsula; (2) that *U. merriami* is much more nearly related to *U. kidderi* than to *U. dalli gyas*; (3) that neither of them are very closely related to *U. middendorffi*; (4) that the examination of a much larger amount of material is necessary before the number of species and the relationships of the big Alaska brown bears can be satisfactorily settled. I here give (Figs. 1-9) three views each of three quite distinct types of skulls, namely, the big Kadiak Bear (*U. middendorffi*), and the two species occurring

on the Alaska Peninsula, all from material obtained by Mr. Stone. As the type skull of *U. merriami* has already been figured (this Bulletin, XVI, 1902, pll. xxx and xxxi), I have selected an average skull from the series obtained in 1903, which should be carefully compared with the figures of the type skull, which is either exceptional in its narrowness and great elongation, or else the later series of specimens now referred to *U. merriami* represents still a third species, related to the *kidderi* type of bear.

The figures are all made to the same scale, and are about one fourth natural size.

21. ***Ursus middendorffi* Merriam.** KADIAK BEAR.—Eight skulls, mostly adult, Kadiak Island.

22. ***Ursus kidderi* Merriam.** KIDDER'S BEAR.—Two specimens (skins and skulls), an adult and yearling, both females, Caribou Hills, Sept. 3 and 4. Adult female, total length, 1778; tail vertebræ, 178; hind foot, 280; height at shoulder, 916; skull, greatest length, 355; zygomatic breadth, 217; mastoid breadth, 148. (For further measurements see table, p. 291.)

In age the adult female (No. 21811) is comparable with No. 21803 of *U. merriami*. The external measurements, however, are much less, except that the tail is longer; the skull measurements for the most part agree closely with some of the younger female skulls of *U. merriami*, even to the size of the teeth.

23. ***Ursus americanus* Pallas.** BLACK BEAR.—One specimen (skin and skull), adult female, Kussilluf Hills, August 19.

24. ***Putorius cicognanii alascensis* (Merriam).** JUNEAU WEASEL.—Six specimens, four males and two females, taken as follows: Sheep Creek, 2, Aug. 14 and 20; Seldovia, 4, Oct. 24. One of the Seldovia specimens is in the white winter pelage, and one is in change, the other two still retaining the summer coat, somewhat lightened, however, by the incoming [August, 1904.]

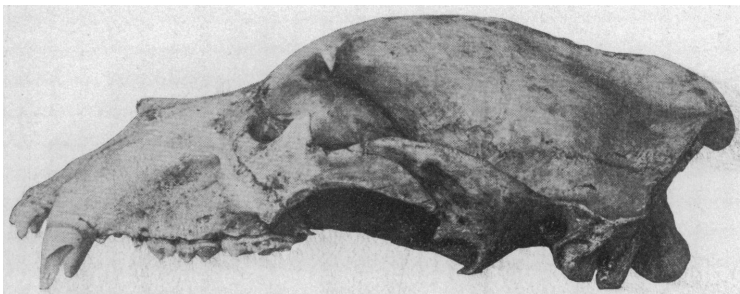


Fig. 1. *Ursus merriami*, No. 21807, middle-aged male, Muller Bay, Alaska Peninsula. $\frac{1}{2}$ nat. size.

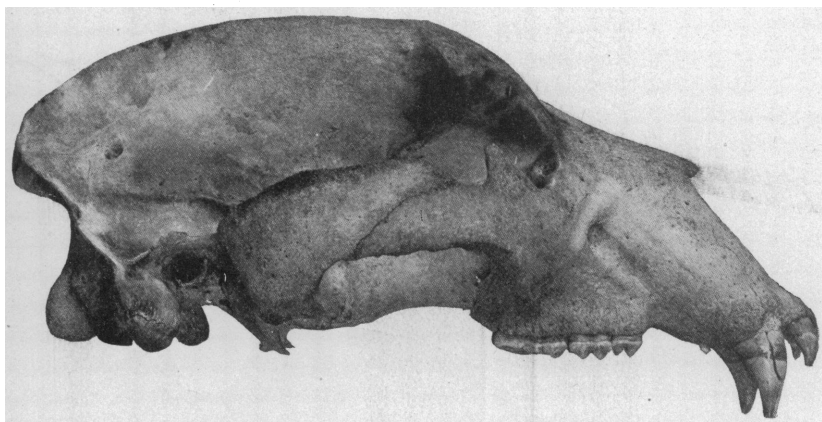


Fig. 2. *Ursus dalli gyas*, No. 21802, old male, Muller Bay, Alaska Peninsula. $\frac{1}{2}$ nat. size.

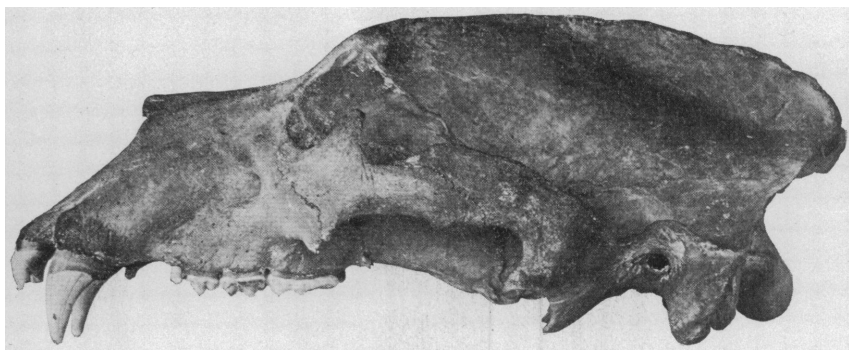


Fig. 3. *Ursus middendorffi*, No. 19766, old male, Kadiak Island, Alaska. $\frac{1}{2}$ nat. size.

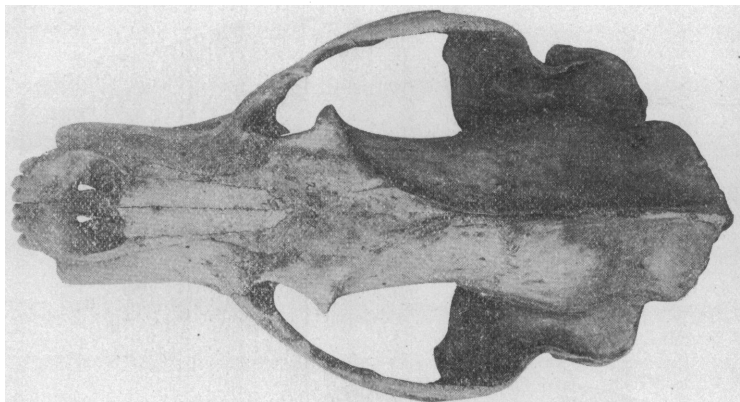


Fig. 4. Same specimen as Fig. 1.

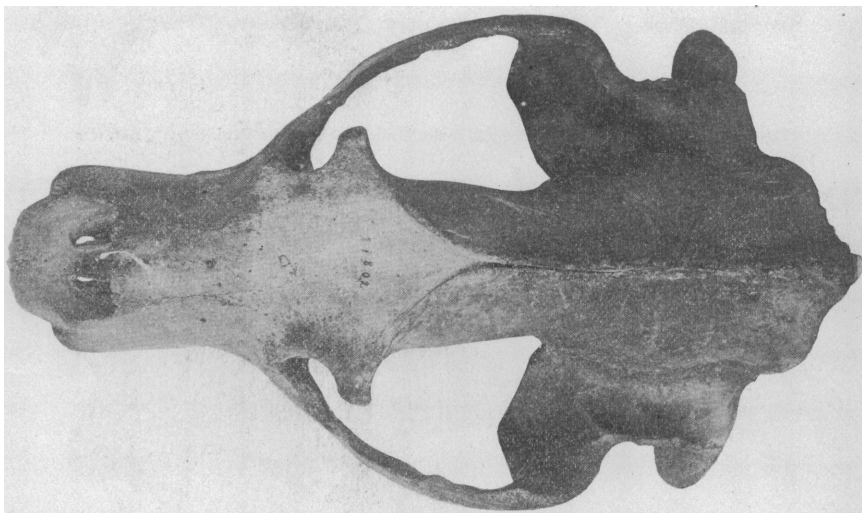


Fig. 5. Same specimen as Fig. 2.

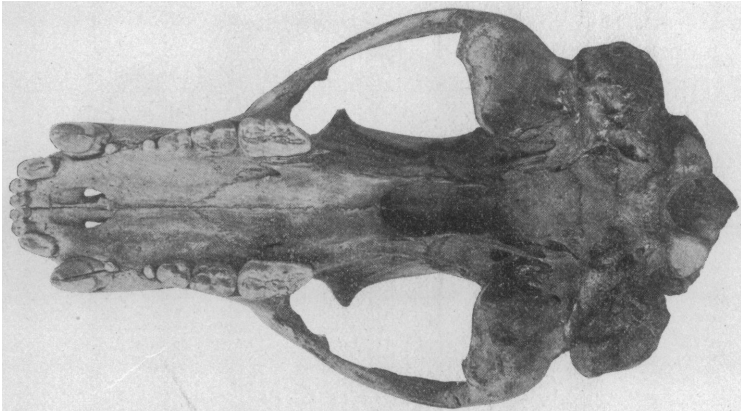


Fig. 7. Same specimen as Fig 1.

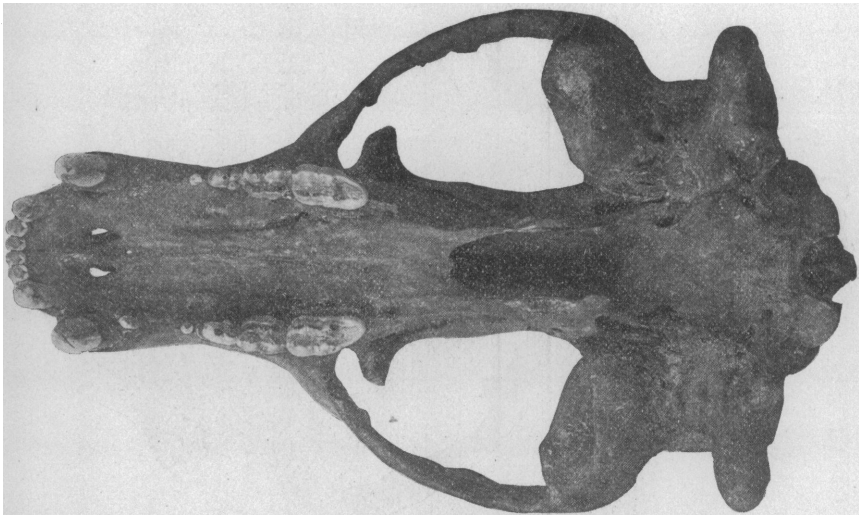


Fig. 8. Same specimen as Fig. 2.

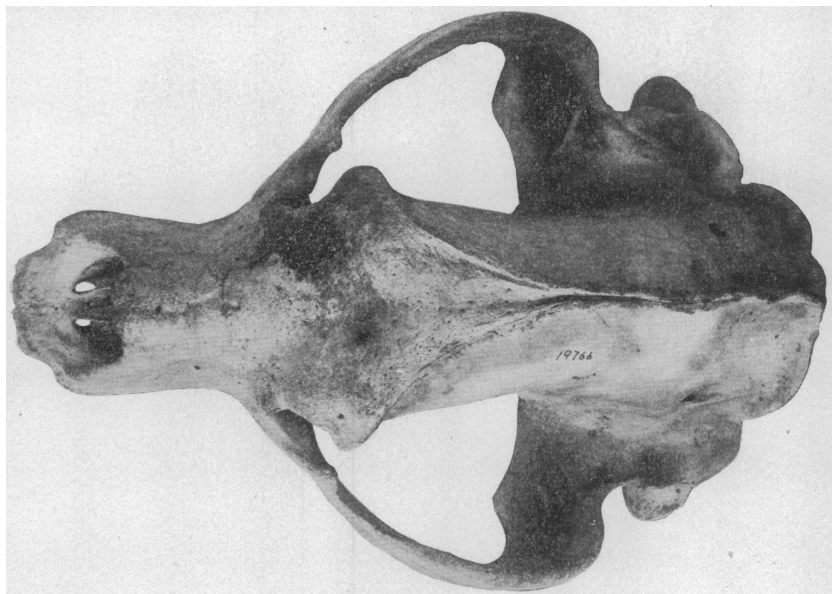


Fig. 6. Same specimen as Fig. 3.

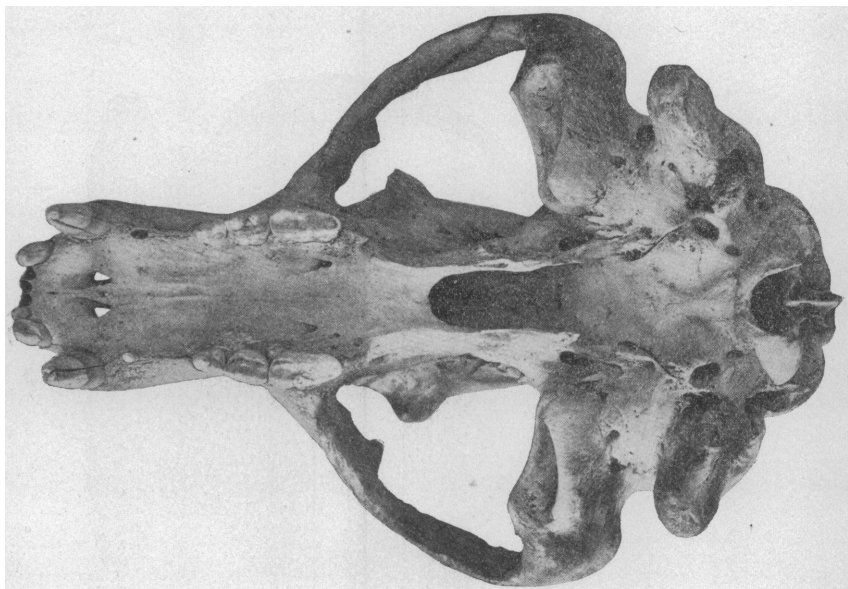


Fig. 9. Same specimen as Fig. 3.

MEASUREMENTS OF TEN SKULLS OF ALASKA BROWN BEARS.

	<i>U. midd-</i> <i>dorff.</i>	<i>U. dalli</i> <i>kyas.</i>	<i>U. merriami.</i>								<i>U. hidd-</i> <i>eri.</i>
	19766 ♂	21802 ♂	21807 ♂	21809 ♂	17622 ¹ ♂	21810 ♀	21808 ♀	21801 ♀	21803 ♀	21811 ♀	
Greatest length (front of premax. to end of occip. crest).....	431	447	378	363	396	370	363	358	—	355	
Basal length (gnathion to post. border occip. condyles).....	400	408	353	358	375	343	340	318	—	325	
Basilar length (gnathion to basion).....	370	387	325	336	350	332	318	300	—	325	
Occipito-nasal length.....	365	385	317	337	328	314	302	303	—	308	
Occipito-sphenoid length.....	107	107	90	93	101	83	85	82	—	85	
Palatal length.....	206	211	179	184	198	185	172	172	191	173	
Postpalatal length (to basion).....	166	175	145	153	151	137	147	133	—	133	
Basion to plane of front of last upper molar..	246	263	222	226	230	211	212	202	—	202	
Zygomatic breadth.....	302	260	210	220	210	223	195	190	221	217	
Interorbital breadth.....	101	92	73	88	81	84	77	70	87	81	
Breadth across postorbital processes.....	142	141	113	119	110	128	105	104	124	110	
Mastoid breadth.....	243	250	170	182	169	172	154	159	—	148	
Breadth of rostrum at base of canines.....	101	101	87	90	85	86	77	76	88	78	
Premolar-molar series (p4-m2).....	77	81	78	72	79	73	75	74	78.5	73	
Molar ² , greatest length.....	37	39	38	35	37.5	35	37	37	37	36	
" " width.....	19	20	20	19.5	21	19	18	19	20	20	

¹ Type.

winter coat. The two August specimens, both apparently females, are very much darker.

A female from Homer, collected by the Stone Expedition in 1901, and formerly identified (this Bulletin, XVI, 1902, p. 228) as *P. arcticus kadiacensis*, is to be referred here.

The four males measure, total length, 334 (312-346); tail vertebræ, 92 (89-94); hind foot, 46 (43-49); ear, 22 (21-23). Two females, 270 (260-280), 71.5 (70-73), 35.5 (34-37), 18 (17-19).

25. ***Mustela americana* Turton.** AMERICAN MARTIN.—Two skulls, Seldovia. These skulls greatly exceed in size the very largest skulls of a large series of *M. americana* from New Brunswick, but fall considerably short of the measurements given by Mr. Osgood for the type skull of *M. a. actuosa*.

26. ***Sorex personatus* I. Geoffroy.** COMMON SHREW.—One hundred and eighty-six specimens, collected as follows: Muller Bay, 4, June 1-7; Seldovia, 97, June 26-August 2; Barabori, 9, August 6 and 28-Sept. 1; Sheep Creek, 35, August 13-26; Carbou Camp, 14, Sept. 3-9; Moose Camp, 27, Sept. 25-Oct. 6.

At Muller Bay "shrews were quite scarce," but on Kenai Peninsula this species was apparently everywhere abundant.

27. ***Sorex obscurus alascensis* Merriam.** ALASKA SHREW.—Thirty-seven specimens: Seldovia, 26, June 26-August 3; Barabori, 1, Sept. 1; Caribou Camp, 7, Sept. 3-9; Sheep Creek, 3, Sept. 12-14.

Evidently less abundant than the preceding, but widely dispersed, though apparently not met with at Moose Camp, where *S. personatus* was very abundant.

28. ***Sorex eximius* Osgood.** OSGOOD'S SHREW.—Two specimens, Barabori, Sept. 9, and Moose Camp, Oct. 1.

This species, previously known only from the type, taken at Tyonek, Cook Inlet, Alaska, Sept. 14, 1900, by Osgood and Heller, is evidently either not numerous or very hard to capture, as of 225 Shrews taken by Mr. Anderson only two were of this species.