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URSUS SHELDONI, A NEW BEAR FROM MONTAGUE
ISLAND, ALASKA.

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Since it is not likely that my work on the American Bears will be completed during the present year it seems desirable to place on record the description of a large and remarkable new species from Montague Island, Alaska, of which five specimens of both sexes and different ages were obtained in May, 1905, by Charles Sheldon; and three additional specimens in 1908 by Miss Annie M. Alexander, all of which have been generously placed at my disposal for study.

Montague Island lies in the western part of the mouth of Prince William Sound, in latitude 60 degrees, only about 20 miles distant from the east shore of Kenai Peninsula—the home of *Ursus kenaiensis*. It is not surprising therefore that the Montague Island bear proves to be related to *kenaiensis*. The two together form a group quite apart from all the other known species.

It is peculiarly fitting that the Montague Island bear should be named in honor of its discoverer—Charles Sheldon of New York—who by zeal and perseverance in the face of many obstacles succeeded in killing five, and generously presented the specimens to the U. S. Biological Survey.

The new bear may be known from its only near relative, *Ursus kenaiensis*, by the following description:

Ursus sheldoni sp. nov.

Type.—No. 137,318, ♂ ad., U. S. National Museum, Biological Survey Collection. Montague Island, Alaska, May, 1905. Charles Sheldon. Original number 17.

Characters.—Size large; claws of adult long and of the grizzly type; hairs over shoulders elongated to form a small but distinct hump; ears dark, with whitish tips; general color brownish, varying from pale to dark, the hairs of the back sometimes yellowish tipped, those of the head grizzled; color darkest (almost blackish) on belly, legs and feet. An old she bear killed by Sheldon May 18, 1905, is very pale grizzled gray on the upperparts, and only moderately darker on the legs and feet. The cub of this bear, killed the same day, was in its 2d year (about 16 months old) and is very pale—almost buffy gray—with dark feet and legs and a strongly marked hump.

Cranial Characters.—Skull in general similar to that of *kenaiensis* but basisphenoid broader and flatter, its length nearly equal to that of basioccipital; posterior roots of interpterygoid fossa more widely spreading; *condyle of jaw more exerted* [in *kenaiensis* sessile], reaching so far back that a line dropped from peak of coronoid to tip of angle touches or traverses it [in *kenaiensis* this line passes freely behind the condyle]; coronoid, in females of same age, smaller and lower—its area for muscular attachment less; ramus of jaw strongly bellied posteriorly, its inferior border below the coronoid *strongly convex downward* and curving evenly, with only a very slight break, to angular process. [In *kenaiensis* the inferior border of ramus is *nearly straight* (not appreciably bellied under coronoid) and ends abruptly in a step or jog at some distance behind the angle.]

In general form and appearance skulls of females closely resemble those of female *kenaiensis*, differing chiefly in the characters above mentioned and in certain dental peculiarities—notably the smaller size and more pointed heel of the last upper molar, and the oblique truncation of the 1st upper molar.

Skulls of males differ widely from those of *kenaiensis*. Only two full grown males of *sheldoni* and one of *kenaiensis* are available for comparison.* The two adult ♂ skulls of *sheldoni*, while full grown, are by no means so old as the old male *kenaiensis*, compared with which they are decidedly larger (averaging 2 inches longer), much higher, more massive, broader across the squamosals and also across the frontals (both interorbitally and postorbitally). The ramus of the jaw is decidedly broader, and its inferior border more bellied and convex posteriorly. The sagittal crest does not reach the frontals [in the old ♂ *kenaiensis* it reaches to *middle* of frontals]; the frontals arch well upward, are traversed by a broad median sulcus, and swollen above and behind the orbits; the nasals

*Those of *sheldoni* are the type, No. 137,318, collected by Sheldon in 1905; and a slightly older male of approximately the same size (No. 970, Mus. Vert. Zool., University of California), collected and loaned by Miss Annie M. Alexander (killed by her hunter, A. Hasselborg, July 31, 1908, at McLeod Harbor, Montague Island). The old male *kenaiensis* (No. 8946, Museum Vert. Zool., Univ. Calif.) was collected by Andrew Berg for Miss Annie M. Alexander, to whom I am indebted for the privilege of comparing it with skulls in the Biological Survey collection. It is very old and presents the maximum development of crests and ridges—the sagittal crest being very long and high, slightly convex, and reaching anteriorly to middle of frontals—the temporal ridges spreading thence at a right angle to the postorbital processes.

are broad and long (in the type specimen reaching plane of postorbital processes).

Dental Characters.—Teeth in general of the grizzly type. Last (4th) lower premolar normally with horizontal heel, slightly upturned at posterior end, and shallow median sulcus reaching from cusp to end of heel, its defining ridges ending in slightly developed posterior cusplets. [In *kenaiensis* the last lower premolar is more conical, the heel sloping, the sulcus incomplete, with only a single posterior cusplet—on inner side of main cusp posteriorly.] First upper molar peculiar, having both ends *obliquely truncate and parallel*, sloping strongly from outer angles backward and inward; inner row of cusps pushed back so that each falls behind plane of corresponding cusp on outer side; the tooth as a whole more rectangular, its inner corners squarer (less rounded), and inner side more flattened and much less convex than in *kenaiensis*.

In the females the last lower molar is conspicuously smaller than in *kenaiensis*, and the last upper molar is smaller, narrower, more wedge-shape, and more pointed posteriorly. In one of the males it is similar. In the three other males the last upper molar is larger and less acute posteriorly than in the females, and the 3d cusp on the inner side is better developed.

Skull Measurements.—Following are measurements of two adult males—the type specimen collected by Sheldon, and a slightly older male collected by Miss Annie M. Alexander (No. 970, Museum of Vertebrate Zool., Univ. Calif.). In each case the measurements of the type come first, followed in parenthesis by those of the Alexander skull. Basilar length, 360 (355); zygomatic breadth, 270 (272); occipito-sphenoid length, 110 (104); postpalatal length, 163 (165); least interorbital breadth, 102 (99); distance from foramen magnum to plane of front of last upper molar, 242 (235); length of upper molariform series, 72 (75); of upper molars, 57 (61); of lower molars, 71 (72).

Remarks.—The skull of *Ursus sheldoni* is large and massive, and contrasted with those of the big bears of other parts of Alaska (*gyas*, *middendorffi*, *dalli*) is short and remarkably broad. The breadth is most conspicuous across the squamosals and frontals. Even the nursing cub shot by Sheldon has the skull strikingly broader throughout than any other cub in the collection. [I have not seen a cub of *kenaiensis*.] Skulls of females are flattened like those of *kenaiensis*. Skulls of males are high and rounded, and those approaching maturity—say in the 4th and 5th years, and doubtless for several years later—have the braincase and frontals so elevated and swollen that were it not for the snout the skulls would appear almost globular.

Another curious feature is that as the skulls lie in a row on the table, those of *sheldoni* have the nose *conspicuously* tilted up. In females the actual difference in height of tips of nasals (above the table) is 8 or 10 mm.; in the males, 35–45 mm. This appears to be due to two causes—the more exerted condyle of *sheldoni*, which throws the jaws a little further forward, and the more bellied basal part of the ramus, which tilts the front part of the skull upward.

It is interesting to note that the 4th lower premolar is distinctly of the grizzly type, while in *kenaiensis* it is variable.

The material on which *Ursus sheldoni* is based is ample to show the constancy of the characters by which the species differs from all other bears. This material consists of 2 adult males, 2 young males (4 or 5 years old), 3 adult females, and 1 cub of the 2d year (about 16 months old).



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