Article V. — DESCRIPTIONS OF NEW RODENTS FROM SOUTHERN PATAGONIA, WITH A NOTE ON THE GENUS EUNEOMYS COUES, AND AN ADDENDUM TO ARTICLE IV, ON SIBERIAN MAMMALS.

By J. A. Allen.

In preparing my report on the mammals collected by the Princeton University Expeditions to Patagonia, 1896–1899, under the direction of Mr. J. B. Hatcher, the following additional species ¹ have been found which appear to be undescribed. A more detailed account of them, with illustrations, will appear later in the final report on the collection, now nearly ready for publication.

The genus *Ctenomys* is represented in southern Patagonia by at least five well-marked forms, three of which appear to be new. *Reithrodon* and *Euneomys* are each represented by several forms, three of which have not been previously recognized. In working out these species, represented by abundant material, it has been found that *Euneomys* is not very closely related to *Reithrodon*, and equally distinct from *Phyllotis*, when properly restricted.

Ctenomys robustus, sp. nov.

Type, No. 84194, U. S. Nat. Mus., & ad., Rio Chico de Santa Cruz, near the Cordilleras, Feb. 20, 1897; O. A. Peterson.

Pelage soft, short, somewhat lustrous. Above deep yellowish brown, varied with blackish, the hairs being dark slaty plumbeous for the basal two thirds, with a subterminal band of dark rusty yellow, and a very short black tip, with longer blackish-tipped hairs sparsely intermixed; below deep brownish ochraceous; ears dusky brown, barely projecting above the fur; upper surface of fore and hind feet dingy yellowish gray; tail well clothed with fine soft hairs, forming a slight pencil at the tip, yellowish gray, dusky at the tip above.

Other specimens vary from the above in being a little lighter or a little darker, both above and below. Tail variable in color, often wholly without any dusky median line above or any dusky tip; gener-

¹ Eligmodontia morgani, based on specimens in the present collection, was described in 1901 (Cf. this Bulletin, Vol. XIV, p. 409).

ally there is a very narrow median dusky line, extending from the tip anteriorly for a part or the whole of the length of the tail; in a few specimens it is strongly developed, broadens and increases in blackness towards the tip, and in rare cases the whole tip is black, with a short black stripe on the lower surface on the apical fourth or third of the tail.

Young examples differ from the adults in the general tint being duller and the pelage less lustrous.

Measurements. — Type: Total length, 290; tail vertebræ, 73; hind foot, 40. Nine adult males measure as follows: Total length, 303.5 (290-322, only one above 310, and only two above 298); tail vertebræ, 81.5 (73-88); hind foot, 40.5 (40-42). Five adult females: Total length, 275 (256-300; only one above 280); tail vertebræ, 75 (70-80); hind foot, 37 (35-40).

Skull, type: Total length, 52.5; basal length, 47; zygomatic breadth, 30; interorbital breadth, 10; mastoid breadth, 29.5; length of nasals, 20; palatal length, 25; diastema, 16; upper molar series, 9.6; lower jaw, inner base of incisors to posterior border of condyle, 33; inner base of incisors to tip of angular process, 41; height at condyle, 16; lower molar series, 10.3; distance between condyles, 18; distance between tips of angular processes, 37. Ten adult male skulls: Total length, 53.6 (51-55); zygomatic breadth, 30.5 (29-33). Five adult female skulls: Total length, 48 (46-50); zygomatic breadth, 27.5 (26.2-28.6). The mastoid breadth is practically the same as the zygomatic breadth, varying in different specimens from slightly more to slightly less. The greater part of the skulls in the present series are middle-aged, with all the sutures distinct; only two or three give evidence of being very old.

Represented by 23 specimens, all from the upper Rio Chico, Cordilleras, and all collected by Mr. Peterson, February 7 to 28 (except one taken March 9). All but three are in adult pelage, and these have nearly acquired it, only the lower part of the back and rump retaining the pelage characteristic of immaturity. The general color above of the adults varies from strong yellowish brown to slightly rufescent brown, and below from deep ochraceous buff to brownish ochraceous. The color of the tail is very variable, as already noted; except in the case of a few which have the tail practically uniform yellowish gray, no two have the tail colored alike, in respect to the median dorsal line, which varies from a slight trace of dusky to a well-defined blackish median stripe, the black widening and increasing in intensity apically; in three specimens the whole tip of the tail is black, including the under surface. A few other specimens approach this condition.

As shown by the measurements already given, the females are much smaller than the males.

The skull is very variable in respect to size and many details of structure, but especially in the size and form of the interparietal. In one specimen it is almost obsolete, forming a mere line less than a millimeter in antero-posterior extent and 5 mm. in transverse extent. Generally it is subtriangular, with a transverse width of 5-7 mm. and an antero-posterior length of 2-4 mm. It is sometimes divided medially into two halves. On each side of the interparietal, and separated from it by the posterior extension of the parietals, is an intercalated bone of variable size and of an irregularly oval outline, each generally considerably larger in area than the interparietal.

Ctenomys robustus differs markedly in coloration from C. magellanicus, but not very appreciably, so far as specimens of the latter are available for comparison, in size or in cranial characters. C. magellanicus is pale yellowish gray, or ash gray with a fulvous tinge, while C. robustus is dark yellowish brown. C. boliviensis is very much larger and very much darker and redder, having "the general hue bright rufous brown," and the upper surface of the nose, head, and nape blackish. It appears to have no close relationship to any of the other described species of Ctenomys.

Ctenomys sericeus, sp. nov.

Type, No. 84191, U. S. Nat. Mus., & ad., Cordilleras, upper Rio Chico de Santa Cruz, Patagonia, Feb. 5, 1897; O. A. Peterson.

Type. — Pelage short, soft, and glossy. General color above yellowish gray strongly varied with black, the hairs being slaty plumbeous for the basal three fourths, then banded narrowly with pale yellowish brown, and tipped with black; flanks and ventral surface buff; sides of nose yellowish brown; top of nose and top of head like median dorsal region, which is darker than the sides; ears very small, blackish; upper surface of feet dingy gray with a slight yellowish cast; tail pale yellowish, with a median dusky stripe along the apical half of the upper surface. In some specimens there is a tendency to a well-marked darker median dorsal band, extending from the nose to the base of the tail. Several of the specimens are a little darker than the type above described. The tail stripe varies in distinctness from nearly obsolete to a broad, well-defined black band running the whole length of the tail.

Young in first pelage are grayer and with less fulvous, and the pelage is longer, softer, and less firm.

Measurements. — Type: Total length, 208; tail vertebræ, 62; hind foot, 28. Five adult males: Total length, 200 (195-208); tail vertebræ, 56.6 (51-62); hind foot, 26.2 (25-28). A single adult female measures: Total length, 210; tail vertebræ, 60; hind foot, 27.

Skull, type: Total length, 39; basal length, 35.2; zygomatic breadth, 24; mastoid breadth, 23.5; interorbital breadth, 7; length of nasals, 13; palatal length, 17; diastema, 10; upper molar series, 7.5; lower jaw, inner base of incisors to end of angular process, 29.5; height at condyle, 7; width between condyles, 15.3; width between tips of angular processes, 25.6; lower molar series, 8. Four adult male skulls: Total length, 36.4 (34.3-39); zygomatic breadth, 21.5 (20-23.6). An old female skull measures, total length, 36; zygomatic breadth, 20.

In several of the skulls the interparietal is entirely absent, and when present is very small. The lateral intercalated bones are present, and are as variable in form as already described in *Ctenomys robustus*.

Represented by 11 specimens, collected by Mr. Peterson at the eastern edge of the Cordilleras of the upper Rio Chico de Santa Cruz, Jan. 31-Feb. 7, 1897. Six are adults and five are young, partly in juvenile pelage.

This species exceeds only a little in size *Ctenomys pundti* Nehring, but differs from it very markedly in coloration. The total length of the skull of *C. pundti* is given as 31.3, and the zygomatic breadth as 19.5; the same for *sericeus* (average specimens) being, respectively, 36 and 21.5. While it agrees practically in size with *Ctenomys bergi* Thomas, from the central part of the Province of Cordova, it differs greatly from it in color, being much darker throughout.

Ctenomys colburni, sp. nov.

Type, No. 147, Colburn Coll., δ ad., Arroyo Aike, in the basalt cañons, 50 miles southeast of Lake Buenos Ayres, Patagonia, April 19, 1898; A. E. Colburn, after whom the form is named.

Similar to C. sericeus but larger, much more strongly suffused with fulvous, and less varied with black.

Measurements. — Type: Total length, 230; tail vertebræ, 65; hind foot, 29. Fifteen males measure as follows: Total length, 224.5 (210-240, with one 245 and one 250); tail vertebræ, 69 (60-75, with two at 80); hind foot, 30 (28-32, and one 33). Seventeen females: Total length, 213 (200-225); tail vertebræ, 62.2 (60-65); hind foot, 29.5 (29-31).

Skull. — Type, total length, 43; basal length, 39; zygomatic breadth, 25; mastoid breadth, 25; interorbital breadth, 8.5; length of nasals, 14.3; palatal length, 20; diastema, 6; upper molar teeth, 8; lower jaw, inner base of incisors to posterior border of condyles, 28.5; inner base of incisors to point of angular process, 33.5; height at condyle, 8; width between condyles, 16; width between points of angular processes, 27; lower molar teeth, 8.5. Seven old male skulls measure: Total length, 43 (41-45); zygomatic breadth, 24.3 (23.5-25.3). Fifteen old female skulls: Total length, 38 (36-41); zygomatic breadth, 22.2 (21-24).

Represented by 33 specimens — 16 males and 17 females all adult except 3, and all collected by Mr. Colburn, of which 16 were taken in the basalt cañons south of Lake Buenos Ayres, April 2 to May 15, and 17 near Swan Lake. Aside from the young specimens, which are grayer and much less fulvous than the adults, the variation in color consists in some specimens being a little more strongly suffused with yellowish than others, and in the distinctness of the tail stripe, which is often wholly wanting, or present in varying degrees, from a faint trace to a broad black stripe.

This species is intermediate in size between C. sericeus and C. mendocina, being larger than the former, and differing from it in its more strongly fulvous and generally lighter coloration, and from the latter in considerably smaller size and entire absence of any reddish suffusion.

Oxymycterus microtis, sp. nov.

Type, No. 84234, U. S. Nat. Mus., \$ ad., Pacific slope of the Cordilleras, near the head of the Rio Chico de Santa Cruz, March 7, 1897; O. A. Peterson.

Adult male (type), March. — Pelage thick, short, and fine, almost mole-like in character. Pelage and general color almost exactly as in Oxymycterus lanosus Thomas, but twice the size of that species, with the tail one half shorter and fore claws large, fossorial. Above dark yellowish brown; underparts whitish gray, the plumbeous under fur tinging the otherwise whitish surface; top and sides of nose dark grayish brown, without any tinge of yellow or rufous; ears very small, scarcely reaching the surface of the short fur, concolorous with the enclosing fur; tail very short, but little exceeding the length of the hind foot, very thickly clothed, dark brown, only slightly lighter below than above; upper surface of the feet grayish brown, the toes lighter, yellowish white; soles naked, dark flesh-color.

A second specimen is exactly similar in coloration, except that the ventral surface has a slight wash of buff, apparently due to staining.

Measurements. — Total length (type), 138; tail vertebræ, 28; hind foot, 21; longest fore claw, 6. Skull, total length, 27.6; basal length, 23.6; zygomatic breadth, 12.5; width of brain case, 12; interorbital breadth, 5; length of nasals, 10.5; palatal length, 10; palatal foramina, 5; diastema, 6.3; upper molar series, 3.5; length of lower jaw (inner base of incisors to posterior border of condyle), 15; height at condyle, 5.5; lower molar series, 3.4.

Represented by two specimens — a skin and skull, and a skin and skeleton — collected on the Pacific slope of the Cordilleras, at the head of the Rio Chico de Santa Cruz.

Externally Oxymycterus microtis is a miniature of Akodon macronyx with a relatively much shorter tail. It exactly resembles in coloration above and in the texture of the pelage Oxymycterus lanosus, but the latter has whiter under parts, is very much smaller, has a much longer tail, and small, nonfossorial claws; but the skulls of the two are very similar in general contour, differing only in size and slightly in details. O. microtis thus combines the large fossorial claws of the Akodon macronyx group with the cranial characters and weak dentition of the O. lanosus type. The narrow line separating Akodon and Oxymycterus is thus still further narrowed by the present annectent link.

Reithrodon cuniculoides obscurus, subsp. nov.

Type, No. 3, Colburn Coll., 5 ad., Punta Arenas, Patagonia, Jan. 1, 1898; A. E. Colburn.

Similar to *Reithrodon cuniculoides*, but darker throughout, the upper parts dark brown, varied with black-tipped hairs and suffused with fulvous, the sides yellowish, and the ventral surface brownish ochraceous; inner side of thighs and anal region whitish; top of head blackish, slightly varied with buff-tipped hairs; sides of nose and cheeks brownish ochraceous like the ventral surface; ears very thinly haired, brown externally, brownish buff internally, with a deep ochraceous buff post-auricular patch; upper surface of feet clear white; tail blackish above along median line, sides and below gravish white.

Measurements (of type, from dry skin). — Total length, 195; head and body, 130; tail, 65; hind foot, 34. (The tail seems to have lost a small portion of the tip.) Skull (imperfect), length of nasals, 15.5; palatal length, 18; palatal foramina, 10; diastema, 9.5; upper molar series, 6.

Unfortunately represented by only the type specimen, which has no flesh measurements. The skull shows the specimen to be fully adult, and larger than any skull in the large series of R. cuniculoides. It is characterized by its strong, dark coloration, between which and the darkest, most-deeply colored specimen in a series of 28 examples from the coast region and the interior plains, there is a striking contrast through the greater depth and intensity of all the tints. Considering the climatic conditions of the two regions,- the moist, forested country of the Punta Arenas district, and the open, arid plains of the coast and interior - the differences here shown in the coloration of the two phases conform to what would be expected to result from such diverse physical conditions. The differences are certainly not to be accounted for by season or age. It finds an exact parallel in the cases of Akodon xanthorhinus as compared with A. canescens, and A. michaelseni as compared with A. macronyx.

Reithrodon hatcheri, sp. nov.

Type, No. 84210, U. S. Nat. Mus., δ ad., Pacific slope of the Cordilleras, head of the Rio Chico de Santa Cruz, March 11, 1897; O. A. Peterson. Named in honor of Mr. J. B. Hatcher, Director of the Princeton Patagonia Expeditions.

Similar in size and proportions to *R. cuniculoides*, but much darker, and with much less fulvous suffusion.

Adult male (type), March. — Above dark grayish brown, varied with black-tipped hairs, faintly suffused with grayish fulvous; sides paler, passing gradually into the pale buff of the ventral surface; sides of nose, lower border of cheeks, lower border of flanks, and whole ventral surface cream-buff, except inside of thighs and adjoining portion of ventral surface; ears rather thinly haired, externally dull brown, internally yellowish buff, the hairs at the anterior base of the ears whitish and the post-auricular patch pale buff; upper surface of the feet white; soles of hind feet to base of toes densely haired, dark brown, toes flesh-color; tail with a narrow brown stripe above, sides and below dull whitish.

Measurements. — Type: Total length, 230; tail vertebræ, 78; hind foot, 34. Seven specimens (4 males and 3 females) measure: Total length, 215 (200-230); tail vertebræ, 77 (75-82); hind foot, 33.3 (32-35). Skull (type).—Total length, 35.7; basal length, 31; zygomatic breadth, 20.5; interorbital breadth, 4; length of nasals, 16; palatal length, 17.5; palatal foramina, 9; diastema, 8.5; upper molar series, 6.4.

Represented by 10 specimens, all collected by Mr. Peterson in the Cordilleras at the head of the Rio Chico de Santa Cruz, and all but one (the type, taken March 11) between February 4 and 21, 1897. Part of the specimens, including the type, are in the dress of the breeding season, while others have partly or wholly acquired the post-breeding dress. These have a stronger suffusion of yellowish buff on the sides and ventral surface, but are otherwise similar to the type. A quarter grown young example is similar in general coloration to the adults, except that the ears have the external surface blackish and the internal surface deep buff, with the hairs at the anterior base of the ears and the post-auricular patch also deep buff, in prominent contrast with the surrounding pelage, as is not the case in the adults.

Reithrodon hatcheri is readily distinguishable from R. cuniculoides by its much darker and less fulvous coloration, the contrast in color between the two series being conspicuously noticeable. There are apparently no cranial differences of importance.

Euneomys petersoni, sp. nov.

Type, No. 84198, U. S. Nat. Mus., \hat{z} ad., upper Rio Chico de Santa Cruz, near the Cordilleras, Patagonia, Feb. 10, 1897; O. A. Peterson, for whom the species is named, in recognition of his important field work on the mammals of Patagonia.

Similar in coloration to *Phyllotis xanthopygus*, but very much smaller, with a relatively very short tail and naked soles, but the upper incisors are as strongly grooved as in *Reithrodon cuniculoides*.

Adult (type), February. — Pelage very long and soft, almost woolly. Above dark gray-brown, varied with blackish and fulvous, the pelage being plumbeous black for the basal four fifths, with an apical band of brownish fulvous, and many longer black hairs intermixed; sides much paler and more fulvous, the fulvous increasing in intensity along the lower border; ventral surface soiled white, the fur being basally very dark plumbeous and broadly tipped with yellowish white; ears dark brown on both surfaces and very thinly haired, the surrounding fur concolorous with that of the anterior dorsal surface; sides of nose and lower border of cheeks whitish gray with a faint tinge of yellowish; soles naked except the posterior third, dark flesh-color; upper surface of fore and hind feet pale flesh-color, nearly white; tail one third or less than one third of the total length, well clothed, dusky brown above, sides and below white.

Measurements. — Total length, 175; tail vertebræ, 60; hind foot, 26. Three other specimens (young adults) measure: Total length 160 (150-165); tail vertebræ, 57 (50-60); hind foot, 25 (25-25).

Skull. - Long and narrow, the interorbital and rostral portions especially elongated; post-palatal fossa narrow and v-shaped, but not quite so narrow and pointed in front as in Reithrodon cuniculoides; front border of zygomatic plate as in Phyllotis, Oryzomys, etc., lacking the pointed superior process seen in Reithrodon and Sigmodon; bullæ small and pointed, as in Phyllotis; upper incisors deeply grooved; molars brachyodont as in Phyllotis, but very broad and heavy, - not hypsodont as in true Reithrodon; lower jaw short and heavy to support the thickened molars; posterior end of lower incisor encapsuled, forming a prominent process on the outer sides at the base of the condyloid process. Dimensions (type): Total length, 30.5; basal length, 26.5; zygomatic breadth, 17.5; interorbital breadth, 3.5; width of brain case, 14; length of nasals, 14; palatal length, 14.5; palatal foramina, 8; diastema, 8.5; upper molar series, 5.2; width of first molar, 1.8; lower jaw, length (inner base of incisors to posterior border of condyle), 18; height at condyle, 15; lower molar series, 5.5.

Represented by four specimens, an adult female that had suckled young, and three younger specimens, nearly adult, all taken by Mr. Peterson in the Cordilleras at the head of the Rio Chico de Santa Cruz, Feb. 8–14, 1897. These specimens are all quite similar in coloration, except that the younger ones are grayer than the adults, with much less fulvous suffusion and with very little fulvous on the flanks and ventral surface.

This species finds its nearest ally in *Euneomys chinchilloides* (Waterhouse), known thus far only from Tierra del Fuego, which it apparently closely resembles in size and coloration. [April, 1903.]

Note on the Genus Euneomys Coues.

Waterhouse, in founding the genus Reithrodon (P. Z. S., 1837, p. 29), included in it two species, R. typicus and R. cuniculoides, which appear to be strictly congeneric. In the 'Zoölogy of the Voyage of the Beagle' (Mammalia, Part II, 1839, p. 72), he added as a third species, R. chinchilloides, and gave figures of R. cuniculoides and R. chinchilloides, including the external characters and the skull and teeth of each, and the lower molar teeth of *R. typicus*. In 1874, Dr. Coues (Proc. Acad. Nat. Sci. Phila., 1874, p. 185), and later in 'Monographs of North American Rodentia' (1877, pp. 118, 119), from a study of Waterhouse's figures, divided the genus Reithrodon into two groups, to which he gave the rank of subgenera, making R. cuniculoides the type of the restricted group Reithrodon, and R. chinchilloides the type and only species of his "subgenus" Euneomys, giving very clearly some of the principal differential characters of the two groups. The more important of these are: (1) "Anterior root of zygoma deeply emarginated in front" in Reithrodon and "about straight in front" in Euneomys; (2) "palate ending much behind the molar series, and showing a median ridge intervening between lateral paired deep excavations" in Reithrodon, and "palate ending nearly opposite the last molars, slightly ridged or excavated" in *Euneomys*; (3) "ptervgoid fossæ deeply excavated, and the bones very closely approximated" in Reithrodon, and "pterygoid fossæ shallow and these bones less approximate" in Euneomys; (4) "condyloid process of lower jaw concave internally" in Reithrodon, and "condyloid process of the lower jaw flat internally" in Euneomys; (5) "coronoid process slender, very oblique" in *Reithrodon*, and "coronoid process very broad, nearly vertical" in Euneomys. To these may be added (6) the very different enamel pattern of the molar teeth in the two groups, in *Reithrodon* the folds being transverse with the outer and inner loops alternating, and in Euneomys oblique, with one less fold in each of the last two upper teeth, and in the first two lower teeth, - a very radical difference in tooth structure, which alone warrants the generic separation of the two groups. As Waterhouse figured the crown surface of the teeth in only R. *cuniculoides*, this most important difference of all necessarily escaped Coues's attention.

In both these genera — Reithrodon and Euneomys — the tooth structure is remarkably distinctive for genera of Muridæ, and, as compared with each other, presents almost the extremes of unlikeness. But a further noteworthy difference (7) is seen in a pair of depressions on the posterior third of the palatal surface in Euneomys, which are absent in Reithrodon and in all of the allied genera.

A comparison of *Euneomys* with "*Reithrodon*" pictus shows that there is only the superficial and purely incidental resemblance of the grooved upper incisors, which, however, are only slightly sulcate in *R. pictus*, *Phyllotis bolivianus*, and their allies, and deeply sulcate in *Euneomys*. In all essential respects *Reithrodon pictus* is a *Phyllotis*, but sufficiently aberrant, perhaps, to warrant its subgeneric separation; but its relationship appears not to be with *Euneomys*, as has been assumed (cf. Thomas, Ann. and Mag. Nat. Hist. (7), VIII, 1901, p. 254).

ADDENDUM TO ARTICLE IV, ON SIBERIAN MAMMALS.

At the time of preparing my report on the mammals collected in northeastern Siberia by the Jesup North Pacific Expedition, a series of 9 Arctic Foxes (*Vulpes lagopus*) in summer coat, purchased by Mr. W. Bogoras at Mariinski Post (mouth of Anadyr River), had been mislaid and were overlooked. They have since been found and seem worthy of record.

These specimens show that the summer coat presents two phases, a light and a dark phase. Four of the specimens represent the dark phase, three the light phase, two are intermediate (one approaching the light phase and one nearer the dark phase), and one, the most interesting of all, in moult, showing the process of change from winter to summer dress. *Dark phase*: Whole dorsal area dark, almost black-ish brown, passing into light yellowish brown on the flanks, and still lighter yellowish brown on the ventral surface. This is the color of the longer overhair; the woolly underfur is dark grayish brown over

the median dorsal area, lighter or gray on the sides, and light gray on the ventral area. *Light phase*: Whole dorsal area with the longer hairs grayish brown, sides and ventral surface lighter, with the underfur light gray or grayish white. The general effect over the dorsal area is dark gray, instead of dark brown as in the dark phase. The specimen in moult has the whole head, limbs, and posterior third of the back dark seal brown, and the pelage very short; the rest of the body is still in the long pure white winter coat, but on parting the dense winter pelage a blanket of short brown fur and hair is found sprouting beneath the winter coat, these short brown hairs being longest and most abundant near the junction of the areas covered respectively by the summer and winter coats.

I also take this opportunity to correct an error in my account of the Kamchatka Bighorn (antea, p. 130). Since the distribution of my paper on Siberian Mammals Mr. Lydekker has called my attention to his paper, 'The Wild Sheep of the Upper Ili and Yana Valleys,' (P.Z.S., 1902, pp. 80-85, pll. vii and viii), which I (most inexcusably) overlooked in writing of the Kamchatka Bighorn. Apparently my specimens are referable to Ovis borealis Severtzoff, since they agree with Mr. Lydekker's description and colored figure of this species (l. c.), alt hough its type loclity is about a thousand miles to the westward of the Taiganose Peninsula, where my specimens were collected. I called attention to the differences in coloration between my specimens and the description and figure of O. nivicola as given by Lydekker in 'Wild Oxen, Sheep, and Goats of All Lands,' and deeming it improbable that two species of sheep would be found so near each other as the Taiganose Peninsula and the points in the neighboring parts of Kamchatka where O. nivicola is known to occur (indeed, Lydekker, in the work last cited, p. 224, gives the range of O. nivicola as "typically the countries forming the northern shores of the Sea of Okhotsk, namely the peninsula of Kamschatka on the east and the Stanovoi Mountains on the west," etc., thus including the Taiganose Peninsula), I ventured to criticise the coloring of the head given in Lydekker's figure. It now appears that the criticism was unwarranted, and that there are two species of Ovis living about the head of the Okhotsk Sea. For the present, therefore, I am content to refer my Taiganose specimens to O. borealis rather than to O. nivicola, with some suspicion, however, that they will not prove subspecifically the same as the O. borealis of the Yana River regoin, nearly one thousand miles to the northwestward of the Okhotsk Sea. I certainly do not agree with Mr. Lydekker in referring any of Siberian sheep to Ovis canadensis of North America, even as subspecies.