

CERVUS MACROTIS.—SAY.

MULE DEER.

PLATE LXXVIII. FEMALE—Summer Pelage.

C. cornibus sub-dichotomo-ramosis; auriculis longissimis; corpore supra pallide rufescente-fusco, caudâ pallide rufescente cinereâ, apice compresso subtus nudi-osculo nigro.

CHARACTERS.

Horns cylindrical, twice forked; ears very long; body above, brownish grey; tail short, above, pale reddish ash colour, except at the extremity on its upper surface, where it is black. Hair on the body coarse, like that of the Elk; very long glandular openings on the sides of hind legs.

SYNONYMES.

- JUMPING DEER. Umfreville, Hudson's Bay, p. 164.
 BLACK TAILED OR MULE DEER. Gass Journ. p. 55.
 BLACK TAILED DEER, MULE DEER. Lewis and Clarke. Vol. 1, pp. 91, 92, 106, 152, 239, 264, 328. Vol. 2. p. 152. Vol. 3. p. 27, 125.
 MULE DEER. Warden's United States. Vol. 1, p. 245.
 CERF MULET. Desmarest Mam., p. 43.
 BLACK TAILED OR MULE DEER. James Long's Exped. Vol. 2, p. 276.
 CERVUS MACROTIS, Say. Long's Expedit. Vol. 2, p. 254.
 " " Harlan Fauna, p. 243.
 " " Sabine. Franklin's Journey, p. 667.
 " " Godman's Nat. Hist. Vol. 2, p. 305.
 GREAT EARED DEER. Griffith's An. King. Vol. 4, p. 133; Vol. 5. p. 794.

DESCRIPTION.

In size this species is intermediate between the Elk and the Virginian Deer, and a little larger than the Columbian Black Tailed Deer, to be noticed hereafter. It is a fine formed animal, bearing a considerable resemblance to the Elk, its long ears constitute its only apparent deformity.

Male.—Antlers slightly grooved, tuberculated at base, a small branch near the base, corresponding to the situation and direction of those of the *C. Virginianus*. The curvature of the anterior line of the antlers, is similar in



On Stone by W^m E. Hitchcock

Black-Tailed Deer.

Drawn from Nature by J.W. Ashbourn

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direction but less in degree than in the Common Deer ; near the middle of the entire length of the antlers they bifurcate equally and each of these processes again divides near the extremity, the anterior of these smaller prongs being somewhat longer than the posterior ones. The lateral teeth are larger in proportion to the intermediate teeth than those of the *Virginianus*. The ears are very long, extending to the principal bifurcation, about half the length of the whole antler. The lachrymal aperture is longer than in the Virginian Deer, the hair is coarser and is undulated or crimped like that of the Elk ; the hoofs are shorter and wider than those of the common Deer, and more like those of the Elk, the tip of the trunk of the tail is somewhat compressed and almost destitute of hair.

Female.—Summer Pelage.—In the length and form of its ears, the animal from which we describe constantly reminds us of the mule, and in this particular may not have been inappropriately named the Mule Deer. The female is considerably larger than the largest male of the Virginian Deer we have ever examined. The head is much broader and longer from the eye to the point of the nose, the eye large and prominent, the legs stouter, and the tail shorter. The gland on the outer surface of the hind legs below the knee, covered by a tuft of hair, is of the unusual length of six inches, whilst in the common deer it is only one inch long. Around the throat, the hair is longer than in the corresponding parts of the Virginian Deer, and near the lower jaw under the throat, it has the appearance of a small tuft or beard. The tail of the summer-specimen is slightly tufted, indicating that in winter it might have a distinct tuft at the end. It is rounded and not broad and flat like that of the Virginian Deer.

The hair on the body is coarse, and lies less compact and smooth, that on the thighs near the buttocks, resembles white cotton threads cut off abruptly.

COLOUR.

Upper portion of nose and sides of face ashy grey ; the forehead is dark brown, and commences a line running along the vertebræ of the back, growing darker till it becomes nearly black. Eyebrows and a few streaks on and along the neck dark brown. Neck, and sides of body, yellowish brown. Outer surface of legs a shade lighter than the sides of the body. Under the chin, inner surface of legs, and belly, greyish white. Belly between the forelegs brownish or yellowish-brown, a line of which colour runs up to the neck. It differs from the Virginian Deer in being destitute of the dark markings under the chin, and has them less conspicuous around the nose. From the root of the tail extending downwards on both but-

tocks there is a lightish patch seven inches in diameter, making an approach to the yellowish white spot on the buttocks, so characteristic in the elk, rocky mountain sheep, and pronged horned antelope. From the root of the tail to near the extremity the hairs are ashy white. Point of tail for two inches black.

There are no annulations on the hair, which is uniform in colour from the roots.

DIMENSIONS.

										Ft.	Inches
Female.											
Nose to anterior canthus of eye	-	-	-	-	-	-	-	-	-		6½
Length of eye	-	-	-	-	-	-	-	-	-		1¼
Nose to opening of ear	-	-	-	-	-	-	-	-	-	1	¼
“ end “ “	-	-	-	-	-	-	-	-	-	1	8¼
Breadth of ear	-	-	-	-	-	-	-	-	-		3½
Nose to point of shoulder	-	-	-	-	-	-	-	-	-	2	1
Nose to root of tail	-	-	-	-	-	-	-	-	-	4	10
Tail vertebræ	-	-	-	-	-	-	-	-	-		5½
End of hair	-	-	-	-	-	-	-	-	-		10
Tip of shoulder to elbow	-	-	-	-	-	-	-	-	-	1	5
“ “ “ to bottom of feet	-	-	-	-	-	-	-	-	-	3	3
Height to rump	-	-	-	-	-	-	-	-	-	3	6¼
Girth back of shoulder	-	-	-	-	-	-	-	-	-	3	1¼
Round the neck	-	-	-	-	-	-	-	-	-	1	2¾
Nose to angle of mouth	-	-	-	-	-	-	-	-	-		3½
Between eyes at anterior canthus	-	-	-	-	-	-	-	-	-		4
Behind the eyes round the head	-	-	-	-	-	-	-	-	-	1	6

Weight, 132 lbs.

Inches.

Dimensions of a Male, as given by Say.

Length from base of antlers to origin of basal process,	-		2
From basal process to principal bifurcations	-	-	4½ to 5
Posterior branch	-	-	2½ to 3
From anterior base of antlers to tip of superior jaw	-		9¼
Of the ears	-	-	7½
Trunk of the tail	-	-	4
Hair at the tip of tail	-	-	3 to 4

HABITS.

The first opportunity was afforded us of observing this magnificent animal, on the 12th of May as we were ascending the Missouri, about eleven hundred miles above Fort Leavenworth. On winding along the banks, bordering a long and wide prairie, intermingled with willows and other small brush wood, we suddenly came in sight of four Mule or black-tailed Deer, which after standing a moment on the bank and looking at us, trotted leisurely away, without appearing to be much alarmed. After they had retired a few hundred yards, the two largest, apparently males, elevated themselves on their hind legs and pawed each other in the manner of the horse. They occasionally stopped for a moment, then trotted off again, appearing and disappearing from time to time, when becoming suddenly alarmed, they bounded off at a swift pace, until out of sight. They did not trot or run as irregularly as our Virginian Deer, and they appeared at a distance darker in colour, as the common Deer at this season is red. On the 25th of the same month, we met with four others, which in the present instance did not stop to be examined; we saw them at a distance rapidly and gracefully hurrying out of sight. On the evening of the same day, one of our hunters brought to us a young Buck of this species, the horns of which, however, were yet too small to enable us to judge what would be their appearance in the adult animal. When on the Upper Missouri, near Fort Union, we obtained through the aid of our hunters, the female Black-tailed Deer, from which our figure, description and measurements have been made. We regret exceedingly that we were so unfortunate as not to have been able to procure a male, the delineation of which we must leave to our successors.

The habits of this animal approach more nearly those of the Elk, than of either the long-tailed or Virginian Deer. Like the former they remove far from the settlements, fly from the vicinity of the hunter's camp, and when once fairly started, run for a mile or two before they come to a pause.

The female produces one or two young, in the month of June.

We have figured a female in summer pelage, and have represented the animal in an exhausted state, wounded through the body, and about to drop down, whilst the hunter is seen approaching, through the tall grass, anticipating the moment when she will reel and fall in her tracks.

GEOGRAPHICAL DISTRIBUTION.

The Mule Deer range along the eastern sides of the Rocky Mountains, through a vast extent of country; and according to LEWIS and CLARKE

are the only species on the mountains in the vicinity of the first falls of the Columbia River. Their highest northern range, according to RICHARDSON, is the banks of the Saskatchewan, in about latitude 54° ; they do not come to the eastward of longitude 105 in that parallel. He represents them as numerous on the Guamash flats, which border on the Kooskooskie River. We found it a little to the east of Fort Union on the Missouri River. It ranges north and south along the eastern sides of the Rocky Mountains through many parallels of latitude until it reaches north-western Texas, where it has recently been killed.

GENERAL REMARKS.

Since the days of LEWIS and CLARKE, an impression has existed among naturalists that there were two species of black-tailed Deer ; the one existing to the east of the Rocky Mountains, and the other, bordering on the Pacific, and extending through upper California. Although the descriptions of those fearless and enterprising travellers are not scientific, yet their accounts of the various species of animals, existing on the line of their travels, have in nearly every case been found correct, and their description of habits very accurate. They state that "the black-tailed fallow Deer are peculiar to this coast (mouth of the Columbia,) and are a distinct species, partaking equally of the qualities of the Mule and the common Deer (*C. Virginianus*.) The receptacle of the eye more conspicuous, their legs shorter, their bodies thicker and larger. The tail is of the same length with that of the common Deer, the hair on the under side, white ; and on its sides and top of a deep jetty black ; the hams resembling in form and colour those of the Mule Deer, which it likewise resembles in its gait. The black-tailed Deer never runs at full speed, but bounds with every foot from the ground at the same time, like the Mule Deer. He sometimes inhabits the woodlands, but more often the prairies and open grounds. It may be generally said that he is of a size larger than the common Deer, and less than the Mule Deer. The flesh is seldom fat, and in flavour is far inferior to any other of the species ! It will be seen from the above, that they regarded the Mule Deer of the plains of Western Missouri as a distinct species from the black-tailed Deer, which existed along the Pacific coast near the Columbia river.

SAY gave the first scientific description of the Mule Deer, which he named "*Cervus Macrotis*," which having the priority we have retained. RICHARDSON, whilst at the Saskatchewan, sought to obtain specimens of this animal for description, but it being a season of scarcity, the appetites of the hunters proved superior to their love of gain, and they devoured the Deer they had shot, even to their skins. When after his return to Europe, in 1829, he

published the animals obtained in the expedition, he very properly added such other species as had been collected by the labours of DOUGLASS, DRUMMOND and other naturalists, who had explored the northern and western portions of America. Finding in the Zoological Museum a specimen of black-tailed Deer, procured on the western coast of America, by DOUGLASS, he concluded that it was the species described by SAY, *C. macrotis*; at the close of his article, he refers to the animal mentioned by LEWIS and CLARKE, as the black-tailed Deer of the western coast, of which he states, that he had seen no specimen, designating it (F. B. Am. p. 257) *C. macrotis*, var. *Columbiana*. We have, however, come to the conclusion that the animal described by RICHARDSON was the very western species to which LEWIS and CLARKE refer, and that whilst his description of the specimen was correct, he erred in the name, he having described not the Mule Deer of LEWIS and CLARK and SAY, but the Columbian black-tailed Deer, our drawing of which was made from the identical specimen described and figured by RICHARDSON. We have named it, after its first describer, *Cervus Richardsonii*.

The following characters will serve to designate the species.

C. Richardsonii, considerably smaller than *C. macrotis*, the male of the former species being smaller than the female of the latter. The hair of *C. macrotis* is very coarse and spongy, like that of the elk, that of *C. Richardsonii* is much finer and more resembles that of the Virginian Deer. The *C. Richardsonii* has no glandular opening on the outer surface of the hind leg below the knee joint, approaching in this particular the antelopes which are also without such openings, whilst the corresponding portion in *C. macrotis* is longer than that of any known species of Deer, being six inches in length. They differ in the shape of their horns, *C. Richardsonii* having the antlers more slender, much less knobbed, and less covered with sharp points than those of the latter. They are also destitute of the basal process, so conspicuous in *C. macrotis*. We regret exceedingly that from circumstances beyond our control, we have been enabled to give a figure of the female only of *C. macrotis*, and of the male only of *C. Richardsonii*. The former was figured from the specimen we obtained at Fort Union, and for the latter we are indebted to the directors of the Zool. Society of London, who very kindly permitted us to make a drawing from the specimen previously described and figured by RICHARDSON.

NOTE.—In connection with this subject, we are deeply pained to be compelled to notice the obstructions thrown in the way of our pursuits by the directors of the National Institute at Washington, which city we visited shortly after the return of our exploring expedition, when we were kindly invited by Mr. PEALE to an examination of the valuable specimens of Natural History, collected by our adventurous countrymen. We pointed out to him one or two skins of the black-tailed Deer from the Western coast, which we both agreed differed

from the *C. Macrotis* of SAY. We proposed to him that he should give a short description of the species, and select the name, which we would afterwards adopt in our work—this is in accordance with the mode usually pursued, and would have only occupied an hour. After the lapse of several years, we made an application by letter to the directors of the Institution for the privilege of making a drawing of the specimen; this we were not only refused, but were even denied the privilege of looking at the specimen, which we were very anxious to see, in order to be enabled to point out in the most satisfactory manner the characteristics by which these two closely allied species of Deer inhabiting our country could be distinguished from each other.

We cannot but contrast the narrow-minded policy pursued towards us in our application at Washington, with the liberality and generosity which was at all times extended to us in Europe under similar circumstances. When we visited England in 1838, the Directors of the Zoological Society opened its museum and assigned to us a private room, of which they gave us the key, and which we occupied for nearly a month—the specimens were taken from the cases by their attendants and brought to us, and when we discovered in the collection undescribed species, we were encouraged and aided in describing them. The same facilities were afforded us in the British museum, and in those of Edinburgh, Paris, Berlin, Dresden, and Zurich. The British Government, as well as our own, gave us all the assistance which could be rendered by either, consistent with other public services, and we derived material advantages from the aid afforded us by the revenue service and the various military stations we have visited in our researches, in Labrador—in Florida—in the far West, and in Texas.

We know not who were the Directors of the National Institute when our reasonable request was so cavalierly rejected, nor have we inquired whether any changes in policy have since taken place in regard to the collection of animals at Washington, but we feel it our duty publicly to protest against a conduct so narrow, selfish, and inconsistent with the liberality of our free institutions and so little adapted to promote one of the objects sought to be gained by the exploring expedition—viz: the advancement of natural history.

When the Hudsons Bay Company received an intimation that we would be glad to obtain any specimens they could furnish us from their trading posts in the arctic regions, they immediately gave orders to their agents and we secured from them rare animals and skins, procured at considerable labour and expense, and sent to us without cost, knowing and believing that in benefitting the cause of natural science they would receive a sufficient reward.



Audubon, John James and Bachman, John. 1851. "Cervus macrotis, Mule Deer [Pl. LXXVIII, female-summer pelage]." *The quadrupeds of North America* 2, 206–212. <https://doi.org/10.5962/p.322390>.

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