



KINDS OF BLACK-TAILED AND MULE DEER

Fact Sheet #41

OVERVIEW

The species that scientists call *Odocoileus hemionus* includes all the kinds of deer we know as black-tailed and mule deer. Historically this species had as many as 11 subspecies, typically based on minor physical variations. Contemporary investigations of genetic, physical, and ecological differences, however, have shown that most subspecies designations were not well supported and today scientists only recognize five subspecies.

SITKA BLACK-TAILED DEER (*Odocoileus hemionus sitkensis*)

Of the subspecies that have been described, two stand out as substantially different from the rest. Both the Sitka and Columbian black-tailed deer have very different mitochondrial DNA than mule deer. Sitka blacktails in southeast Alaska and coastal British Columbia are also physically the most different. Overall, it is the smallest subspecies with a darker coat and are browner on the sides of their face making lighter-colored eye rings more prominent. The hair on the edges of the preorbital (in front of the eyes) glands is white, which is distinctive and unique in this subspecies. The presence of two white throat patches is iconic in Sitka blacktails, compared to the single patch in mule deer. Their rump markings are the most subdued of all subspecies, with very little white visible on either side of a flat, flap-like tail that is brown, fading to black at the tip. Their ears are the shortest of all subspecies. Antlers of this small, coastal, rainforest deer are correspondingly smaller with two or three points per side (excluding brow tines) common in mature males, but some individuals develop miniature versions of the classic 4x4 mule deer configuration.



COLUMBIAN BLACK-TAILED DEER (*Odocoileus hemionus columbianus*)

Columbian black-tailed deer inhabit the coastal Pacific Northwest from southern British Columbia to northern California. The two black-tailed deer subspecies are also genetically different from one another. Columbian blacktails look more like mule deer than do Sitka black-tailed deer, but they are still smaller, darker, and have shorter ears than mule deer. The Columbian black-tailed deer has a more obvious rump patch than Sitka blacktails, but it is still much smaller than in mule deer. The tail of this subspecies is mostly black for the length of the upper surface, but it is often narrower and brown at the base of the tail. Although they are more likely to produce a classic 4x4 antler configuration than Sitka at maturity, the antlers are smaller and less massive than mule deer. While the two black-tailed deer subspecies are supported as sufficiently different, they do blend together where their distributions meet along the coast of British Columbia.



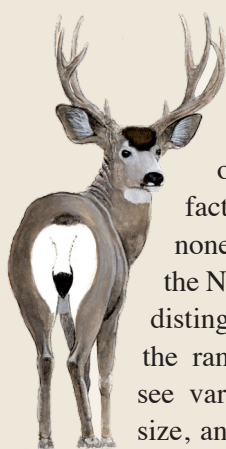
TIBURÓN ISLAND MULE DEER (*Odocoileus hemionus sheldoni*)

The first of two island subspecies is confined to Tiburón Island in the Sea of Cortez between the Mexican mainland and Baja California. The island is separated from the mainland by a channel 1–5 miles wide. Mule deer have been documented swimming between the island and mainland, but genetic patterns indicate it is not common. These deer have

been mostly separated from the mainland for 10,000 –11,000 years and a recent analysis revealed that this subspecies shows considerable genetic differences from mule deer on the mainland. Although they differ genetically, Tiburón Island mule deer are physically similar to those on the mainland, with some variation in color and reported dental and skull measurements. Their hair is consistently darker and sometimes fades to a reddish-brown in mature animals with the white undersurfaces tending toward tan instead of white in many deer. These deer also have darker antlers, commonly with extra points and a dark stripe along their back from the upper neck to the tail, which is less common on the mainland.

CEDROS ISLAND MULE DEER (*Odocoileus hemionus cerrosensis*)

A second Mexican island mule deer subspecies lives on Cedros Island and has been isolated in the Pacific Ocean 15 miles off the west coast of Baja California for 10,000–12,000 years. Recent research found it genetically different from mule deer on the nearby mainland. These island mule deer have been referred to as island dwarfs and pygmy deer because of their smaller size. Overall hair color is dark, reddish-brown with a dark line down the back of the neck to the tail. Cedros Island mule deer have a very small rump patch with cream-colored hairs instead of white. Likewise, the throat patch, belly, and inside of the legs are more subdued with a tan or brown color. There are also some indications their tails have longer hairs than other mule deer subspecies.

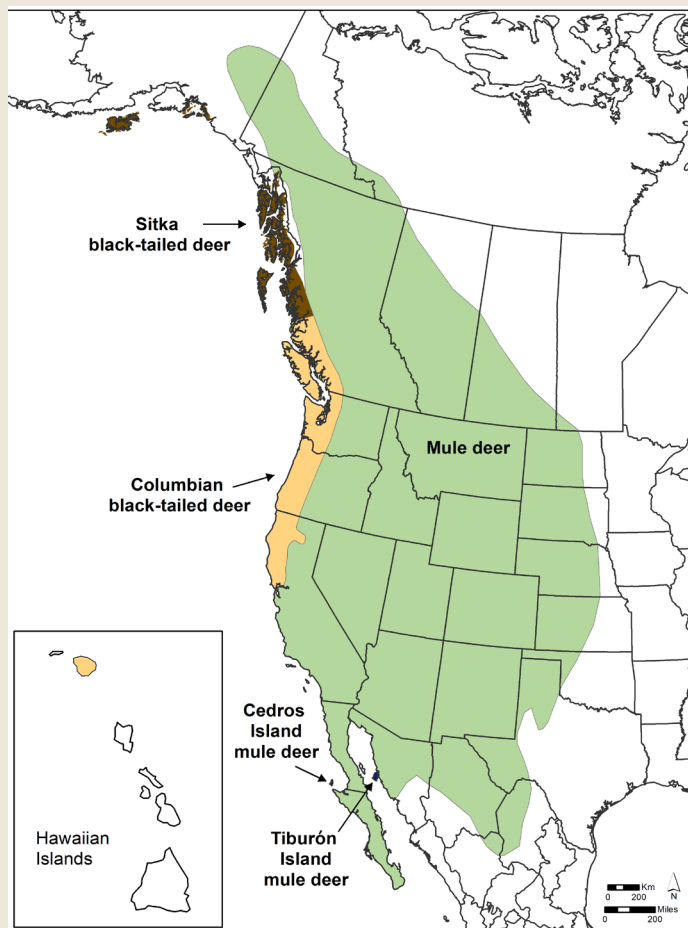


MULE DEER (*Odocoileus hemionus hemionus*)

On the North American mainland, mule deer populations are distributed in continuous and interconnected populations from the Yukon and Northwest Territories southward to Zacatecas, Mexico and from the southern Pacific Coast east to the central Great Plains. None of the various types of mule deer that have been referred to as subspecies are geographically separated from other types. In fact, a rangewide genetic analysis found that none of the mule deer subspecies described on the North American mainland were genetically distinguishable from one another. Throughout the range of mule deer on the mainland, we see variations in tail color, rump color, body size, antler shape, metatarsal gland length, coat color, skull shape, and coloration on the face and neck. These variations in physical characteristics occur as gradients—from big to small or light to dark—across their range.

SUBSPECIES AND ECOTYPES

Mule deer living in some parts of their range look different from mule deer elsewhere. If these different kinds of deer are not genetically different they are more appropriately categorized as “ecotypes” shaped more by environment than evolutionary separation. The formerly recognized mule deer subspecies on the mainland North American continent (California, Rocky Mountain, desert, burro, southern, Inyo, and peninsula) are good examples of ecotypes and should not be recognized as subspecies. Still, there is no reason to discontinue the use of these local references, even if they do not represent well-defined scientific divisions of a species.



More information on mule deer can be found at www.muledeerworkinggroup.com

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