

Mountain Goat

The **mountain goat** (*Oreamnos americanus*) is the single North American representative of a unique group of mountain ungulates called the Rupicaprinae, or “rock goats”. They are characterized by relatively short horns and a fondness for living in rugged terrain.

Occupying remote habitat, little scientific information was recorded about mountain goats until the 1800’s. Mountain goat hides had been obtained by Captain Cook as early as the late 1700s, but he had presumed that the specimens were of white bears, and the species was not described in the scientific literature until 1816. Even today, mountain goats are the least studied large mammal in North America. Alaska Natives, however, have a long history coexisting with mountain goats in Alaska dating back thousands of years. Alaska Native traditional knowledge, while not well documented in the contemporary literature, has undoubtedly contributed significantly to our understanding of mountain goats. Oral accounts of subsistence hunting and uses of mountain goat wool for weaving Chilkat and raven’s tail blankets are particularly notable.

Distribution: The mountain goat’s range is restricted to the steep and broken mountain ranges of northwestern North America and extends naturally from the northern Cascade and Rocky mountains to Southcentral Alaska. Mountain goat populations are patchily distributed throughout this range and can be found from near sea level to over 10,000 feet, however in Alaska most mountain goats are found at elevations below 5,000 feet. In Alaska, mountain goats occur throughout the southeast Panhandle and continue north and west along the coastal mountains to Cook Inlet. In Southcentral Alaska they are generally confined to the Chugach and Wrangell mountains, although small numbers of goats have been documented in Talkeetna Mountains. Mountain goats also have been introduced to non-native range on Kodiak and Baranof islands where populations have expanded, to Chichagof Island where the transplant apparently failed, and most recently to Revillagigedo Island where they are now firmly established. Mountain goats were also re-introduced to the Mt. Juneau area, an area where mountain goat populations had been previously depleted.

General description: Mountain goats are one of the two species of all-white, hooved, large mammals found in Alaska. They are often confused with young and female Dall sheep, but are easily distinguished by black horns. Mountain goats are well adapted for extreme winter conditions and have a long, shaggy winter coat. A crest of long, erect hair up to eight or more inches in length runs along the length of the spine, on the rump, and over the shoulders and neck. Long hairs on the legs give the animal the appearance of wearing pantaloons. A shaggy crop of hair hangs down from the chin and lower jaw – a goatee. Mountain goats beginning shedding their winter coat in June, with adult males and subadults shedding-out before females. By mid-July mountain goats have a soft, sleek summer coat that is hardly longer than a Labrador retriever; this helps goats stay cool during hot summer periods. By the time the first winter snows dust the high country in mid-October, mountain goats have fully grown in their new winter coats. Both sexes have a crescent-shaped gland behind each horn that increases in size, particularly among males, during the rutting season.

The appearance of both sexes is much alike except that males are about 40% larger than females and have different shaped horns. Adult male and female mountain goat weights average about 260 and 180 lbs., respectively. However, large adult males can weigh up 350 lbs. The horns of an average adult female are equal in length to those of an average adult male but are more slender and bend back more sharply towards the tip. Sexes are extremely difficult to differentiate in the field unless the female is accompanied by a kid.

Goats are usually quite docile and their usual gait, even when alarmed, is a deliberate pace. The body structure is robust and muscular with a broad chest and powerful front and rear legs. Mountain goat hooves are specially designed for climbing in steep, rocky and slippery terrain. A close-up look reveals a hard keratinous sheath and a soft embedded pad that enable goats to gain purchase on the smallest of granite cracks while simultaneously gripping maximum surface area. Tracks are slightly larger than Sitka black-tailed deer but broader in appearance.

Life history: Throughout their lives mountain goats remain in or near steep, broken terrain, a behavior pattern which most likely evolved as a means to avoid predators such as wolves, bears, and cougars. The breeding season for mountain goats occurs between late-October and early-December. Billies (male goats) may travel considerable distances in search of receptive females (nannies). Mountain goats have a polygynous mating system, meaning that males will breed with multiple females but not vice versa. Typically, prime-aged males (5-10 years old) do most of the breeding and some battling among males occurs as puncture wounds, particularly on the rear quarters, are occasionally present. Adult males are generally segregated from other age classes except during the rut. They may form small bachelor groups, especially in summer. On the other hand, females with kids and immature animals are generally found in groups. This is particularly evident during early-mid summer when large nursery bands are formed. Nanny-kid groups of up to 50 individuals have been observed, though group sizes of 5-8 are more common. Usually a single kid is born in mid-late May after a gestation period of approximately 180 days. Twinning occurs rarely but is more frequent following mild winters on good range. Kids are precocious and can keep up with adults shortly after birth despite being hardly larger than snowshoe hares. Nannies seek out rugged, isolated sites prior to giving birth but soon join other nannies with newborn kids to form nursery groups. Kids remain with their mothers until the next breeding season and often for some years beyond. Interestingly, mountain goats will not give birth until they are 4 years of age; quite old as compared to moose, black-tailed deer and caribou. Mountain goats may live up to 18 years, though most live less than 12. Male mountain goats have higher mortality rates than females, particularly following severe winters. Many goats show healed wounds, chipped horns and missing teeth, indicating the incidence of accidents, presumably from falls. Avalanches are an ever-present threat for mountain goats during winter and can be a significant cause of mortality in some areas.

Food habits and habitat use: Mountain goats are both grazing and browsing animals, depending on the particular habitat and season of the year. They normally summer in high alpine meadows where they graze on grasses, herbs, and low-growing shrubs. Most goats in coastal areas exhibit altitudinal migrations from alpine summer ranges to winter ranges at or below tree line, typically in old-growth forest habitats. In more interior areas, mountain goats will winter on windswept ridges as long as forage is uncovered by snow. As winter advances and the more succulent plant species are frost-killed, the feeding habits generally shift to browsing. Blueberry, hemlock and, in some cases, lichen can be important winter diet items, but feeding habits in winter are mainly a matter of availability. Weights of mountain goats fluctuate widely between lean winter months and lush summer periods. During the peak growing season (August-October), mountain goats may gain 10-15 lbs of body mass per month (male and females, respectively). However, during winter mountain goats are in a negative energy balance and must rely on fat and protein reserves built up during summer to get by.



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Hunting: Mountain goats have traditionally been hunted for their meat and hides by Alaska natives for thousands of years. In more recent times, the mountain goat has also been recognized as a highly sought after trophy animal. In Alaska, mountain goats are hunted throughout most of their range however harvest is closely regulated in order to maintain sustainable populations. Since mountain goat populations tend to be locally isolated, fairly small in size and grow slowly, special efforts are needed to ensure populations are not overharvested. Of particular interest are programs designed to reduce harvest of female mountain goats. While not illegal, harvest of female goats can strongly limit population growth and consequently reduce future hunting opportunities. The Alaska Department of Fish and Game has developed a program that aims to provide hunters with educational materials that will help with field identification of male and female goats, so that unintentional harvest of females can be avoided.

Mountain goats are not particularly wary of hunters and rely on the security of their cliffy terrain to avoid danger. Approaching within shooting range is not exceptionally difficult provided the hunter is able to negotiate the terrain. When possible, it is usually best to approach from above as goats are more alert to possible danger from below. Goat horns are not particularly impressive when compared to some of the other game species, but from the standpoint of physical hardship, spectacular setting, and difficulty of the terrain, the trophy billy goat presents a unique challenge.

Overall, mountain goats can provide excellent meat for the table. As with other wild food animals, much depends on when and how the animal is killed. A billy of three years or less taken prior to the rigors of winter is outstanding meat. Adult billies, regardless of the season they are taken, are generally very tough—particularly so after the rut. Nonetheless, if processed as burger can provide excellent table fare. The hide of a mountain goat obtained in late-fall or winter can be beautiful.

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