



## Sitka Black-tailed Deer

The **Sitka black-tailed deer** (*Odocoileus hemionus sitkensis*) is native to the wet coastal rain forests of Southeast Alaska and north-coastal British Columbia. Its range has been expanded by transplants, and established populations now also exist near Yakutat, in Prince William Sound, and on Kodiak and Afognak islands.

**General description:** The Sitka black-tailed deer is smaller, stockier, and has a shorter face than other members of the black-tailed group. Fawns are born in early June and weigh 6 to 8 pounds (2.7-3.6 kg) at birth. The average October live weight of adults is about 80 pounds (36 kg) for does and 120 pounds (54.5 kg) for bucks, although dressed-weight bucks of over 200 pounds (90.1 kg) have been reported. The summer coat of reddish-brown is replaced by dark brownish gray in winter. Antlers are dark brown with typical black-tailed branching. Normal adult antler development is three points (including the eyeguard) on each side. Antlers are relatively small, with very few scoring more than 110 points by the Boone and Crockett system.

Their average life span is about 10 years, but a few are known to have attained an age of at least 15.

**Life history:** Fawns are born in late spring. After the winter snow pack recedes, deer disperse; migratory deer move to high elevation alpine/subalpine habitats while resident deer remain at lower elevations throughout the forest. Summer and early fall are periods of active foraging as deer accumulate fat reserves which will help them through the winter and early spring. With the first heavy frost, deer in the higher alpine and subalpine descend to the upper forest.

The breeding season (or rut) peaks during late November. Breeding bucks spend little time foraging and by late November have used up much of their fat reserve. Does, however, generally enter December in prime condition. Does breed during their second year of life and continue producing fawns annually until they are 10 or 12 years of age. Reproductive success decreases rapidly beyond 10 to 12 years and by age 15, which is probably the maximum life expectancy, reproduction has essentially ceased. Prime age does (5 to 10 years) typically produce two fawns annually.

Throughout the rest of the winter and early spring, deer are generally restricted to uneven-aged old-growth forest below 1,500 feet in elevation. The old-growth forest provides optimal winter habitat because the high broken canopy intercepts much snow but still provides enough light for the growth of forage plants used by deer. During winter, the distribution of deer at various elevations is influenced by changing snow depth. During extreme snow accumulation, many deer congregate in heavily timbered stands at lower elevations, and some may even move onto the beach. Spring is a critical period for deer, and if winter snows are deep and persistent many deer die of starvation. As snow melts in mid- to late spring deer begin to disperse, and by late spring and early summer they start rebuilding some of the fat reserves lost during winter.

**Home range:** Summer and winter home range areas vary from 30 to 1,200 acres and average about 200 acres for radio-collared deer on Admiralty Island. Migratory deer have larger annual home ranges than resident deer. The average distance between summer and winter home ranges is five miles for migratory deer and half a mile for resident deer. Movement of deer between watersheds appears to be minimal during winter.

**Food habits:** During summer, deer generally feed on herbaceous vegetation and the green leaves of shrubs. During winter, they are restricted to evergreen forbs and woody browse. When snow is not a problem, evergreen forbs such as bunchberry and trailing bramble are preferred. During periods of deep snow, woody browse such as blueberry, yellow cedar and hemlock, and arboreal lichens are used. Woody browse alone, however, is not an adequate diet and deer rapidly deplete their energy reserves when restricted to such forage.

**Populations:** Deer populations in Alaska are dynamic and fluctuate considerably with the severity of the winters. When winters are mild, deer numbers generally increase. Periodically, however, a severe winter will cause a major decline in the population. Deer have a high reproductive potential, and depressed populations normally recover rapidly. In some cases, however, predation may speed deer decline, as well as slow recovery to higher levels. The wolf, which occurs on the mainland and islands south of Frederick Sound, is considered the major predator of deer in Southeast Alaska. Both black and brown bears also prey on deer to some degree.

Maintaining large tracts of old-growth forest is vital for sustaining healthy populations of deer in Southeast Alaska. Deer are highly dependent on uneven-aged old-growth spruce/hemlock forests especially for winter survival. Areas cleared of trees produce forage during summer. However, during winter, these areas are often inaccessible due to deep snow. As cleared areas age, conifer growth becomes dense, shading out understory forage plants leaving very poor habitat for deer. In the long term, cleared areas will experience a significant decline in deer numbers.

The presence of a number of parasites and disease has been noted in Alaska deer, with the lungworm being the most significant. Winter-killed deer often show signs of this parasite, particularly in northern Southeast Alaska. A high incidence of lungworm is frequently an indicator of high deer density, and lungworm infections probably contribute to deer mortality during hard winters. Lungworm is primarily a disease of animals of less than 2 years of age.

**Hunting:** Throughout much of the range of Sitka black-tailed deer, normal dispersed hunting pressure has little influence on deer numbers. Bag limits vary from complete closures to six deer of either sex, depending on populations. Early season hunting is concentrated in the alpine and subalpine areas. The largest portion of the harvest is taken in November during the rut when both sexes respond to a call resembling the bleat of a fawn. During late November and December, heavy snow sometimes concentrates deer at low elevations allowing high harvest levels when local weather conditions are favorable.



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