



## Marmot

The **hoary marmot** (*Marmota caligata*), the **Alaska marmot** (*M. broweri*), and the **woodchuck** (*M. monax*) are the three species of marmots that live in Alaska. The hoary marmot can be found in talus slopes, boulder fields, and rock outcrops in alpine areas of Alaska, south of the Yukon River. It may occur down to sea level along some areas of the coast where suitable habitat exists. The Alaska marmot lives in similar habitat throughout much of the Brooks Range, the Ray Mountains, and the Kokrines Hills (north of the Yukon River). The woodchuck digs its den in loess (wind-deposited soils) along river valleys in the dry lowlands of eastcentral Alaska.

**General description:** The largest members of the squirrel family (Sciuridae) in North America, adult hoary and Alaska marmots weigh 10 pounds (4.5 kg) or more and may exceed 30 inches (76 cm) in total length. The woodchuck weighs between 2 and 9 pounds (1-4 kg) and may grow to be 26 inches (67.5 cm) long. The animals attain their maximum weight in late summer, when they accumulate thick layers of fat that will sustain them through winter hibernation. Body shape is similar in all three species: head short and broad, legs short, ears small, body thickset, tail densely furred, and front paws clawed for digging burrows. Hoary and Alaska marmots are predominantly gray with a darker lower back and face and a dark, reddish tail. The hoary marmot has a white patch above its nose and usually has dark brown feet, resulting in the Latin name *caligata*, meaning "booted." The Alaska marmot does not have a white face patch, its feet may be light or dark, and its fur is much softer than the stiff fur of the hoary marmot. A uniform reddish brown, the woodchuck has an unmarked brown face. The name woodchuck originated as a Cree Indian word used to describe a number of similar-sized animals and does not describe characteristics of the woodchuck's behavior or habitat preference.



Alaska Marmot



**Life history:** In Alaska, all marmots mate in April or May. About a month later, two to six young are born hairless and blind. Young woodchucks disperse two months after birth and may breed for the first time when they are 1 year old. Alaska and hoary marmots will not disperse in their first year and are not sexually mature until 2 or 3 years of age. Marmots may live to 10 years or more. They feed on grasses, flowering plants, berries, roots, mosses, and lichens.

Hoary and Alaska marmots make their summer homes in talus slopes, boulder fields, and rock outcrops where the rocks protect them from predators and provide lookout stations. Woodchuck dens may be up to 30 feet long, are dug in the loamy soils of river valleys in Interior Alaska, and end with a chamber containing a large grass nest. Most marmot dens have a main entrance with a mound of dirt near the hole and a number of concealed entrances. Marmots are social animals. Although each family has a separate burrow, these burrows are located near each other, forming a colony.

True hibernators, marmots enter a state of torpor in winter during which body temperature and all bodily functions are reduced. Hoary marmots and woodchucks hibernate alone in the same burrows in which they spent the summer. To protect themselves from the cold, they plug the tunnel leading to the nest chamber with a mixture of dirt, vegetation, and feces. They emerge from their winter hibernation in April or early May to find food and mates. Adapted to the harsher winter climate of northern Alaska, Alaska marmots create a special winter den which has a single entrance and is characteristically located on an exposed ridge that becomes snow-free in early spring. The entrance is plugged after all colony members are inside, and no animals can leave until the plug thaws in early May. Consequently, Alaska marmots

mate before they emerge from their winter den. These dens are relatively permanent for each colony, and some are used for more than 20 years. Because hibernation begins in September, most marmots in Alaska spend two-thirds of each year locked in their winter dens.

Marmots are most active in early morning and late afternoon, although they may leave their burrows during other daylight hours. Marmots need wind to control mosquito levels and rarely venture out on calm days. The Alaska marmot marks its territory by rubbing its face and glands on rocks and along trails. The hoary marmot marks its territory in the same way.

The pelage color of marmots is adapted to help them blend with the lichen-colored rocks or rusty-brown soil of their surroundings. Nevertheless, marmots remain alert for predators including eagles, foxes, coyotes, wolves, wolverines, and bears. When the Alaska marmot is alarmed, it produces a two-toned, high-pitched warning call. The alarm call of both the hoary marmot and the woodchuck is a loud whistle. They also hiss, squeal, growl, and yip. In areas where marmots are hunted by humans, they may have learned to remain quiet when humans approach. Good climbers and swimmers, woodchucks may also take to trees or water to avoid predators.

Marmots often secondarily benefit other animals and plants. Abandoned marmot holes can become homes for other small mammals. In moderation, their digging and defecation loosen, aerate, and improve the soil. Alaska Natives have long relished marmot meat and used its thick coat for warm clothing. Although these wary animals are difficult to approach closely, persistent observers are rewarded by the fascinating sight of a marmot community.

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Woodchuck

