

The Unique Olympic Marmot



Isolation

Over millennia, glaciers, changing sea levels and geography have been key forces in the isolation of the Olympic Peninsula. This isolation has fostered a kaleidoscope of unique plants and animals cut off from others of their kind. These unique species range from the Olympic mud minnow to Piper's bellflower. The Olympic marmot, which occurs in patches of subalpine meadows throughout the Olympic Mountains, is also unique—found nowhere else in the world.

Surviving Mountain Life

While mountain meadows can be warm and beautiful in July and August, winters can be harsh, with high winds and deep snow. Few mammals can survive year-round in these meadows, but the Olympic marmot is supremely adapted to its environment. Family groups hibernate in burrows deep beneath the snow for up to eight months of the year. During the brief summer, they bear young and feed on a rich variety of mountain plants. A marmot may double its weight in just three months and then lose much of it over the winter. In summer, two-year-old marmots leave their family groups, often traveling several miles before finding suitable habitat and a mate. This dispersal to other sites is essential to maintaining healthy marmot populations.



Marmot Facts:

- ▶ Marmots are large members of the squirrel family. There are 14 species of marmots worldwide, including six in North America.
- ▶ Adult Olympic marmots weigh 8 to 20 pounds and may live up to 10 years.
- ▶ Females bear three to four young every other year. The young emerge in late July and remain with their families until age two.





Why Is Research Needed?

During the 1980s and 1990s, two events led to concern about the Olympic marmot. First, the nearby Vancouver Island marmot declined to near extinction for reasons that are not fully understood. Second, some well-known colonies of Olympic marmots declined or disappeared. Because of lack of information, it is not clear whether the declines are due to normal population fluctuations, changes in local conditions or if they indicate widespread decline.

In 2002, biologists began a multi-year, parkwide investigation into Olympic marmot populations. Research will reveal the distribution and abundance of marmots throughout the park. Researchers will also compare current numbers of marmots at several colonies (and their birth and death rates) with data from the 1960s. Finally, they will investigate the movement of marmots between isolated colonies. This work will help us unlock the mystery of disappearing local colonies and learn the status of the entire Olympic marmot population.

Science in the Park

Much of the work involves simple surveys of meadows for marmots or active burrows, and the collection of hair samples (obtained without trapping the marmots) for genetic analyses. At a few sites, field technicians trap marmots to attach small metal ear tags and, in some cases, implant radio-tracking devices. This allows them to gather detailed information about survival rates and to accurately census marmots. It also allows them to track marmot movements. You may see research in action as you explore the park.

Visitors and Marmots

Though most of the Olympic marmot's habitat is protected, these animals and others in the park are still affected by human actions. Please help us protect marmots by staying on designated trails and not feeding them. Human food may keep marmots from their natural foods and research shows consuming human foods can lead to poor hibernation survival. In addition, because marmots must be constantly alert for predators such as mountain lions and coyotes, distraction by humans can waste their valuable energy reserves.

Many of the colonies that have declined are in areas with heavy human traffic. Could humans be affecting marmot populations? We don't know. With your help and insight gained from research, the Olympic marmot should continue to be a part of the unique wildlife community in Olympic National Park for years to come.

