

Antelope Bitterbrush

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The FireWorks Notebook, in USFS WILDFIRE BOX



I am a shrub. My scientific name is *Purshia tridentata*.. The word “tridentata” describes my small leaves, which are divided at the tips into three lobes. My woody branches are stiff and branched. I lose my leaves each fall and grow new ones in the spring because I am deciduous. I’m part of the rose family.

Where do I live? I am native to the western United States and Canada. You’ll find me in the dry sagebrush grasslands and the low-elevation ponderosa pine forests, often in sandy soils. I grow very well in open, sunny places and my seeds need full sun to sprout. You’ll often find me growing with other shrubs, like Big Sagebrush.

What do I look like? I can grow to be over six feet tall, but you’ll find young plants at all different heights. I have dark-colored woody stems and small, wedge-shaped leaves, each with 3-toothed tips. My leaves look silvery-green because they are covered with tiny hairs. My small yellow flowers grow at the ends of short branches. I am a long-lived perennial shrub, living over 100 years if conditions are good.

Growing Up: I can grow from seed, or by stems that lay on the ground and sprout new roots and branches. I am able to produce seeds once I am 8-10 years old, and I need insects to pollinate my flowers. Seeds fall to the ground in fall, and need the cool wet winter before they can sprout in the spring.

BOTANICAL FACT: I have a long tap root that reaches down 15-18 feet, so I can use groundwater during dry seasons. I also have a few shallow roots that can soak up rainfall or snowmelt, when it comes. Sometimes, I have colonies of the *Frankia* bacteria living in my roots. These bacteria supply me with a form of nitrogen I can use.

Growing Points: I have growing points at the tips of my branches, in all of my buds that produce leaves and flowers, at my root crown, and at the tips of my roots.

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How do I reproduce? Most new plants come from seeds that sprout. Sometimes, a branch laying on the ground sprouts roots and grows into a new shrub.

My calendar: My leaves unfold from their buds in early spring. Flowers come out in early summer. My seeds ripen by early fall and fall to the ground. I lose my leaves in late fall.

Am I useful? Mule Deer and Elk depend on my leaves and branches for food, especially in fall and winter. My seeds are collected as food by ground squirrels, deer mice and ants. Sometimes, these animals are able to collect almost every seed I produce! The animals store the seeds in underground tunnels, called caches. Luckily, many caches are never used and seeds sprout and grow from the caches. I also provide important shelter for resting many birds, mammals, and insects. Mule deer use me in winter for safe and warm cover.



What does fire do to me? Summer and Fall fires usually kill me, especially if I am very young or very old. Some of us can sprout again after being burned in a light spring fire, if the fire has not burned too hot. Some re-sprout branches from buds that circle an above-ground root crown. Others can sprout again from stem tissues under the bark or sprout from an under-ground tuber that survives the heat of a wildfire.

BOTANICAL FACT: In areas where cheatgrass has invaded, the amount of fine fuels is greater. When fires come, the increased fuel causes a hot fire, killing antelope bitterbrush. Seeds are less able to sprout here due to competition with cheatgrass seedlings.

Life After Fire: Wildfires clear away dense old shrubs and allow sunlight to reach the soil where my seeds from many years wait. If the snowmelt and spring rains provide enough moisture, seeds can sprout and grow. The uneaten underground seed caches stored by ants or rodents are often where seeds sprout and grow.