

Antelope bitterbrush

Purshia tridentata

By Kathy Lloyd

If you have hunted or hiked through Montana's prairies or mountain foothills, you have no doubt walked among bitterbrush, one of the state's iconic shrubs. This time of year, especially, it's worth paying attention to bitterbrush, because it's one of the most important winter foods for prairie and foothills big game species.

Identification

Bitterbrush, a slow-growing deciduous shrub in the rose family, grows from two to more than six feet tall. The small, inch-long leaves are wedge-shaped with three lobes, green on the upper surface and appearing gray-green on the underside because of dense hairs.

Long taproots that reach as far as 18 feet down into the soil allow the plant to draw moisture from deep underground in the semiarid environments where it grows.

The small flowers of bitterbrush are yellow and very fragrant, helping to attract insect pollinators needed to perpetuate the species. Bitterbrush blooms early, while the leaves are just starting to emerge, and paints an otherwise drab landscape in a wash of brilliant yellow. In central Montana, where I live, the flowers are gone by mid-June, after which the small, three-lobed leaves become the shrub's most distinguishing feature.

Range

Bitterbrush ranges across 340 million acres of western North America from British Columbia to northern Mexico and throughout the Rocky Mountains and Great Basin. The shrubs grow most commonly on well-drained soils at 3,000 to 10,000 feet. In Montana, bitterbrush is usually found with bluebunch wheatgrass, needle-and-thread grass, Idaho fescue, and big sagebrush.



Scientific name

Purshia refers to F. T. Pursh, a German American botanist who originally described this plant. The Latin word *tridentata*, meaning "three-toothed," refers to the three lobes on the plant's leaves.

Wildlife value

Bitterbrush (also known as buckbrush) is browsed by deer, elk, antelope (hence the name), moose, bighorn sheep, and domestic livestock. Pronghorn and mule deer especially rely on the shrub to survive winter. Rodents such as deer mice and kangaroo rats browse bitterbrush leaves and eat the plant's seeds. As with big sagebrush, large tracts of bitterbrush act as the prairie's "forests," trapping moisture and providing shelter for rodents, songbirds, sage-grouse, mule deer, and pronghorn in the dry, windswept environments.

At Mount Haggin Wildlife Management Area near Anaconda, selective logging is opening up areas to sunlight and encouraging bitterbrush growth for mule deer. "Bitterbrush is highly susceptible to shading," says FWP Butte-area wildlife biologist Vanna Boccadori. "Projects that remove conifer overstory are important for bitterbrush conservation."

Cheatgrass

Cheatgrass, an invasive, non-native annual, is spreading rapidly in bitterbrush and

sagebrush habitats. Cheatgrass invasion has increased the amount of fuel in prairie environments. Though bitterbrush is adapted to minor fires, it cannot endure the more frequent, high-severity fires caused by increased fuel loads. As a result, some vegetation studies have shown that cheatgrass outcompetes bitterbrush after major wildfires.

Historical notes

Bitterbrush had many medicinal uses among Native Americans. An infusion of the root was consumed for lung problems and coughs. The dry, ripe fruits were used to induce vomiting. Members of some Indian tribes used the leaves as a poultice for skin problems, a general tonic, and a treatment for gonorrhea.

Some tribes used the outer seed coat to produce a purple dye for staining items made of wood. Tribes living where trees were sparse made arrows from bitterbrush wood. Some Indians also chewed bitterbrush leaves to bring good luck during hunting. Indians, trappers, and settlers all used bitterbrush branches as firewood in areas with few or no trees.

Bitterbrush is one of 31 plant specimens collected in Montana by the Corps of Discovery that still survive and are housed in the Lewis and Clark Herbarium at the Academy of Natural Sciences in Philadelphia. Meriwether Lewis collected his bitterbrush specimen near Ovando in what he called the "prairie of the knobs." 🐾

Kathy Lloyd of Helena recently stepped down after volunteering for 20 years as president of the Kelsey Chapter of the Montana Native Plant Society.