

NATURE DETECTIVES

Summer 2009

Don't Shrug Off Shrubs

Poems are written about trees. Paintings feature them. Trees are great. What about shrubs?

"Well, shrubs are okay," a person might say with a slight shrug of the shoulders.

Whoa! If you could ask a mule deer or a deer mouse or a scrub jay about shrubs, they wouldn't shrug (even if they could). They would be much more enthusiastic (if they could talk) because shrubs provide important food and shelter for them and for many other animal species.

Those animals might say, "Shrubs are great!"

What is a Shrub?

A shrub is a plant that is smaller than a tree but with the same sort of woody branches and twigs as trees have. As with trees, shrub branches do not die back to the ground each winter. Unlike trees, shrub branches grow too low to the ground to walk under. Next time you walk around a shrub, take a good look. Shrubs, bushes or scrub, whatever you call them, make great wildlife habitat.

How Much Do You Know About Shrubs?

Try your hand at these true or false questions about some shrubs that grow in Boulder County Open Space Parks. Read pages 2 & 3 to check your answers.

T/F One type of shrub has seeds that plant themselves into the ground.

T/F One shrub smells almost as bad as a skunk.

T/F Mice sometimes end up planting shrub seeds.

T/F Just by looking, you can often tell which animal has been eating a shrub.



Home Sweet Shrub

Shrubs grow in the zone between plains grasslands and forests. As they grow, shrubs take nutrients from the soil to grow the fruits, seeds and juicy leaves that animals like to eat. The list of animals using shrubland habitat is long.

Crowded, twiggy branches hold bird nests secure, and the areas under shrubs are used for shelters or as den sites. Rodents such as deer mice thrive here, and the rodents provide food for predators like bobcats.

A Nature Detective can look for clues to whether a deer, rabbit or vole has been eating a shrub. Stems bitten by deer or elk look shredded or torn at the ends. Deer and elk do not have upper front teeth so they rip off small stems between their lower teeth and upper lips. Rabbits have upper and lower teeth for biting.

Rabbit-chewed twigs look like smooth knife cuts. Mice and voles usually leave little crisscrossed tooth marks on the bark or stems as they nibble. When you look at shrubs, please remember to leave the leaves, twigs, and berries for the animals that need them.

Skunkbush

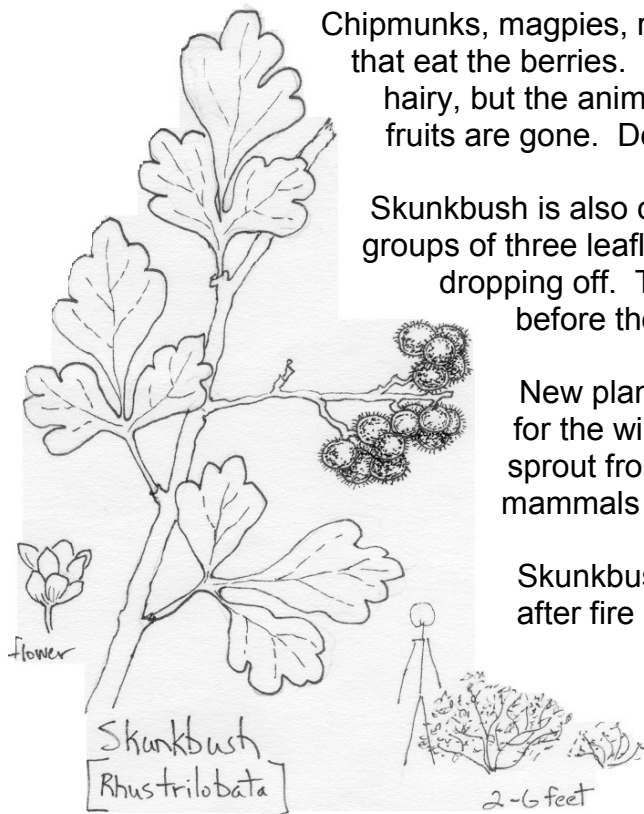
Crush a leaf of this shrub and you'll know how it got its name. Despite the smell, this small, densely branched bush is a favorite shelter for birds. Although it is related to poison ivy, native tribes used parts of the plant as medicines. Its red/orange berries keep for a long time, and were eaten raw or cooked by some Native Americans. They also made a sour fruit drink, similar to lemonade, from the berries.

Chipmunks, magpies, robins and crows are among the many animals that eat the berries. The fall-ripening fruits are dry, sour and slightly hairy, but the animals eat them late in winter when better tasting fruits are gone. Deer and rabbits feed on the bark and twigs.

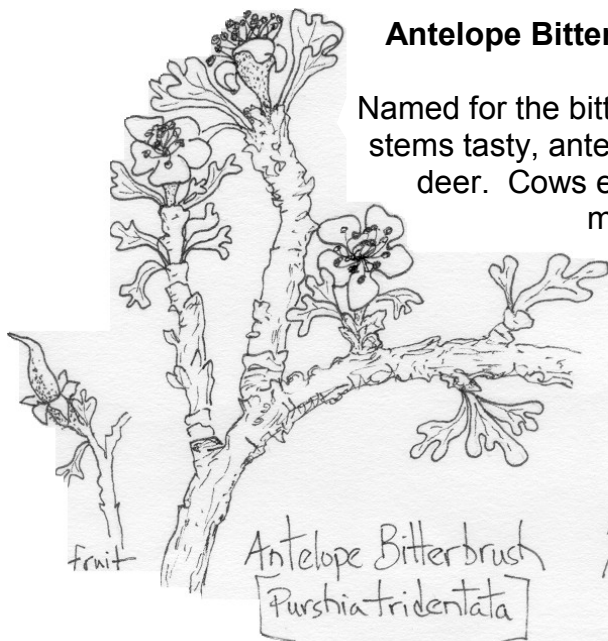
Skunkbush is also called three-leaf sumac for its leaves that grow in groups of three leaflets. The leaves turn scarlet red in the fall before dropping off. Tiny yellow/green flowers appear in clusters before the shrub leafs out in spring.

New plants can grow from seeds that mice stored away for the winter but never ate. Most new skunkbushes sprout from seeds left in the droppings of the birds and mammals that ate the fruits but didn't digest the seeds.

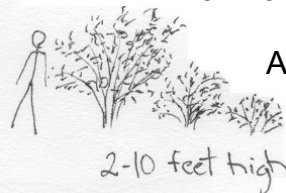
Skunkbush can also grow back from its roots after fire kills the branches.



Antelope Bitterbrush



Named for the bitter-tasting fruit and one of the animals that finds its stems tasty, antelope bitterbrush is also a favorite browse for mule deer. Cows eat it. So do elk and rabbits. Chipmunks, pocket mice, and golden-mantled ground squirrels eat the large seeds and leaves off the small bushes. Insects such as moth caterpillars attack bitterbrush and other shrub species, and birds such as bluebirds snack on the insects. Native Americans used various parts of the bitterbrush for many types of medicines.



As a member of the rose family, bitterbrush has fragrant, pale yellow flowers in the spring. It loses its leaves in the fall except for a few baby leaves that sometimes last into the winter.

Like skunkbush, new bitterbrushes can grow from seeds put away for the winter by rodents. Some of the seeds that didn't get eaten in these caches may sprout in the spring if conditions are favorable.

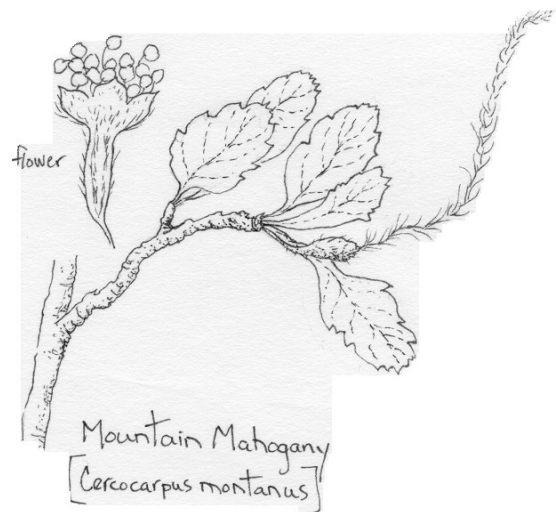
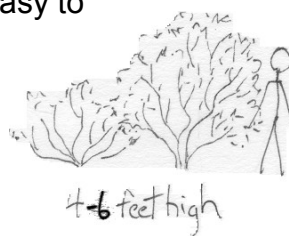
Mountain Mahogany

Mule deer readily nibble on this member of the rose family, too. It is often found growing in the same area as bitterbrush and skunkbush. These hardy bushes grow in rocky areas where water runs off rapidly and the thin soil erodes easily. They survive where the sunlight is intense and the wind can blow hard. Temperatures can be very hot or very cold. Bull snakes, cottontail rabbits and towhees are among the many animals that seek food and shelter here.

Each single mountain mahogany seed has an amazing, long, feathery tail that helps the seed to float off the plant and land pointed end down. Once on the ground, the tail becomes a type of corkscrew, straightening out as it gets wet and twisting as it dries.

The twisting and untwisting of the 2 to 3-inch tail drills the seed right into the ground, planting it where it will sprout when soil and weather conditions are right. The tailed seeds stay on the shrubs into winter and make mountain mahoganies easy to identify.

And, now you know, all four T/F statements on the first page are true.



Go on a Shrub Search

Tune up your detective's observation skills and head to Rabbit Mountain or to Hall Ranch for a hike. Rabbit Mountain and Hall Ranch are Parks and Open Space properties where all three of the shrubs described here grow.

See if you can find all three bushes using the clues below and the ones in the previous pages. Also look for signs that animals have been using the shrubs for food or shelter, such as nests or tooth marks on branches.

If you choose, bring along some paper, a pencil and a hard surface to write on, and sketch the leaves, or make a pencil-rubbing of them.

Mountain Mahogany

- 3 to 5 feet tall
- Small, oval-shaped leaves that are dark green with lighter-colored undersides
- In the fall, seeds have long, feathery-looking "tails"

Antelope Bitterbrush

- 2 to 3 feet tall
- Leaves have 3 shallow lobes that are kind of like "teeth"
- Flowers are yellow and fragrant

Skunkbush or Three-Leaf Sumac

- Round-shaped bush
- Leaves are deeply lobed – it almost looks like there are bunches of 3 leaves, but really it's one leaf that has 3 "sections"
- In the fall the leaves turn red and orange
- Leaves have a strong scent
(rub one between your fingers and smell)

