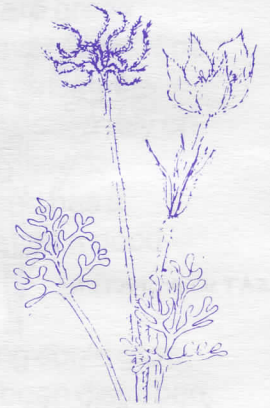
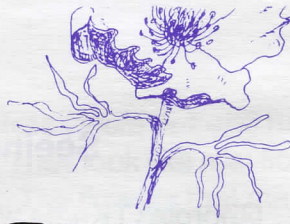


NATURE DETECTIVES

Spring 2003



THE WONDER OF WILDFLOWERS

How Pasqueflower Got "Furry" — A Make-Believe Story

Little pasqueflower plant steadily pushed its leaves through the white snowdrift until its tender new bud stretched above the icy crust, at last. Warmed by the early spring sunshine, the flower blossom slowly began to open.

As the pale lavender petals unfurled, clouds raced across the sky and covered the sun. The spring wind suddenly picked up and the air grew chillier. The little flower felt its leaves turning stiff with the cold.

Just then, a tiny meadow vole nosing for something to eat sniffed the chilly flower. "You shouldn't be blooming so early if you don't have a fur coat like mine to keep you warm," the mousy vole scolded.

"I wish I did have a fur coat," the little flower agreed sadly.

A passing fairy heard the flower and decided to grant the wish. "I know you need warmth so you can try to be the first flower of spring, but I cannot give you mouse fur," chuckled the fairy. "I can cover your petals and stems with plant fuzz to help you stay warm. In return, you must promise to give shelter to others. You must let small bugs sleep inside your flower when they are caught out on a freezing spring night or when they need to stay dry on a stormy day."

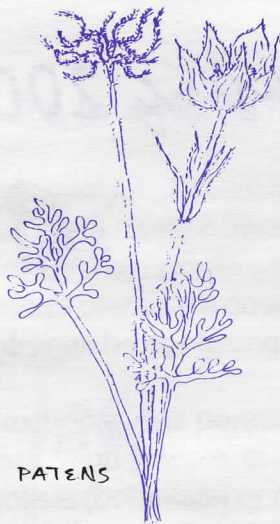
"I promise!" chirped the little flower. So the flower fairy waved her magic wand, and instantly the lavender petals and green stems became covered with tiny plant hairs.

Since that day, all pasqueflowers have hairy stems and fuzzy petals, and small bugs do find warm shelter inside the beautiful blooms.



FLOWER FAIRY

Pull Out and Save



PULSATILLA PATENS

Seeing Flowers in the Wild

Georgia O'Keeffe was a talented artist. You may have seen some of her lovely flower paintings. She said, "Nobody sees a flower, really – it is so small – we haven't time, and to see takes time, like to have a friend takes time."

Spend some time this spring exploring for wildflowers. We have many to see in Boulder County. Check out a wildflower guide from your library; take a friend and head out on an Open Space trail.

Like all plants, wildflowers need moisture to grow. Melting snow provides excellent moisture, and the snowy crust shelters new plant growth from cold air. Several wildflowers appear behind retreating snow. They include pasqueflowers, glacier lilies, and snow buttercups. Here are a few descriptions to get you started.

Pasqueflowers (*Pulsatilla patens*) have adapted to harsh spring conditions up to 10,000 feet elevation with some plants even appearing above tree line. They have soft hairs on the flower buds and stems. The silky hairs protect the plant from wind, insulate the buds from cold, and shade the stems from the hot sun. They are found growing in gravelly soil on grassy hillsides, sagebrush fields, meadows, and open forests. Feathery hairs on the seeds help the wind blow the seeds to new ground.

Pasqueflowers are one of the earliest flowers of spring, often appearing through melting snow. The tulip-shaped, pale lavender flower cups shelter insects in a space that can be much warmer than the outside air.

Glacier Lilies (*Erythronium grandiflorum*) can appear as a carpet of yellow blooms at the edge of a retreating snow pack. The 6-15 inches tall flowers bloom in the subalpine to alpine areas to 12,000 feet. The green seed pods are good eating for elk, mule deer, and bighorn sheep. Bears dig up the bulbs to eat, and some rodents dig up the bulbs and store them for winter nibbling.

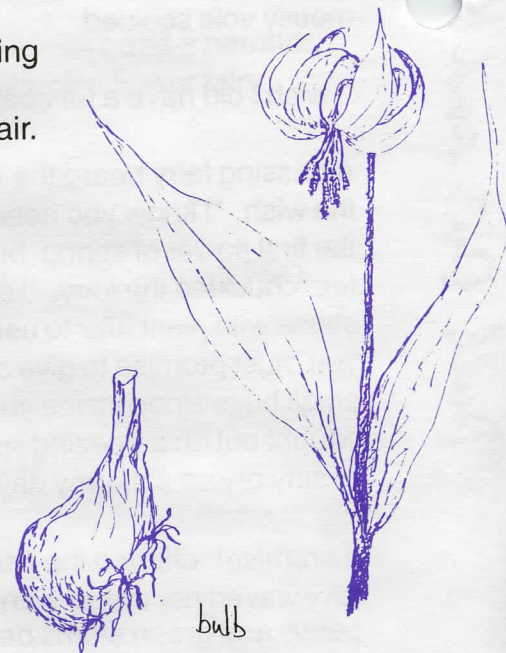
Snow buttercups (*Ranunculus adoneus*) will grow right through the snow. Apparently eager to bloom, the plants have been found

under 12 feet of snow starting to blossom. The name *Ranunculus* is Latin for "little frog." Like little frogs, buttercups like wet areas. Despite their rush to bloom in spring, they keep blooming all summer. The flowers are bright yellow, but they contain an interesting red pigment called anthocyanin. This pigment is a natural antifreeze that keeps ice crystals from forming in the plant cells in cold weather. The Native Americans used the petals to make dye.



RANUNCULUS ADONEUS

ERYTHRONIUM GRANDIFLORUM



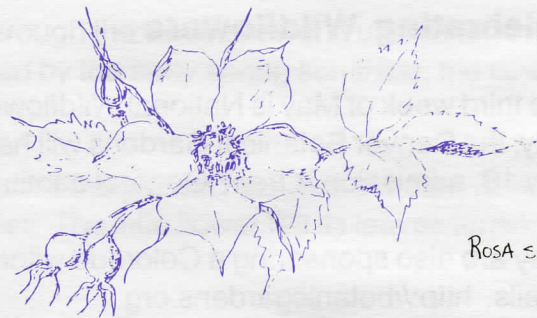


VIOLA NUTTALLII

Nuttall's violets (*Viola nuttallii*) have small yellow flowers in early spring. They look like real flowers but they usually don't make seeds. The flowers that make the seeds are green, petal-less flowers that grow underground and never open. The problem with having seeds form underground is getting the seeds transported to new spots to sprout. Plants often rely on birds, insects, animals, or the wind to carry away seeds. Nuttall's violets rely on ants. In fact, the violet seed has a bump-out on one side making it easy for ants to get a good grip for carrying.

The bright little yellow violet is often on a dry hiking trail where it looks like nothing could grow. Look for them beside rocks from the plains to the subalpine where the soil has been disturbed.

Wild roses (*Rosa spp.*) have nutritious fruits called hips that are good food for birds and wild animals. Early pioneers made jelly from rose hips, which are high in vitamin C. Flies, beetles, and wasps pollinate the rose flowers. Native Americans used roses as a treatment for sore throats.



ROSA spp.

At least twenty different kinds of roses grow in the Rocky Mountain area. Early blossoms appear in warm protected spots, but the five-petal red or pink flowers can be found in bloom in many areas all summer.

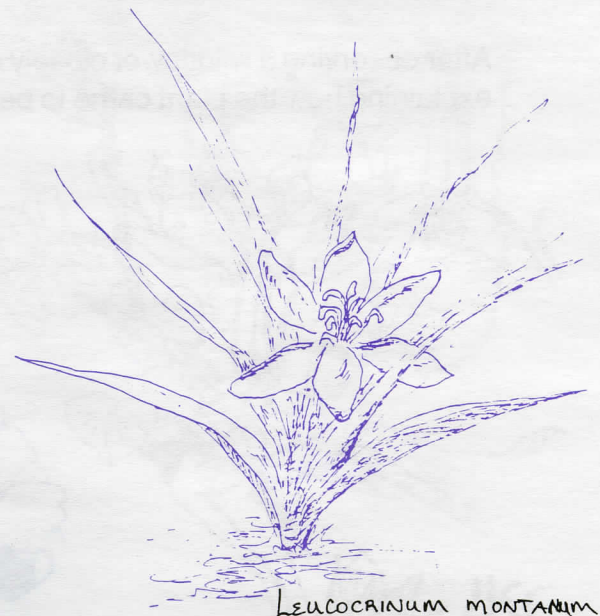
Sand lilies (*Leucocrinum montanum*) are spring stars on the ground. Look for their white, six petal flowers and grass-like leaves on south facing slopes and open hillsides or where the ground has been disturbed.

Spring Marches Uphill

Remember that spring weather usually comes first to the plains then moves up the mountains. Spring flowers may start blooming in March or earlier on the plains but flowers on the alpine tundra may not bloom until June. Plants that get a little extra warmth or shelter bloom earlier than more exposed flowers. So look for early bloomers against a sunny rock face, on south facing hillsides, and on dark, bare soil.

Future Flowers

And, don't forget, it is illegal to dig up wildflowers. Even picking a single flower may lessen the plant's chances of survival and reproduction. Take a photo or draw a picture, but please leave the flowers for the animals that need them and for the plant's future.



LEUCOCRINUM MONTANUM

What's In a Name?

The playwright, William Shakespeare, wrote, "What's in a name? That which we call a rose by any other word would smell as sweet." Common names of plants are descriptive and colorful, but names can be confusing.



For example, one person may speak of pasqueflowers while others talk of wild tulips, wild crocus, wind flowers, or prairie smoke. All are nicknames for the same plant so when plant scientists (botanists) or others want to communicate accurately, they refer to the plant's scientific name, *Pulsatilla patens*. The scientific name identifies the plant as a specific plant within a group of similar plants and is based on the ancient Latin language.

Celebrating Wildflowers

The third week of May is National Wildflower Week. In celebration, May 19-23, from 10–2 daily, the Denver Botanical Gardens will have educational activities for children of all ages. May 19, admission is free. General admission will be charged the other days.



They are also sponsoring a Colorado wildflower coloring contest. See their web site for details. <http://botanicgardens.org>

Put on a Play

Stage the story of how pasqueflower got "furry" as a play with three characters and a narrator. Speakers in order of appearance: narrator, pasqueflower, meadow vole, and flower fairy. Non-speaking roles that could be added: sun, clouds, and wind.

Write a Story

After observing a wildflower closely or reading about one, write your own make-believe story explaining how the plant came to be the color or shape or in the location it grows.

