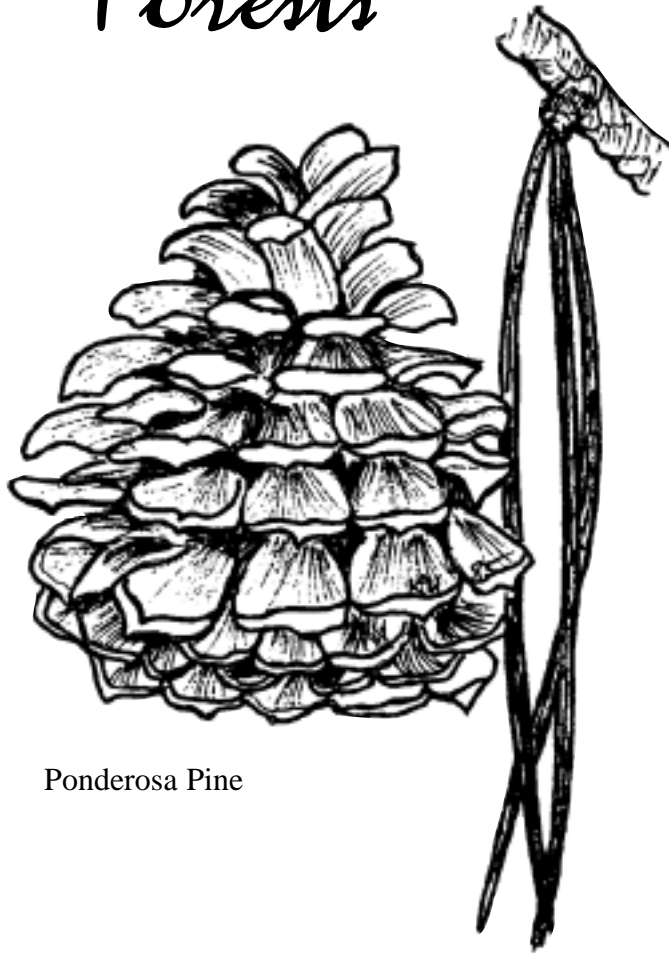


Wildflowers of Ponderosa Pine Forests



Ponderosa Pine

Coloring Book



Ponderosa Pine Forests

Ponderosa pine is an important tree species in the western United States. The scientific or Latin name for this tree is *Pinus ponderosa*. This widespread species resides from Canada to Mexico and west from Nebraska all the way to California. Forests of ponderosa pine usually occur on sunny, dry mountain slopes of low and intermediate elevations. In Colorado, this pine tree can be easily recognized, since no other native conifer has needles as long. The needles can be four to seven inches long and occur in bundles of two or three needles. The trees can grow to be 150 feet or taller; that's as tall as a fifteen story building! The largest trees can be up to 500 years old. The bark of a ponderosa pine tree has a distinctive scent of vanilla or butterscotch. As a tree ages, the bark changes from a brownish-black to an orange or yellow-brown color. The bark can become very thick and form large jigsaw puzzle shaped pieces. The long needles and aromatic, brightly colored bark makes ponderosa pine easy to identify. Next time you are in a forest, use these clues to find a ponderosa pine tree.

In the southern Rocky Mountains ponderosa pine ecosystems are found between the elevations of 5600 and 9000 feet. In this habitat the winters are cold while the summers are warm with frequent droughts. Ponderosas receive most of their moisture from spring snowstorms and summer thunderstorms. Snow usually melts quickly in ponderosa habitats. It is an important source of moisture. Mature stands of ponderosa usually form on south-facing slopes. Here they will receive lots of sunlight, which is necessary because ponderosas are a shade intolerant species. This means that the trees will not grow in the shade of other trees or shrubs. The large spaces between mature ponderosa trees allow a large amount of sunlight to reach the forest floor. Many herbaceous plants, grasses, and shrubs can grow in these sunny, open patches. In dense, overcrowded forests very little sunlight reaches the forest floor and few understory plants can survive. Wildflowers and shrubs are an important part of an ecosystem. They provide food and shelter for insects and animals, but they also make an area more interesting and beautiful.

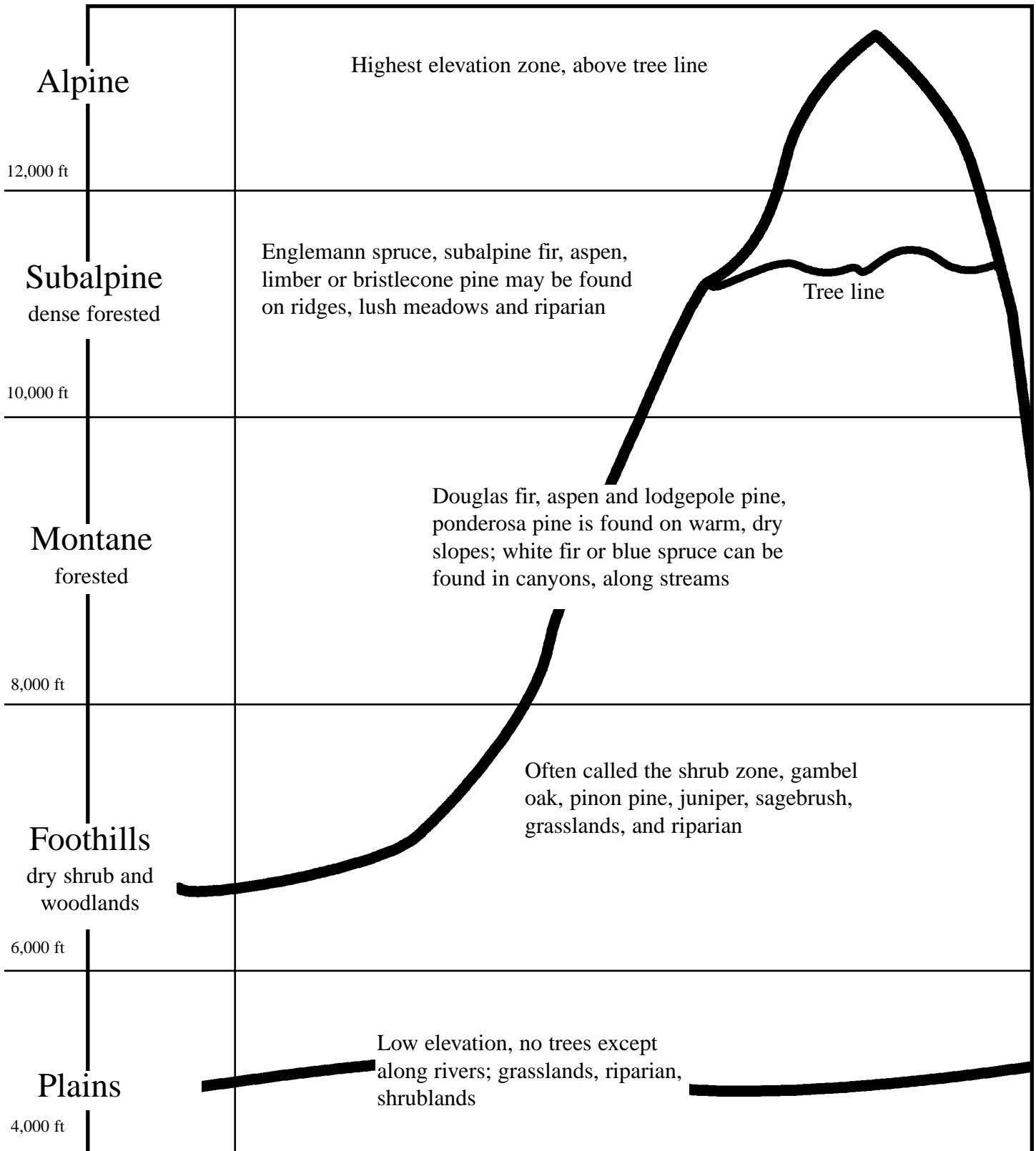
Ponderosa pine habitats have always been a popular place to live, and therefore they have been heavily used for logging, grazing, and recreation (hiking, bicycling). Have you noticed all the houses being built in the foothills of Colorado? Lots of people want to live in ponderosa habitats because they are beautiful and the cities are close. The climate is very comfortable; cool in the summer and not too cold in the winter. As more people move into ponderosa pine habitat, it is important that we protect and manage the remaining forests, or they may be lost.

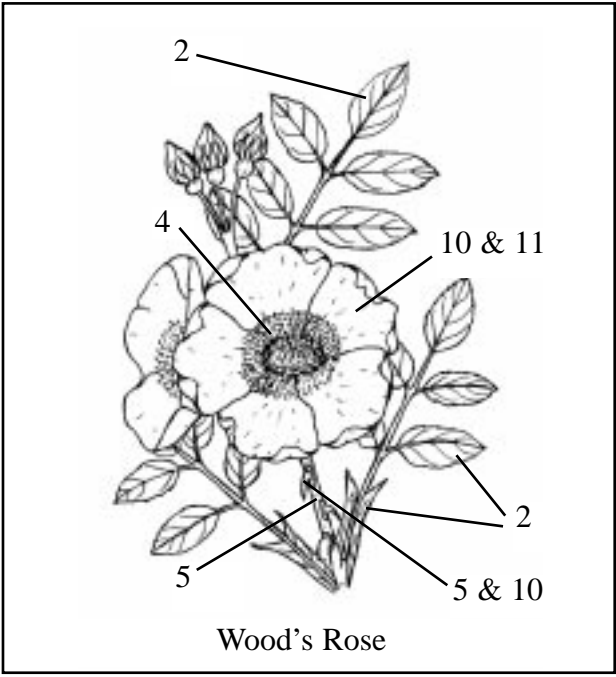
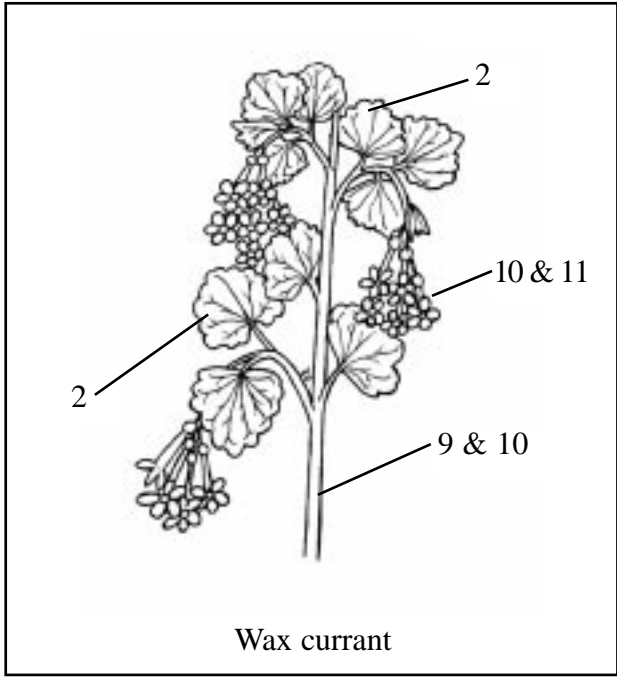
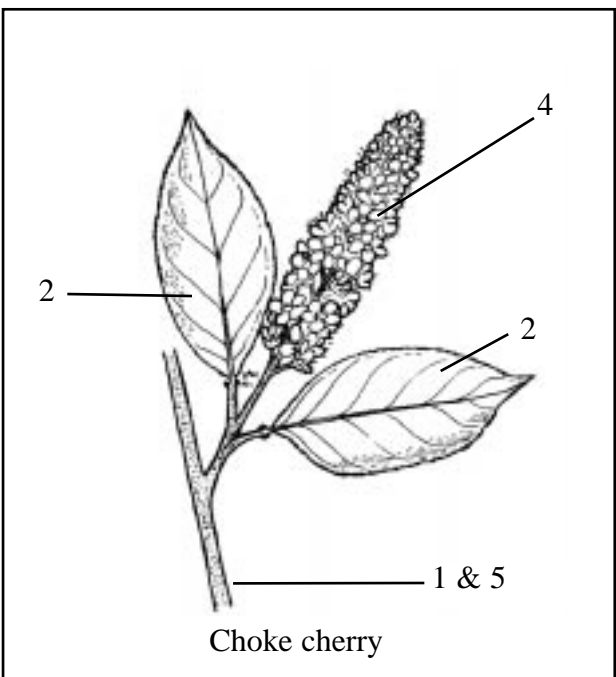
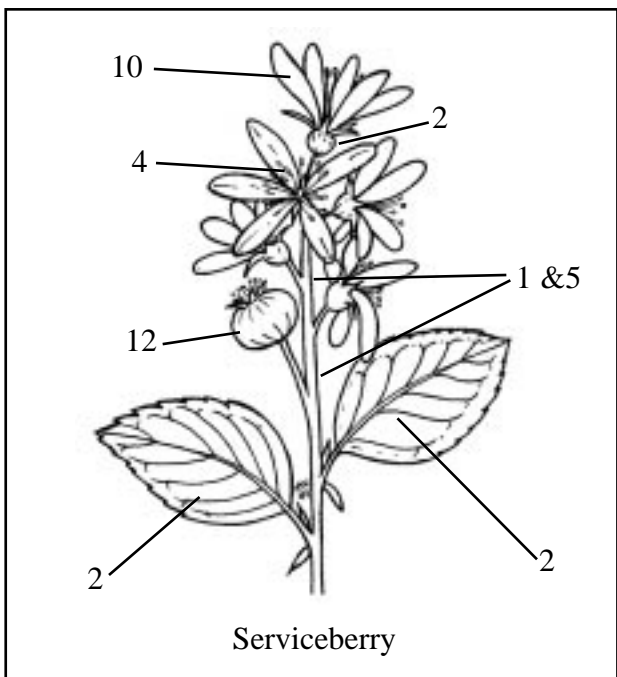
Fire is a natural part of many forest ecosystems. Without fires, the forests can become overcrowded, or invaded by other tree or shrub species. When forests are overcrowded there are not enough nutrients, sunlight, or water to support all of the trees. This causes the forest to become unhealthy and susceptible to disease or insects. Currently, many ponderosa pine forests are infested with Mountain Pine Beetle. These insects invade unhealthy forests and can kill the trees. Today, fire is being used to manage forests. Controlled fires by federal and state agencies help to prevent overcrowding and insect infestations. Forest management is critical to the long-term survival of our forests. Most Colorado forests are managed by federal, state, local, and private agencies. To learn more about our natural areas consult these agencies or your local library. Enjoy the forests.

Life Zones

An important clue in wildflower identification is where the plant grows. As you travel along the roads of Colorado, you have probably noticed that certain kinds of wildflowers and trees belong at certain altitude and are not found much above or below these limits. Therefore, you expect to find different plants on top of Mt. Evans (above tree line) than you would at Red Rocks amphitheater (foothills).

These changes are called **life zones**. In Colorado there are 5 life zones, based on the changes scientists see in plant and animal life with increasing elevation.





1 Red	7 Violet/Purple	13 Violet-Red	19 Cerulean
2 Green	8 Orange	14 Carnation	20 Blue Violet
3 Blue	9 Gray	15 Red Orange	21 Blue Green
4 Yellow	10 White	16 Vivid Tangerine	22 Jungle Green
5 Brown	11 Fuchsia	17 Yellow Orange	23 Yellow Green
6 Black	12 Red-Violet	18 Peach	24 Green Yellow



Serviceberry

Amelanchier alnifolia the Rose Family

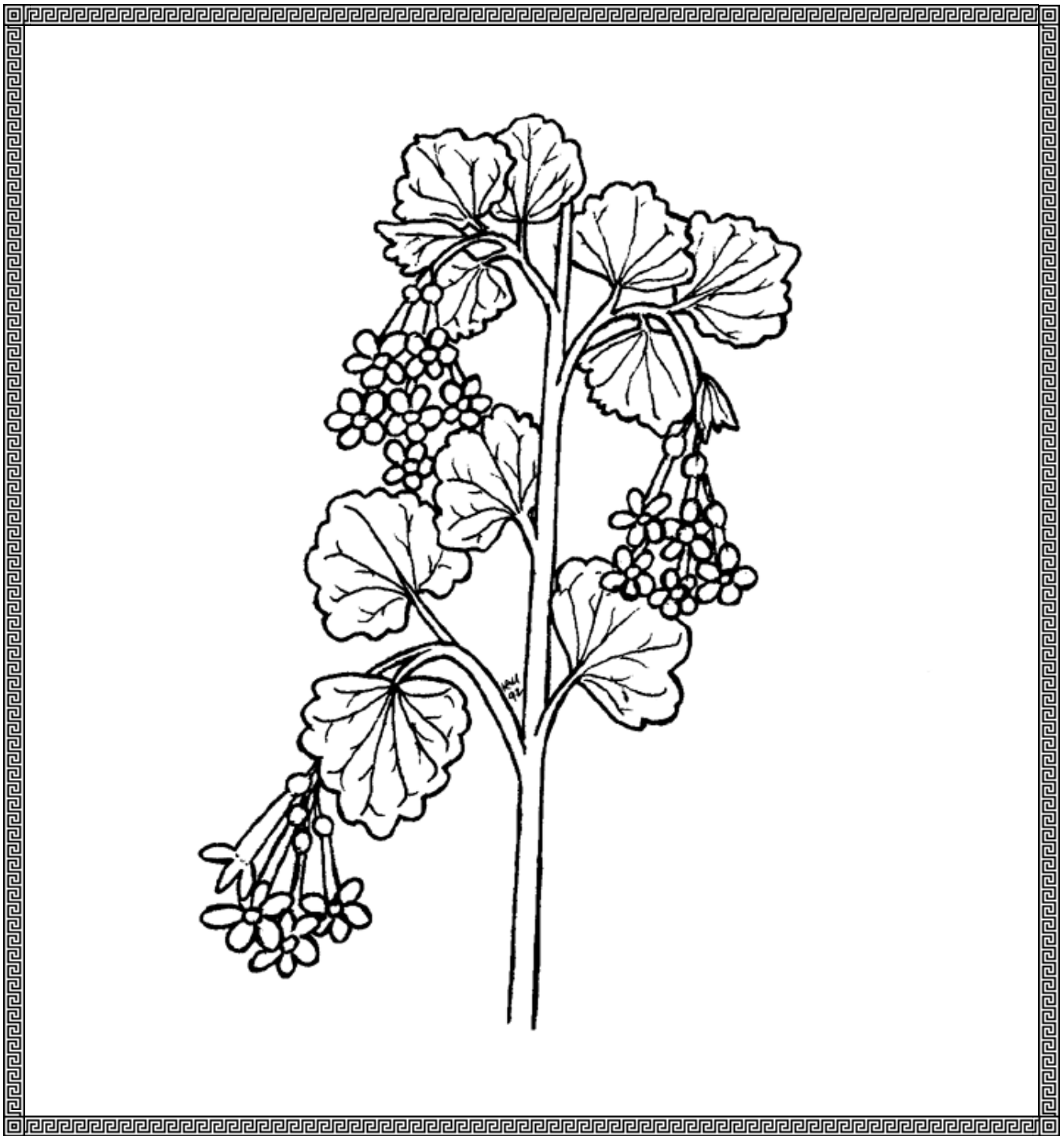
These are moderately tall shrubs that grow in rocky soil from oakbrush areas up to aspen. The plants have clusters of white flowers and simple, rounded leaves with toothed margins. The dark purplish fruit is like a little apple and is very bitter tasting to people, but is readily eaten by birds and other wildlife species.



Choke cherry

Padus virginiana the Rose Family

These are tall shrubs, common along streams and roads in the 7000-9000 feet elevation zone. The flowers are white and fragrant and borne in an arrangement called a raceme. The fruit is similar to a cherry in that fleshy covering surrounds a single seed. When eaten fresh, this sour fruit can produce a puckering of the mouth and throat, thus it was commonly called “Choke” cherry.



Wax currant

Ribes cereum the Goosefoot Family

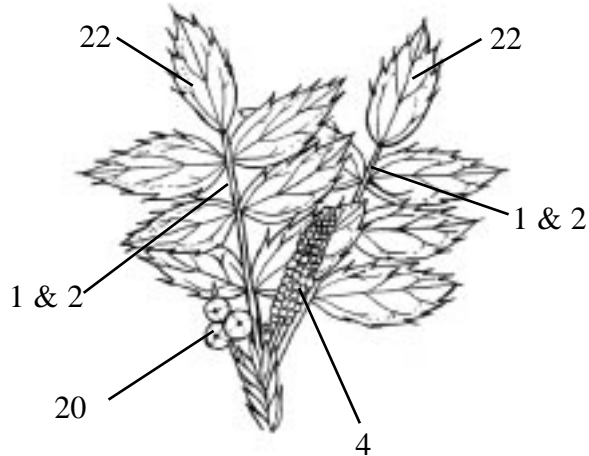
This is a highly adaptable shrub species that grows everywhere from canyons to dry gravelly hillsides. The plants can differ in size and shape depending on where they grow. This plant flowers from May to July. The flowers are followed by red berries, which are an important food source for many birds and small animals.



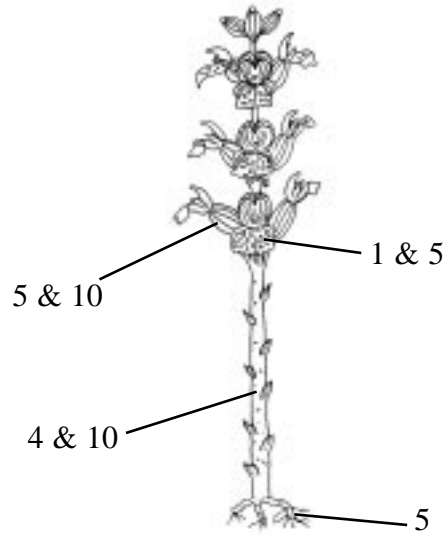
Wood's Rose

Rosa woodsii the Rose Family

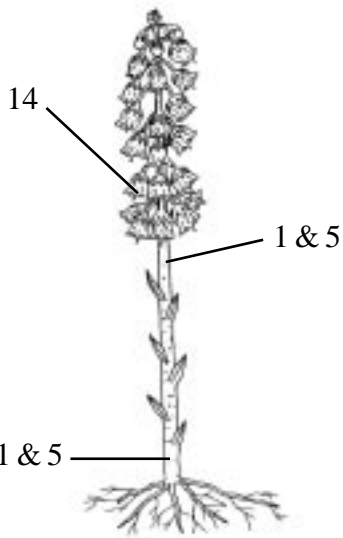
This wild rose blooms in early summer with delightfully fragrant, showy, pink blossoms that resemble garden roses. These shrubs have spiny stems and pinnately compound leaves. The fruits are often called “hips” and are a good winter food for wildlife. They contain high levels of vitamin C, and are often made into jelly or dried for tea.



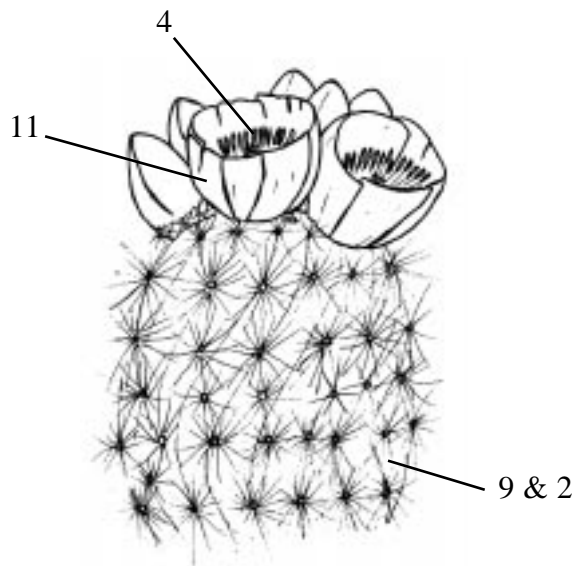
Oregon Grape



Spotted coralroot orchid



Pinedrops



Simpson's Ball Cactus

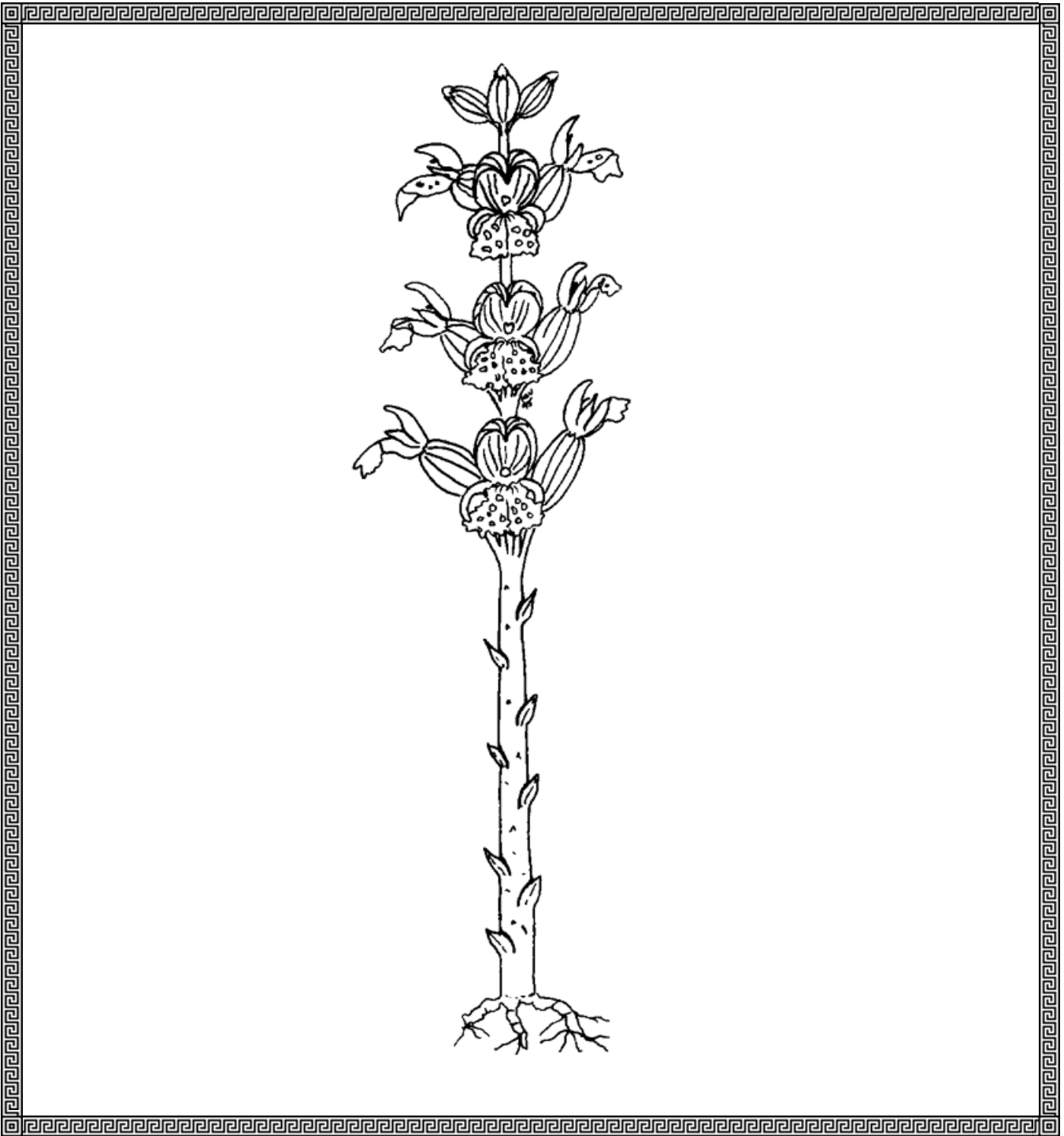
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Oregon Grape

Mahonia repens the Barberry Family

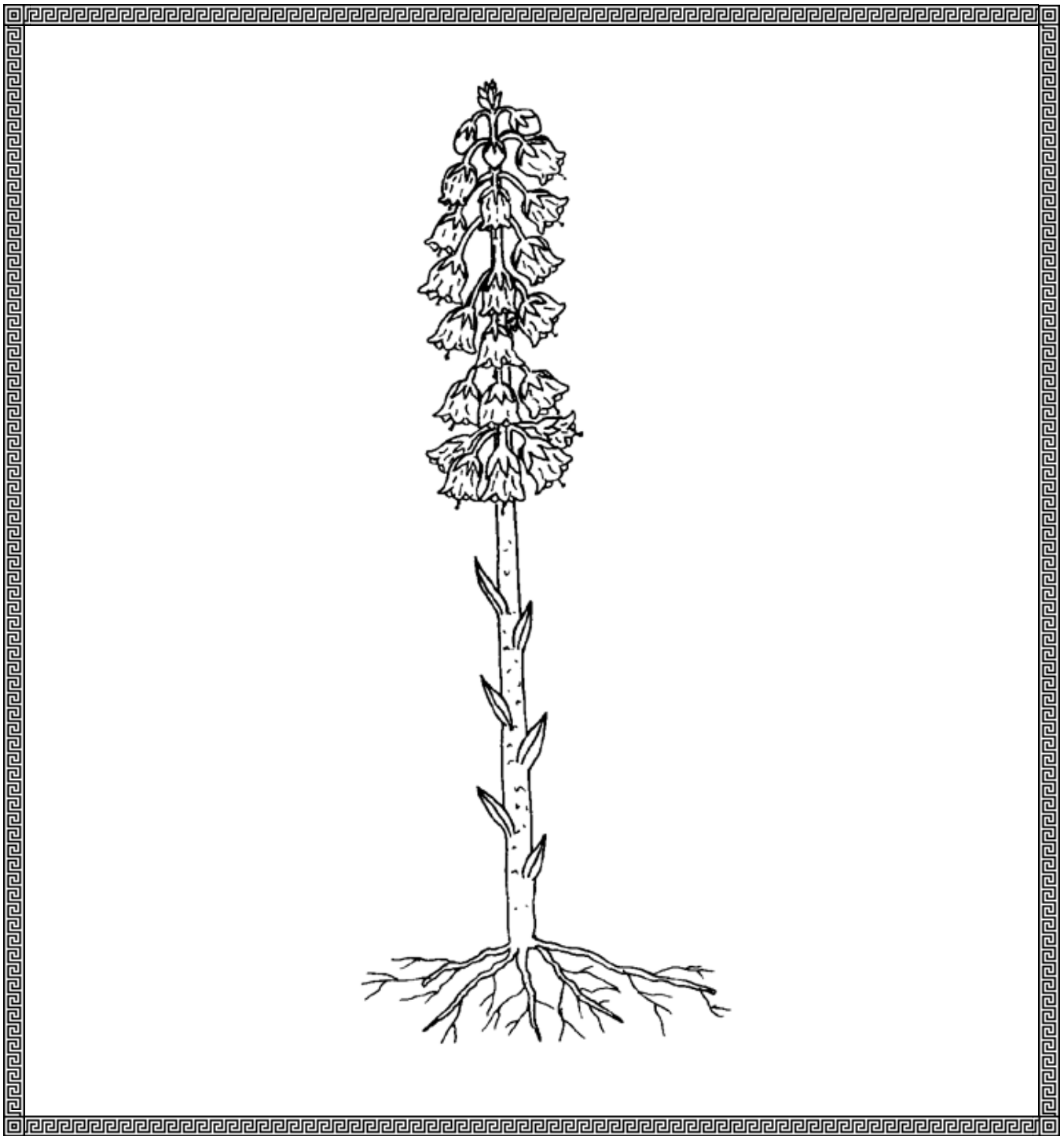
Plants in the Barberry family are sometimes called “living fossils” because they were very common in Colorado millions of years ago. The Oregon grape has compound, evergreen leaves with small slender teeth, and short stems. The fruits have been used to make jelly.



Spotted coralroot orchid

Corallorhiza maculata the Orchid Family

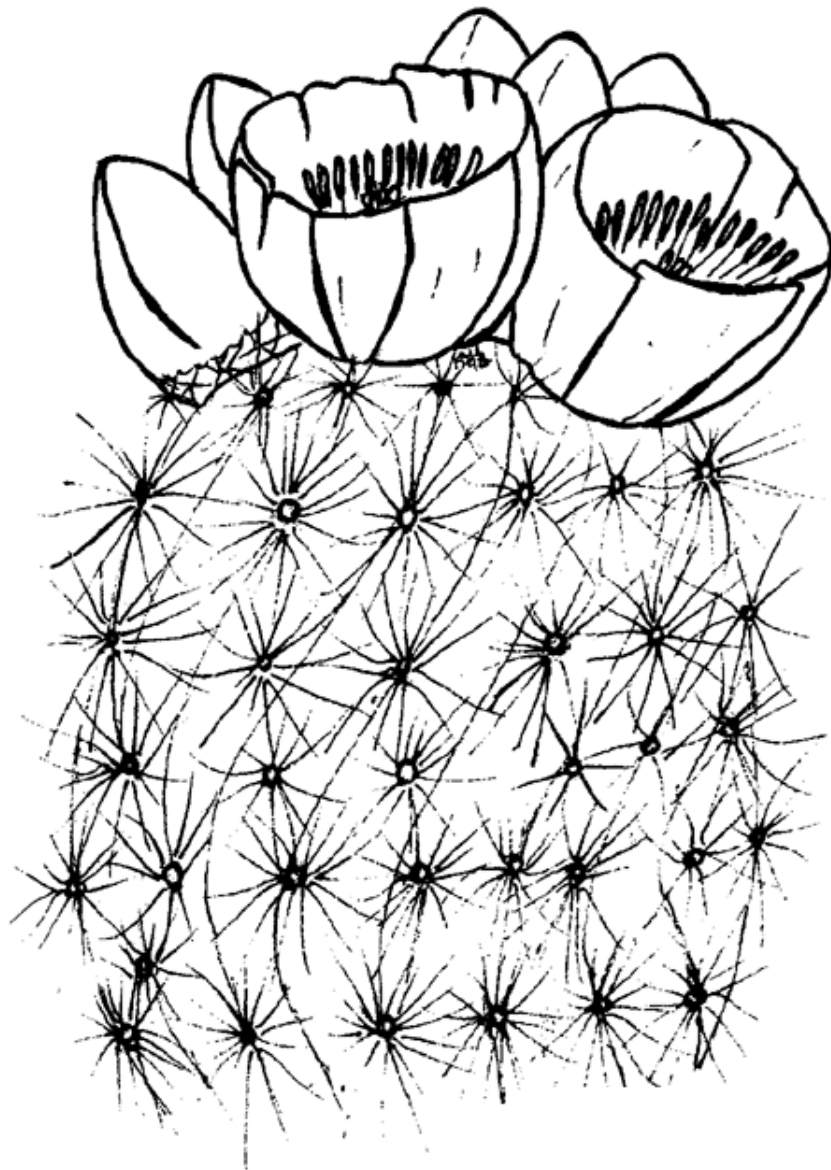
Spotted coralroot can be found in wet to dry pine forests from July to September. The reddish stemmed plants have no leaves. The flowers are mostly white with a lip spotted with purple.



Pinedrops

Pterospora andromedea the Pinesap Family

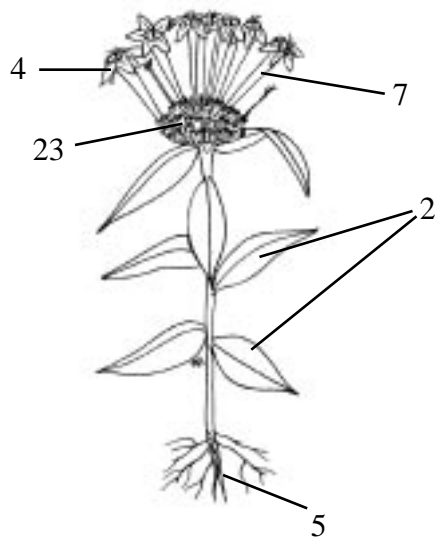
These plants are common in pine needle duff in forests. The plants are fleshy, with small, reduced leaves. The stems are reddish brown rather than the common green color. They lack chlorophyll and are parasitic on the roots of the pine trees.



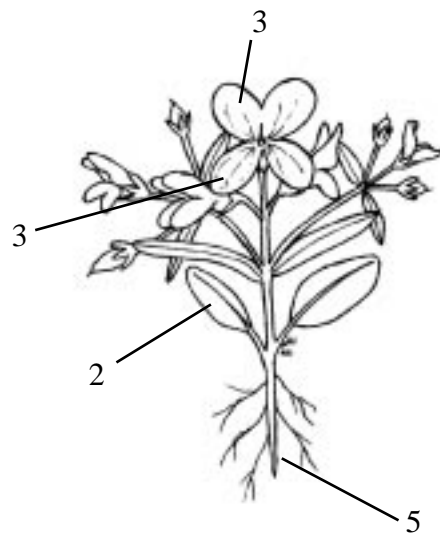
Simpson's Ball Cactus

Pediocactus simpsonii the Cactus Family

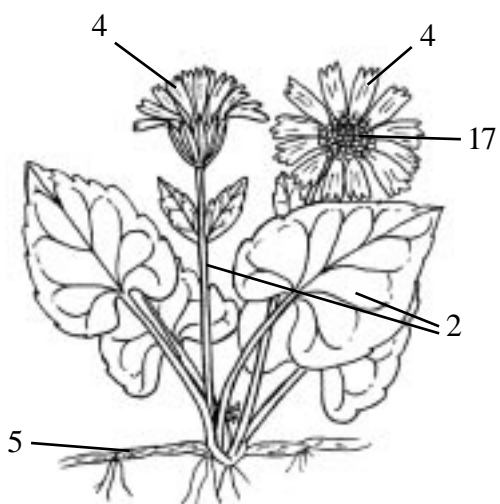
This small round cactus often grows in clumps. The fragrant showy, rose to purple flowers are found blooming on the top center of the cactus. It is quite common in the foothills and dry parts of mountain parks in Colorado.



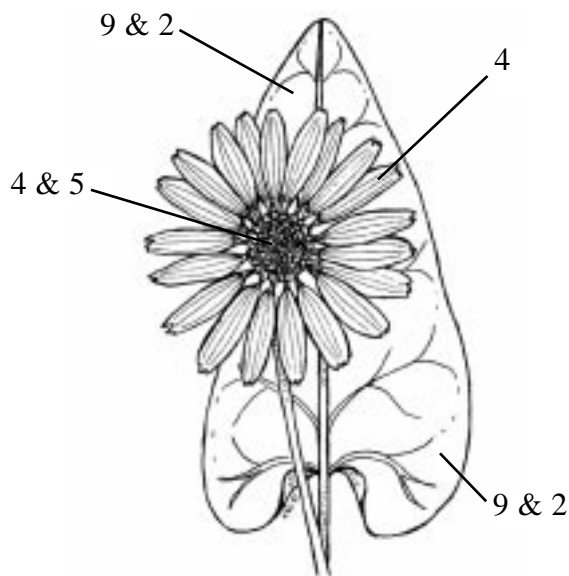
Narrow leaved collomia



Blue-eyed Mary



Heart-leaved Arnica



Arrow-leaved Balsamroot

1	Red	7	Violet/Purple	13	Violet-Red	19	Cerulean
2	Green	8	Orange	14	Carnation	20	Blue Violet
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5	Brown	11	Fuchsia	17	Yellow Orange	23	Yellow Green
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Narrow leaved collomia

Collomia linearis the Phlox Family

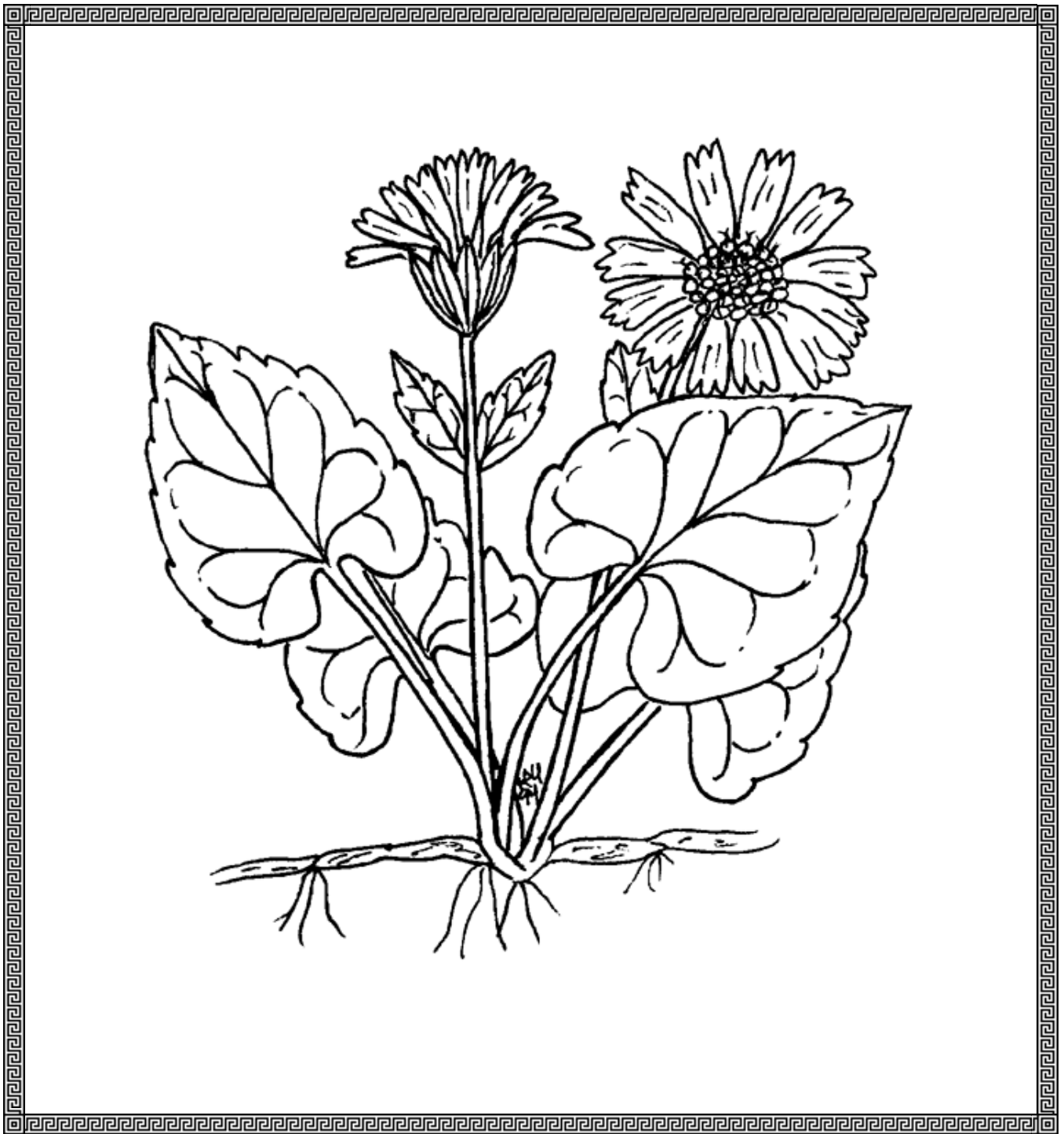
This species is found in a variety of habitats in Colorado including ponderosa pine forests, oakbrush and sagebrush meadows. The pink or whitish flower petals are united into a tube. The leaves are alternate on the stem.



Blue-eyed Mary

Collinsia parviflora the Figwort Family

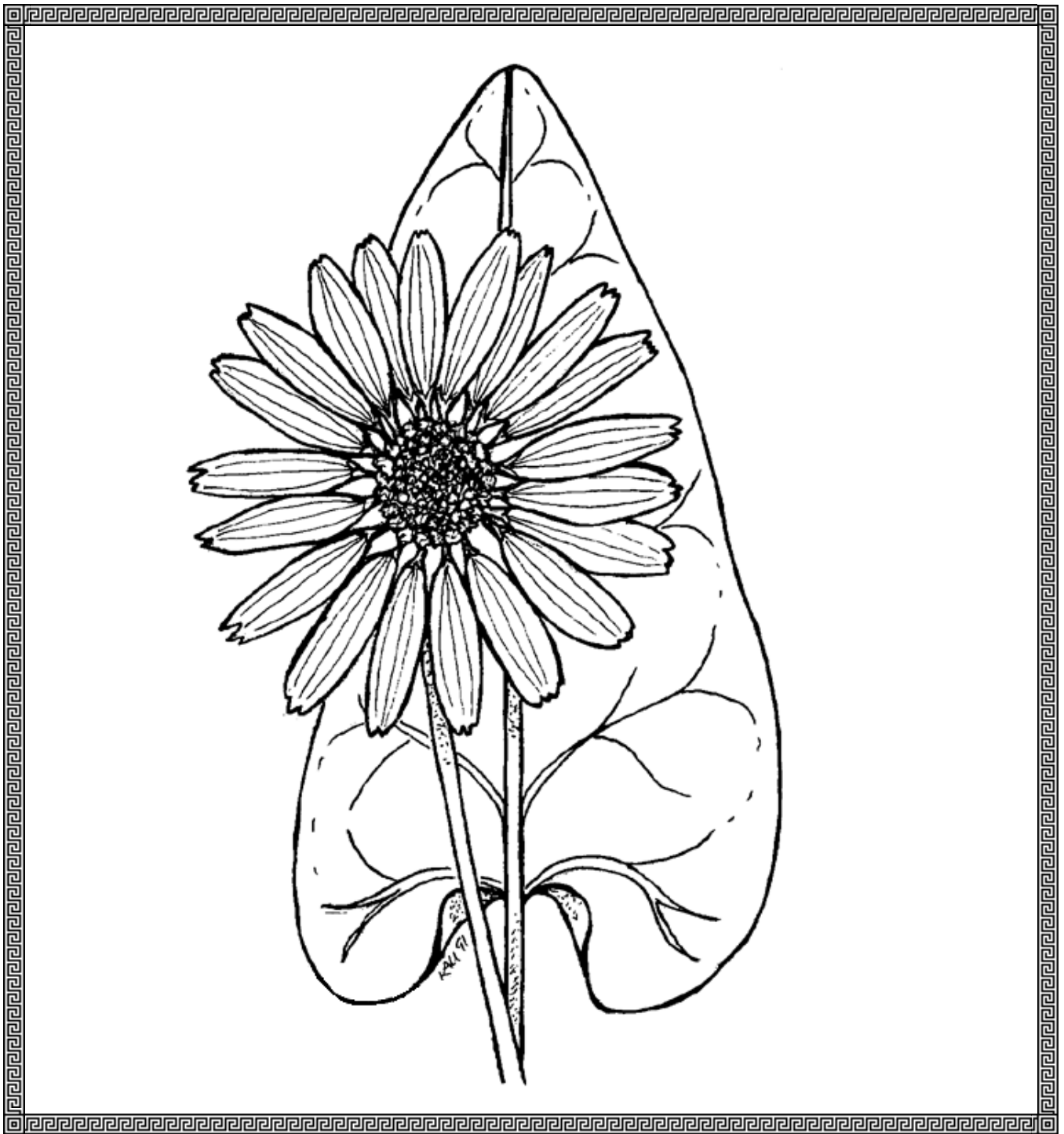
A very delicate and often overlooked annual. It flowers early with tiny (less than one-fourth of an inch) hump-back flowers. The leaves are usually reddish purple in color. It is very common in the foothills in the early spring.



Heart-leaved Arnica

Arnica cordifolia the Sunflower Family

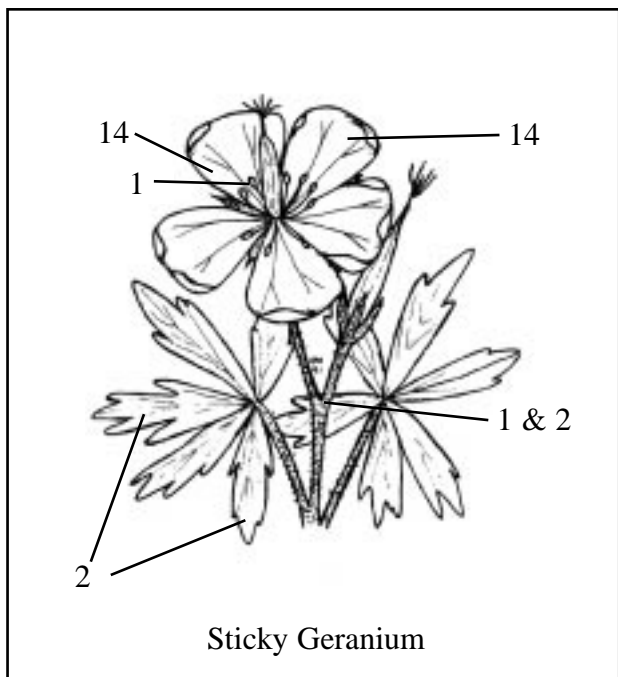
This relative of the sunflower is common in some areas from the foothills to the alpine. It forms colonies that spread by underground stems, which send up clusters of leaves and flowering stems.



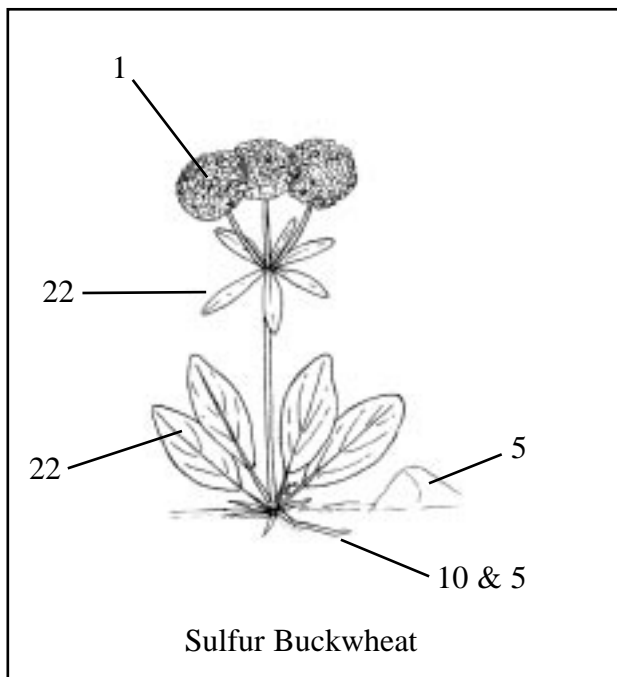
Arrow-leaved Balsamroot

Balsamorhiza sagitata the Sunflower Family

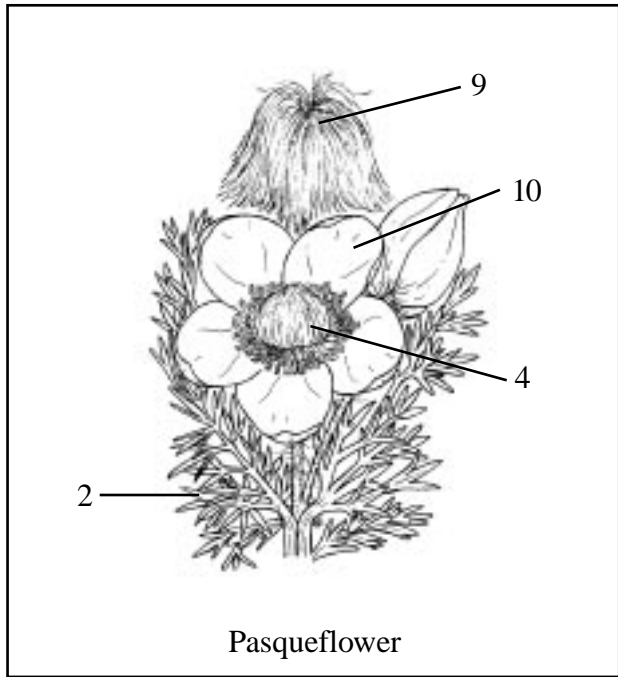
A late spring to summer bloomer, this relative of the sunflower has a massive root with sticky sap, and large leaves with short rough hairs. It is a widespread species, scattered from Colorado to Oregon and Washington.



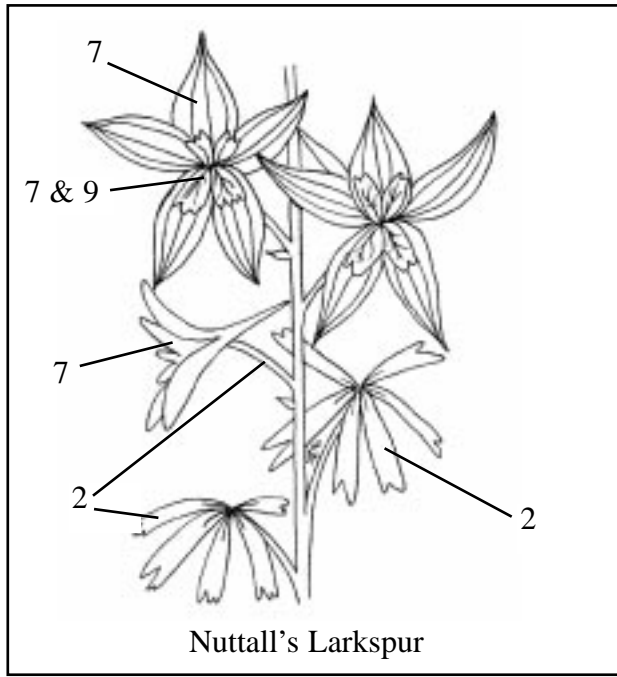
Sticky Geranium



Sulfur Buckwheat



Pasqueflower



Nuttall's Larkspur

1 Red	7 Violet/Purple	13 Violet-Red	19 Cerulean
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Sticky Geranium

Geranium viscosissimum the Geranium Family

One of our native geraniums, this plant is perennial (which means it is able to survive the harsh winters in Colorado to bloom year after year). It has sticky hairs covering much of the surface of the plant, which provide the common name.



Sulfur Buckwheat

Eriogonum umbellatum the Buckwheat Family

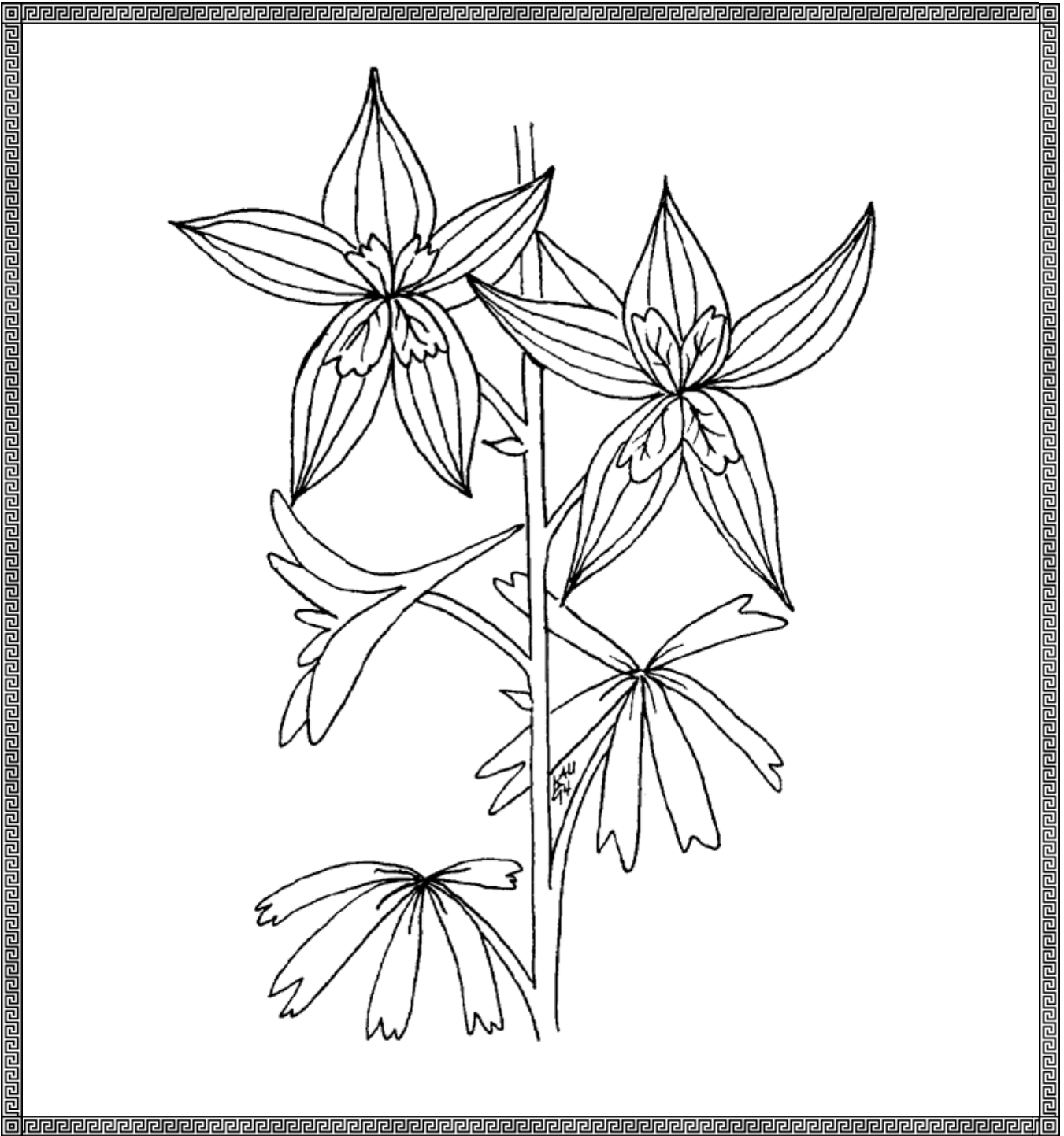
Common from the foothills to the mountains, the small bright yellow flowers arise in clusters of “pom poms” from June to August (depending on elevation), which turn orange or red in autumn.



Pasqueflower

Pulsatilla patens the Buttercup Family

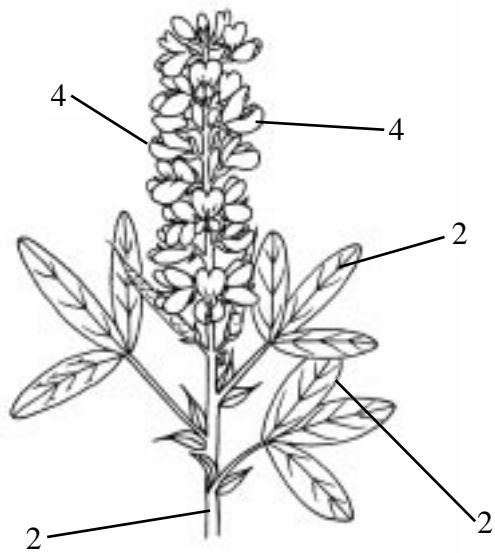
One of the first signs of spring in Colorado, the Pasqueflower blooms with large lavender flowers very early in the spring (often while patches of snow are still on the ground). The common name comes from the Spanish for Easter, which in some areas is about the time of year when it blooms.



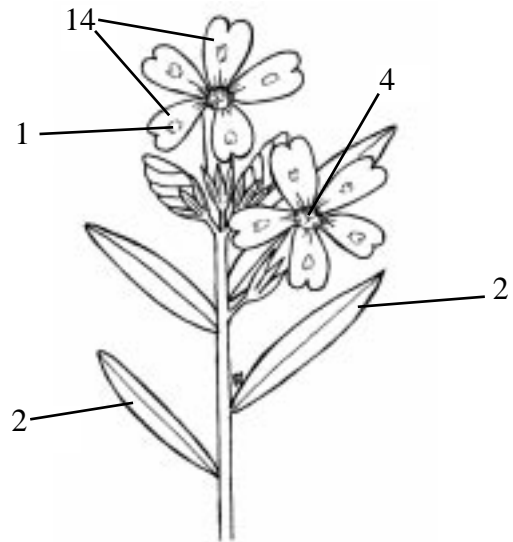
Nuttall's Larkspur

Delphinium nuttallianum the Hellebore Family

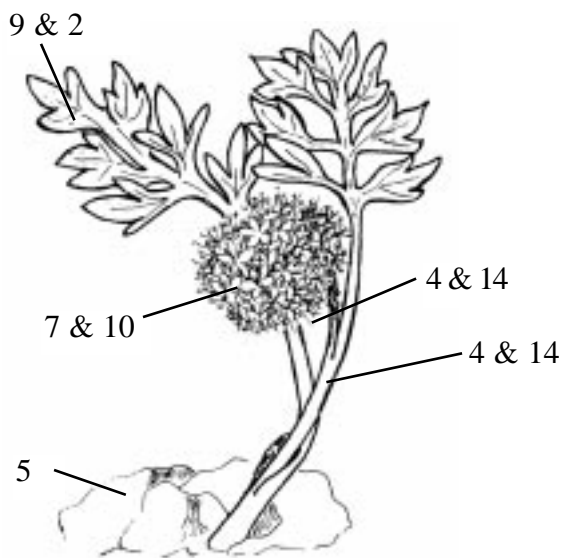
This lovely wildflower occurs from the sagebrush zone up into the ponderosa pine zone. It can be poisonous to cattle if they eat too much, and the poisonous nature of this plant enabled American Indians to make medicinal preparations for killing lice.



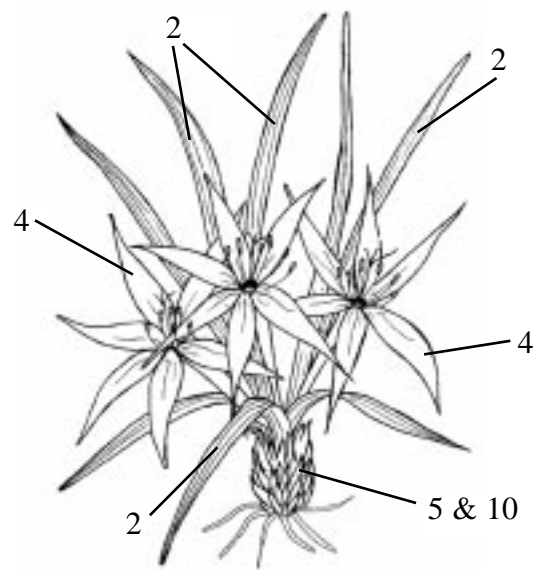
Golden Banner



Annual Phlox



Ball Head Waterleaf



Sand Lily

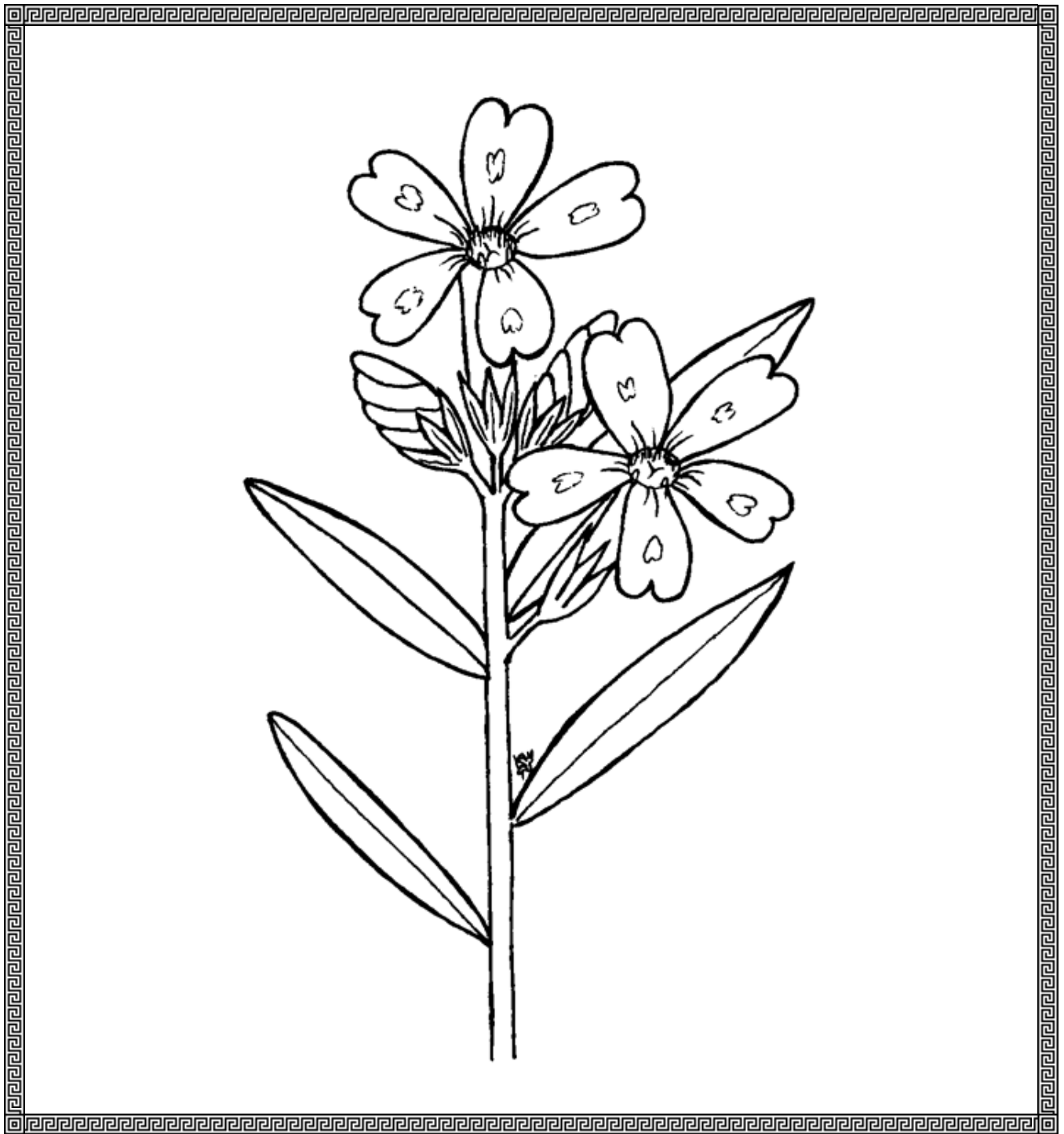
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Golden Banner

Thermopsis montana the Pea Family

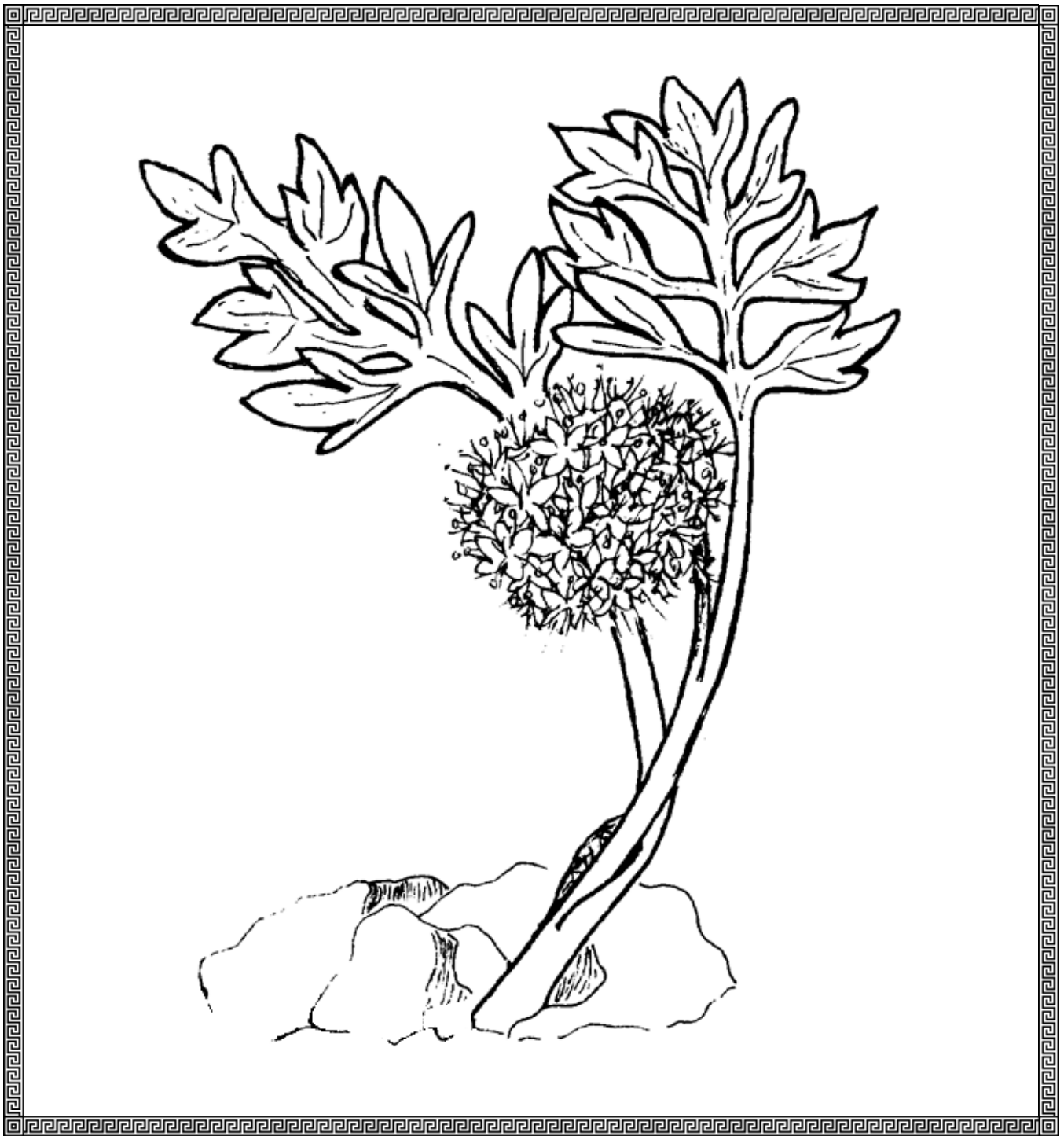
This plant is in the same family as the garden pea. It blooms early in the season, and provides a splash of bright yellow color on the landscape from the ponderosa pine zone out into the prairie.



Annual Phlox

Microsteris gracilis the Phlox Family

Though very common, this wildflower is easily missed because it is only 1 to 4 inches tall. It is an annual plant (meaning that it grows from seed each year and does not overwinter as an adult plant). Flowering occurs in early spring during April and May.



Ball Head Waterleaf

Hydrophyllum capitatum the Waterleaf Family

This small plant is common from the lower mountains to the subalpine. The blue flowers are arranged in a ball-like cluster, which is not as tall as the leaves.



Sand Lily

Leucocrinum montanum the Lily Family

Early in spring, the waxy-white flowers arise from a cluster of leaves that look much like a tuft of grass. Then, by midsummer, the plant disappears completely from the surface and lies dormant underground through the hottest part of the year. Unlike most lilies, the sand lily has fleshy finger-like roots instead of a bulb.

“Celebrating Wildflowers”

The third week of May each year is the kickoff week of “Celebrating Wildflowers”.

Celebrating Wildflowers - National Wildflower Week - is an annual event that promotes the importance of conserving and managing native plants and plant habitats in America. More than 630 million acres of Public Lands provide habitats for American’s wildflowers. We encourage you to explore our National Forest, National Parks, National Wildlife Refuges, and millions of acres of Bureau of Land Management (BLM) lands throughout the year.

To find out more about events on the Nation’s Public Lands on Celebrating Wildflowers, call the **Wild Hot Line April through August**. The Wild Hot Line number is 1-800-354-4595.

**The 1998 Wildflower
Coloring Book is presented by:**

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Andy Kratz -- USDA Forest Service
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Karl Urban -- USDA Forest Service

Celebrating Wildflowers in Colorado