



*Native  
Wildflowers  
and Bees  
of  
Western  
Montana*

# The Beauty of Wildflowers

Many of us enjoy the beauty of wildflowers, but we may not know their names or how to identify them.

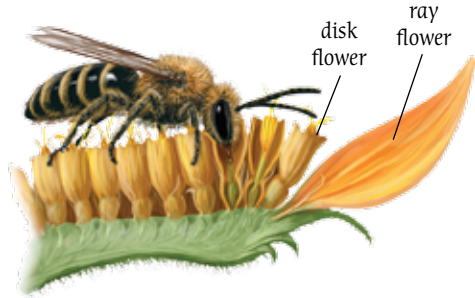
This basic guide will help you identify sixteen pairs of common native wildflowers and bees of western Montana that provide vital pollination services.

For this guide, a bee is paired with a flower it is most likely to visit, but it may visit other flower types as well.

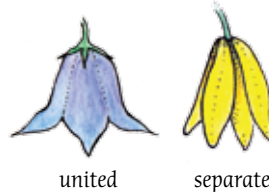
From early spring through the fall, look for these wildflowers and bees as you walk along forest and grassland trails.

Please do not pick wildflowers; leave them where you find them for others to enjoy.

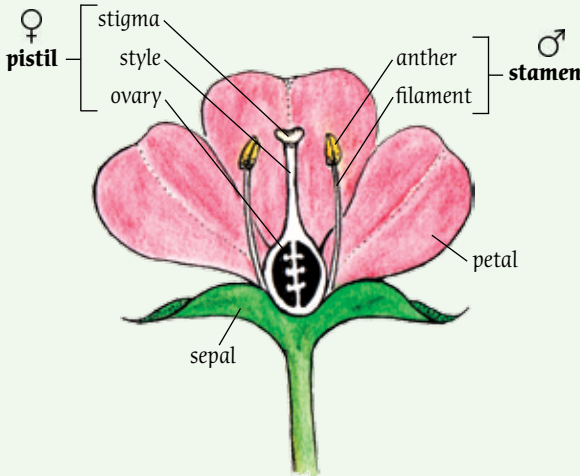
## CROSS SECTION OF A FLOWER FROM THE ASTER FAMILY



## PETALS



## PARTS OF A FLOWER

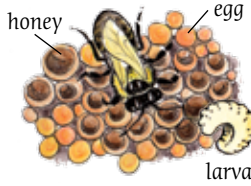


# What is Pollination?

*Pollination* is the process of moving pollen from one flower to another of the same species, which produces fertile seeds. Most flowering plants depend on native bees for pollination. Bees and other animals pollinate one-third of the food we eat – all kinds of fruits, vegetables, grains, nuts and beans. And they provide us with landscapes filled with wonderful wildflowers.

Bees are by far the most effective pollinators because they feed only on flowers. Flowers attract and reward bees for their pollination service with sugar-rich nectar to fuel their flight and protein-rich pollen, or bee bread, to feed their young brood.

## NESTING LIFESTYLES



**Social Nest**  
(bumble bee)

Bees can be organized into two groups based on their nesting lifestyle – **social** and **solitary**.

**Social** nesting bees, like bumble bees, build communal nests and share division of labor including foraging and rearing of the young. They are the only native bees that nest socially in a colony.

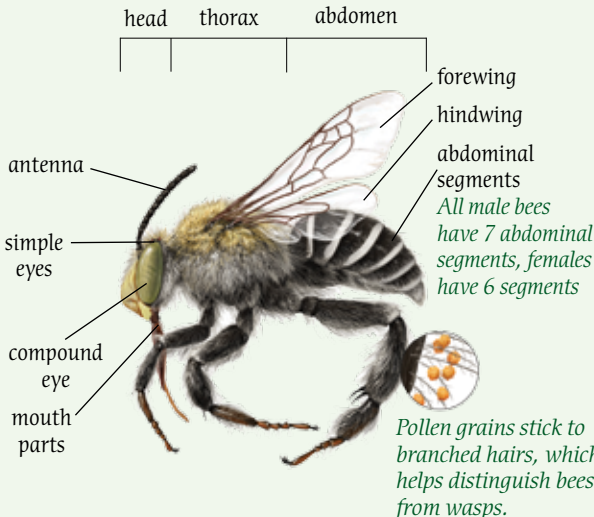


**Solitary Nest**  
(leafcutter bee)

**Solitary** nesting bees nest alone, but some species share nest entrances or nest in groups.

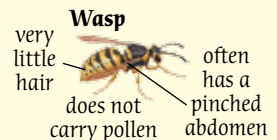
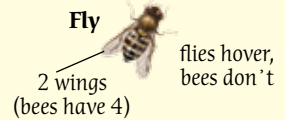
## PARTS OF A BEE

SIDE VIEW OF A DIGGER BEE



## IDENTIFICATION TIPS

How do I know it's a **bee** and not a **fly** or a **wasp**?

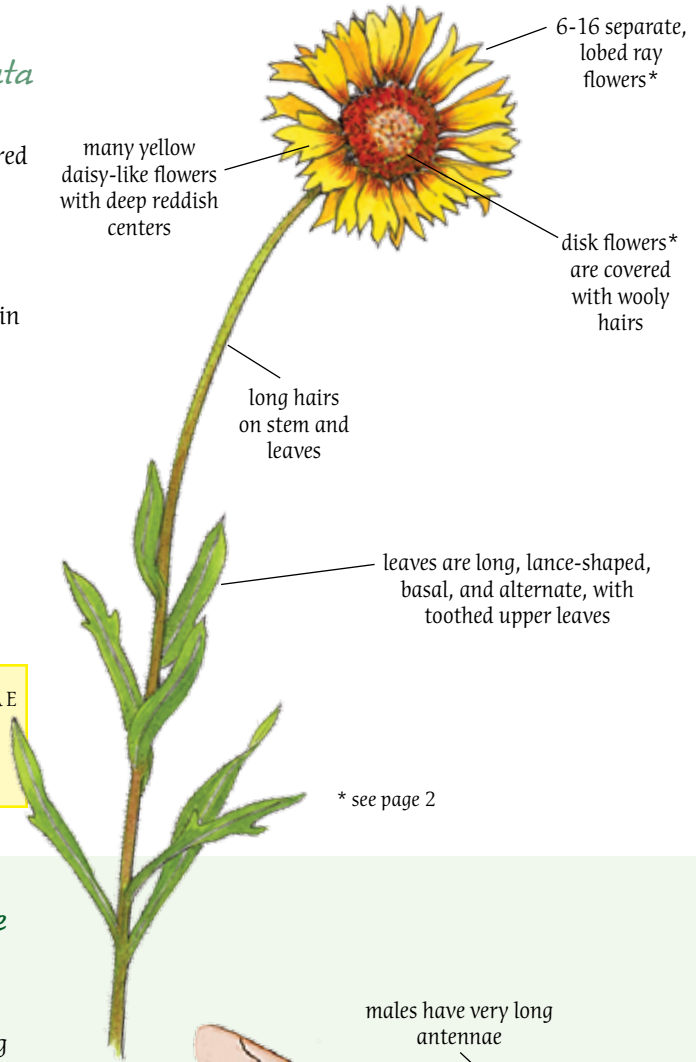


## A COMMON NON-NATIVE



*Blanketflower*  
*Gaillardia aristata*

Blanketflower, with its long-lasting multi-colored flower heads of yellow, purple, red and orange, grows in clumps. It can be found in dry, open grasslands and mountain slopes.

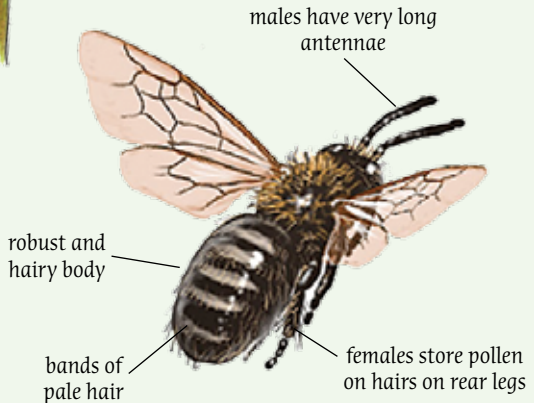


FAMILY ASTERACEAE  
Blooms: June-August  
Size: up to 20" tall

\* see page 2

*Long-horned Bee*  
*Melissodes spp.*

These bees get their name from the very long antennae found on males. Long-horned bees are important pollinators of sunflowers, blanketflowers, and other asters.

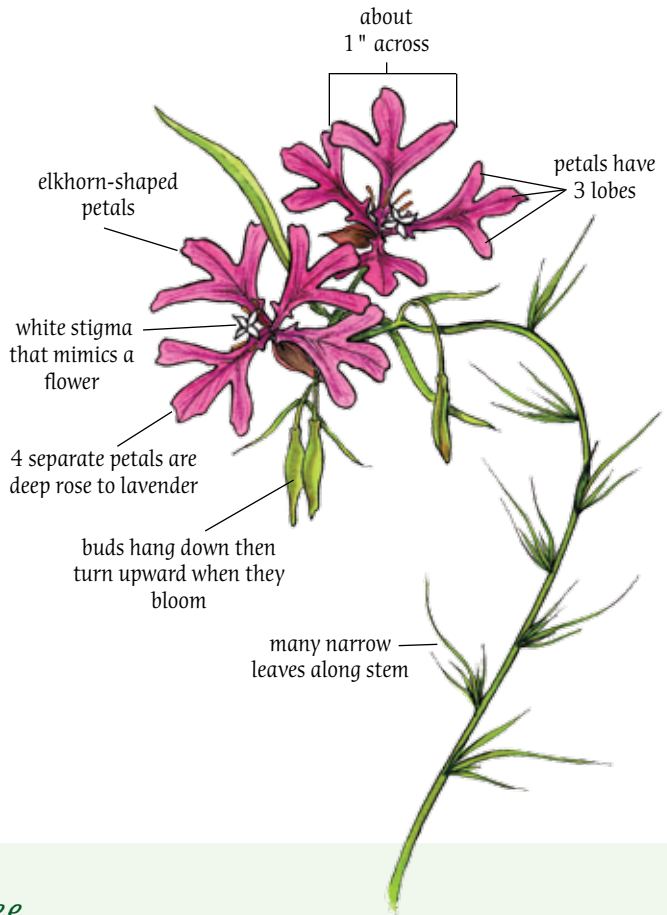


FAMILY APIDAE  
Nest: Solitary (ground)  
Size: 0.3-0.7" long



*Clarkia*  
*Clarkia pulchella*

Clarkia, named in 1806 by Meriwether Lewis for Lewis and Clark Expedition partner William Clark, occurs at low elevations, in valleys and on dry mountain slopes. Clarkia is also known as “elkhorns” and “ragged robin.”



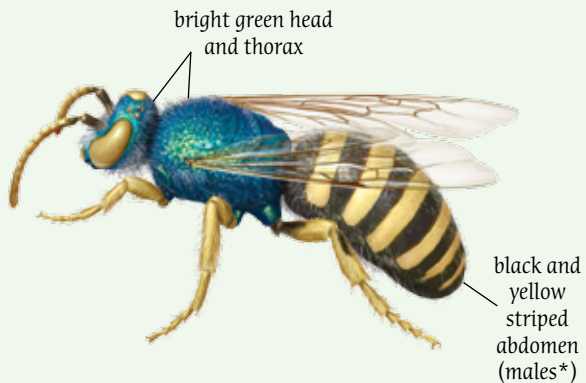
FAMILY ONAGRACEAE

Blooms: June-August

Size: 10-20" tall

*Metallic Green Bee*  
*Agapostemon texanus*

These brilliantly colored metallic blue or green bees visit a wide variety of flowers. These bees are commonly called “sweat bees” because they are attracted to human sweat.



FAMILY HALICTIDAE

Nest: Solitary (ground)

Size: 0.3-0.6" long

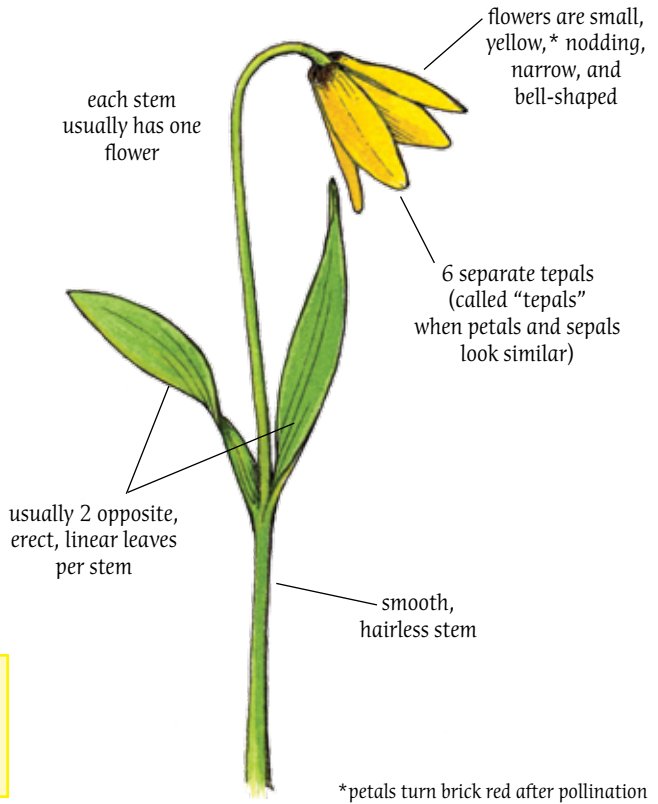


\*females are entirely green



## Yellow Bells *Fritillaria pudica*

One of the first wildflowers to bloom in the spring after the snow melts, yellow bells grow in dry, loose soil in open woodlands and grasslands. Meriwether Lewis collected this plant in 1806.



FAMILY LILIACEAE

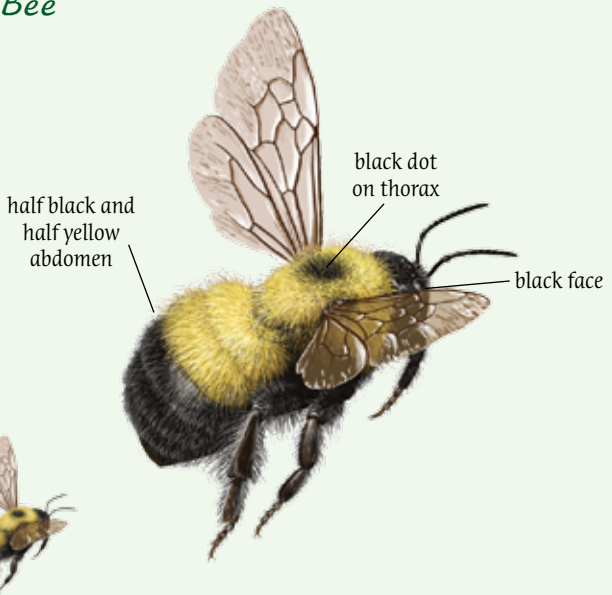
Blooms: April - June

Size: 4-12" tall

## Half-black Bumble Bee *Bombus vagans*

These large, hairy bees are one of the most common bumble bees in our area. They forage in sunny meadows and shady forests.

Bumble bees nest in small cavities such as abandoned rodent burrows or under grass tussocks.



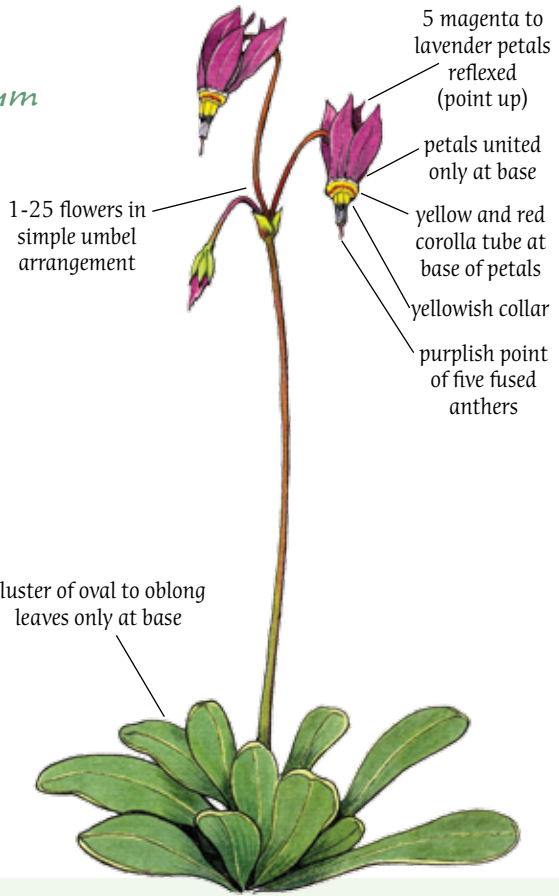
FAMILY APIDAE

Nest: Social

Size: 0.4-0.9" long

## Shooting Star *Dodecatheon pulchellum*

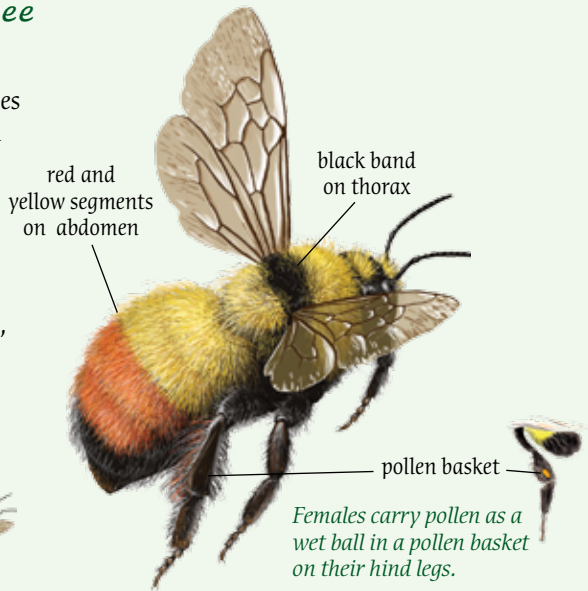
The nodding flowers of shooting stars look like pink darts. They grow in moist grasslands, forests, and along streambanks.



FAMILY  
PRIMULACEAE  
Blooms: April - June  
Size: 6-16" tall

## Great Basin Bumble Bee *Bombus centralis*

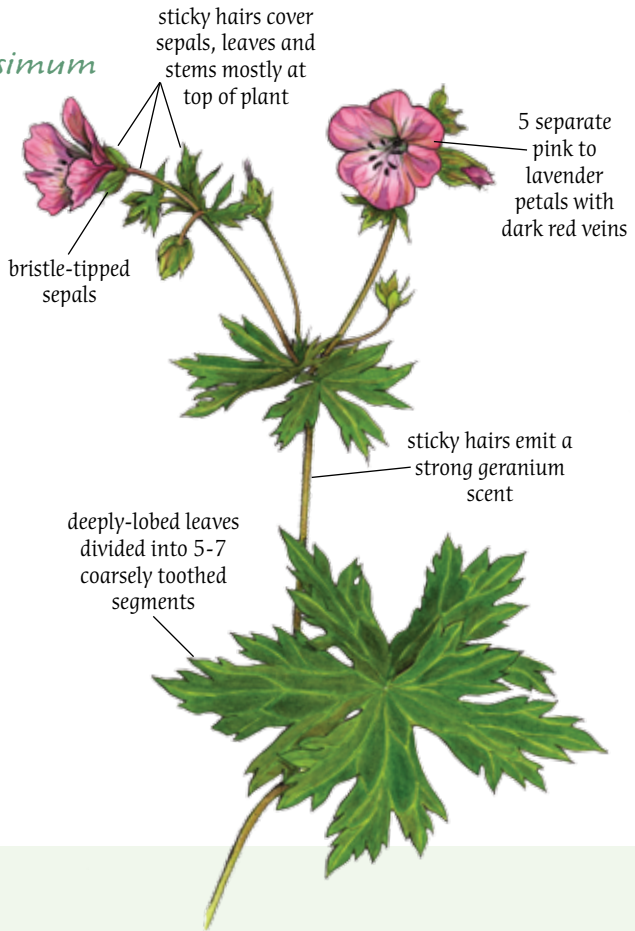
Great Basin and other bumble bees perform a special behavior called "buzz pollination," in which a bee grabs a flower in her jaws and vibrates her wings to dislodge pollen trapped in a flower's anthers. Bumble bees buzz pollinate tomatoes, peppers, cranberries and shooting stars.



FAMILY APIDAE  
Nest: Social  
Size: 0.4-0.9" long

## Sticky Geranium *Geranium viscosissimum*

This perennial with a thick, woody taproot is commonly found in open grasslands and valleys to subalpine meadows. Sticky to the touch, geraniums emit a strong geranium scent. The dark red veins on the petals guide pollinators to their reward.



FAMILY GERANIACEA

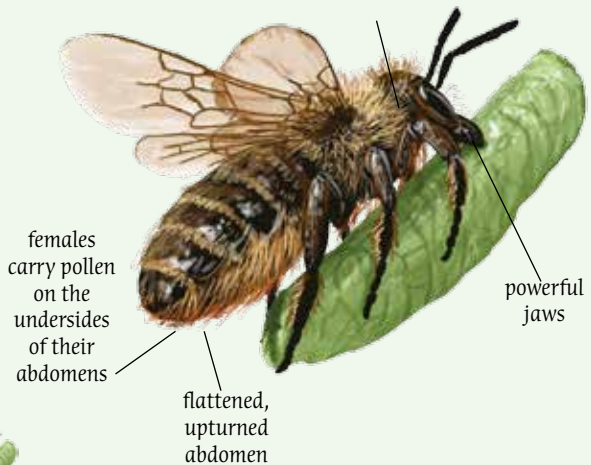
Blooms: June - August

Size: 16-32" tall

## Leafcutter Bee *Megachile spp.*

Female leafcutter bees cut circular leaf or petal pieces and use them to line their brood cells that they build in holes in wood or loose gravel.

Their stout bodies with upturned abdomens give them a pugnacious look.



FAMILY MEGACHILIDAE

Nest: Solitary

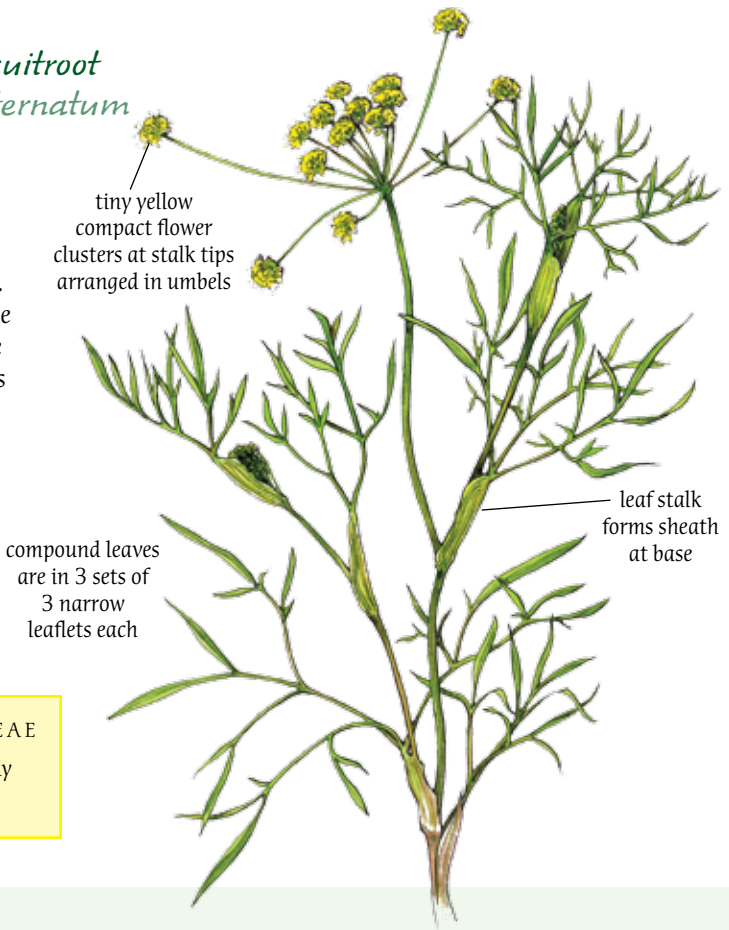
Size: 0.4-0.8" long





## *Nine-leaf Biscuitroot* *Lomatium triternatum*

The nine leaves, consisting of three sets of three leaflets each, give nine-leaf biscuitroot its name. This perennial, in the carrot family, can be found on open slopes from valleys to subalpine forests.



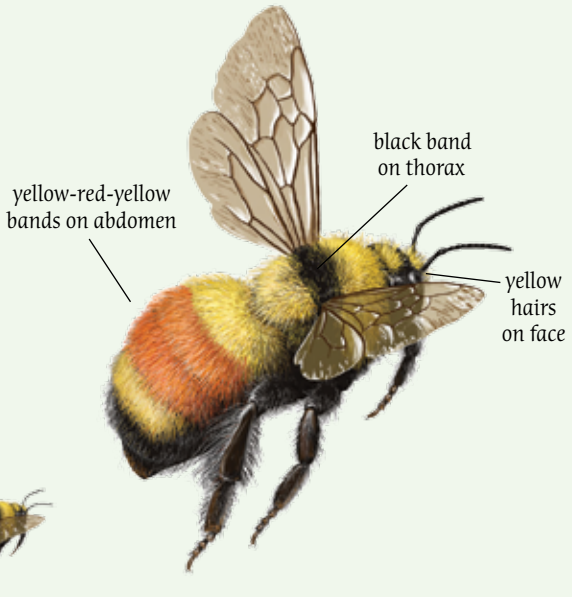
FAMILY APIACEAE

Blooms: May - July

Size: 8-32" tall

## *Hunt's Bumble Bee* *Bombus huntii*

Queen Hunt's bumble bees are one of the earliest bumble bees to emerge in spring in search of the first flowers of the season. Because of their chunky size and furry body, bumble bees can fly in cooler temperatures and at lower light levels than many other bees.



FAMILY APIDAE

Nest: Social

Size: 0.4-0.9" long

## Bitterroot

### *Lewisia rediviva*

Montana's state flower grows on dry, exposed mountain slopes in gravelly soils. It's named for Meriwether Lewis who collected it on July 1, 1806 during the Lewis and Clark Expedition.

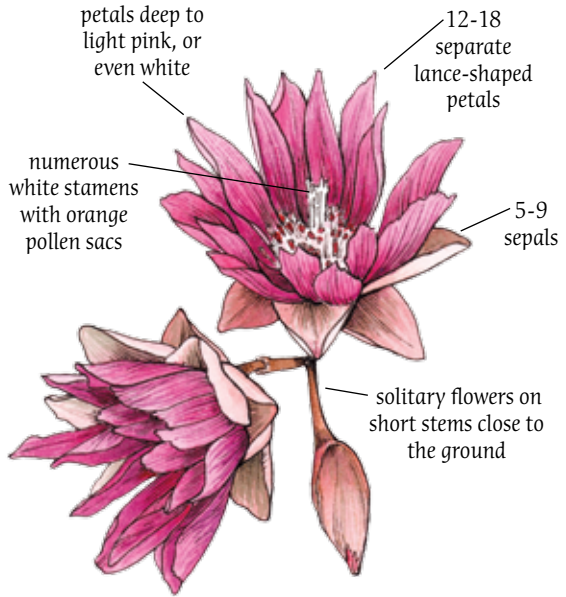


Leaves disappear usually before flowers bloom. They are narrow, basal, succulent and less than 2" tall.

FAMILY  
PORTULACACEAE

Blooms: May - June

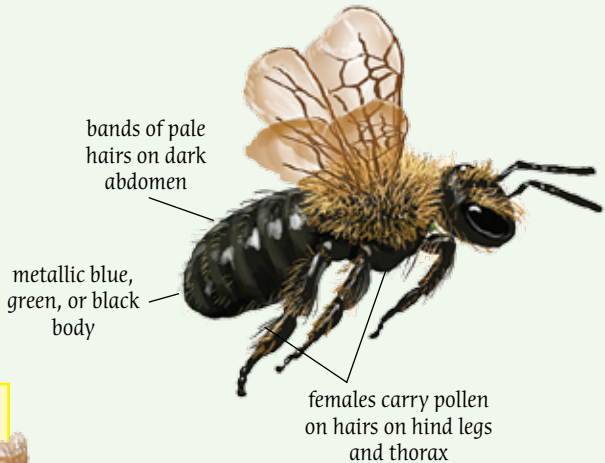
Size: 2-3" tall



## Mining Bee

### *Andrena spp.*

These medium-sized bees are often encountered by gardeners because they nest in lawns. They are among the most common bees that forage in the spring.



FAMILY ANDRENIDAE

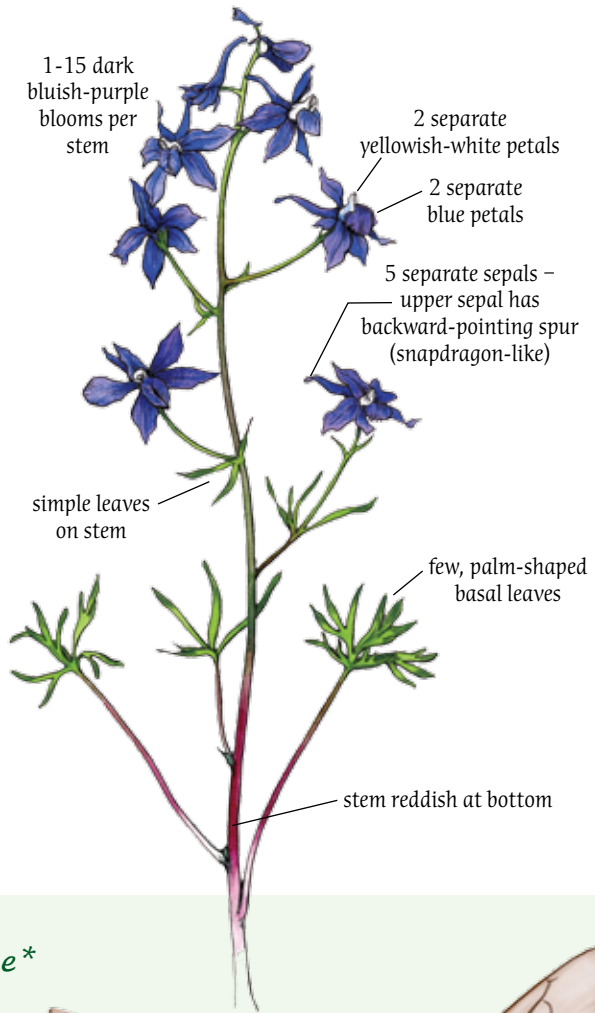
Nest: Solitary (ground)

Size: 0.3-0.7" long



*Little Larkspur*  
*Delphinium bicolor*

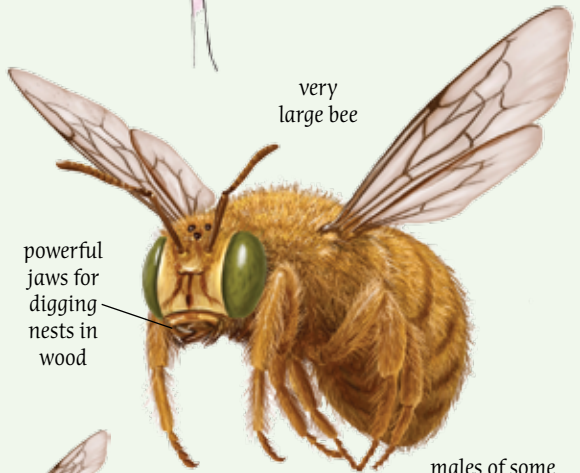
Little larkspur can be found in dry areas from valleys to subalpine forests. It's called "larkspur" because one of the sepals on each bloom has a spur, which looks like the spur on a lark's foot.



FAMILY  
RANUNCULACEAE  
Blooms: May - July  
Size: 5-16" tall

*Large Carpenter Bee\**  
*Xylocopa californica*

These large, black or golden brown bees are often mistaken for bumble bees, but with much less hair. Males are territorial and will buzz around humans, but they (males) are unable to sting. They build nests in wood or stems.



FAMILY APIDAE  
Nest: Solitary (wood)  
Size: 0.5-1.25" long



males of some species are golden brown

\*uncommon in Montana

## Arrowleaf Balsamroot *Balsamorhiza sagittata*

The leaves of arrowleaf balsamroot can be up to a foot long and look silvery due to dense white hairs that cover their surface. Look for this plant in open grasslands, valleys and mountain slopes.



FAMILY ASTERACEAE

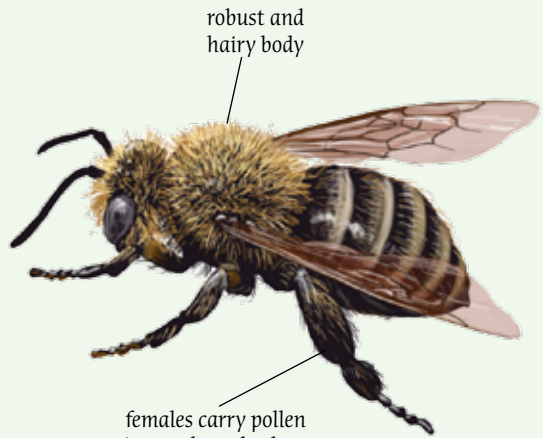
Blooms: April - July

Size: 12-24" tall

\* see page 2

## Sunflower Bee *Diadasia enavata*

These bees have a specialized foraging habit – collecting pollen and nectar from sunflowers and other asters only. These solitary ground nesters have a unique habit of surrounding the nest entrance with a turret (chimney) possibly to protect it from the weather.



females carry pollen in very large baskets on their hind legs

FAMILY APIDAE

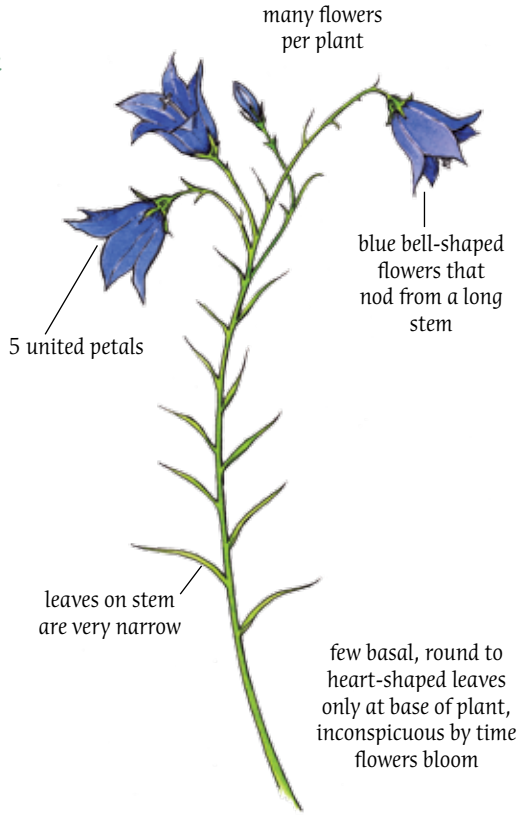
Nest: Solitary (ground)

Size: 0.2-0.9" long



## Common Harebell *Campanula rotundifolia*

Harebell, with its bell-shaped flowers, is commonly found in open sites from grasslands and valleys to subalpine forests. If you break open harebell's stems or leaves, you will notice a milky fluid.



FAMILY  
CAMPANULACEAE  
Blooms: June - September  
Size: 6-20" tall

## Yellow-faced Bee *Hylaeus spp.*

These small, slender and hairless bees are often mistaken for wasps. Females do not carry pollen externally on their body; instead, they store it in their stomachs. Most species nest in stems and twigs.



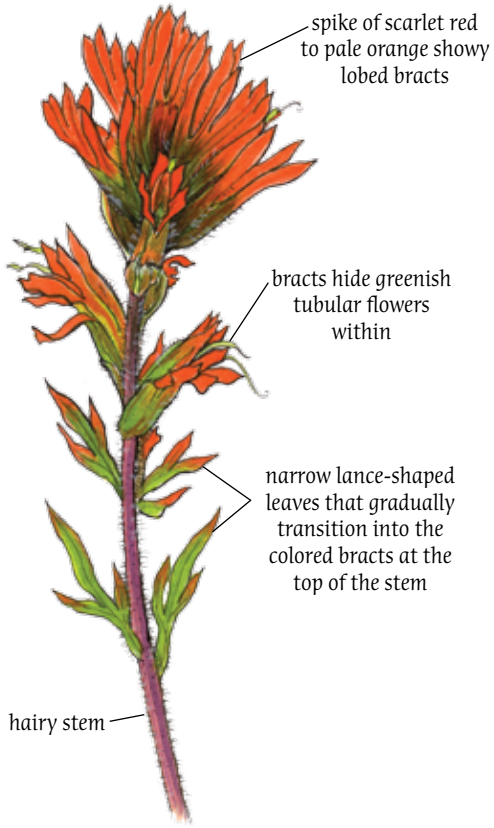
FAMILY COLLETIDAE  
Nest: Solitary  
Size: 0.2-0.3" long





## Scarlet Paintbrush *Castilleja miniata*

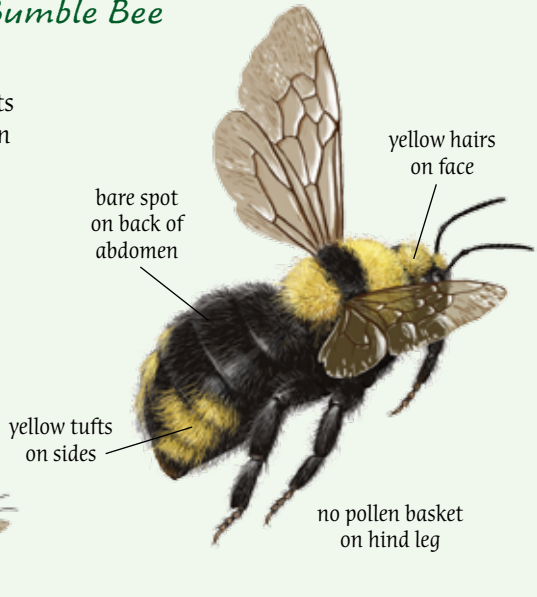
Because paintbrush produces lots of nectar, some ecologists believe that paintbrush and hummingbirds evolved together. Paintbrush is partly parasitic, which means that they take some of their nutrients and water from nearby host plants. Look for this widespread plant in moist meadows and open forests.



FAMILY  
SCROPHULARIACEAE  
Blooms: July - September  
Size: 8-32" tall

## Indiscriminate Cuckoo Bumble Bee *Bombus insularis*

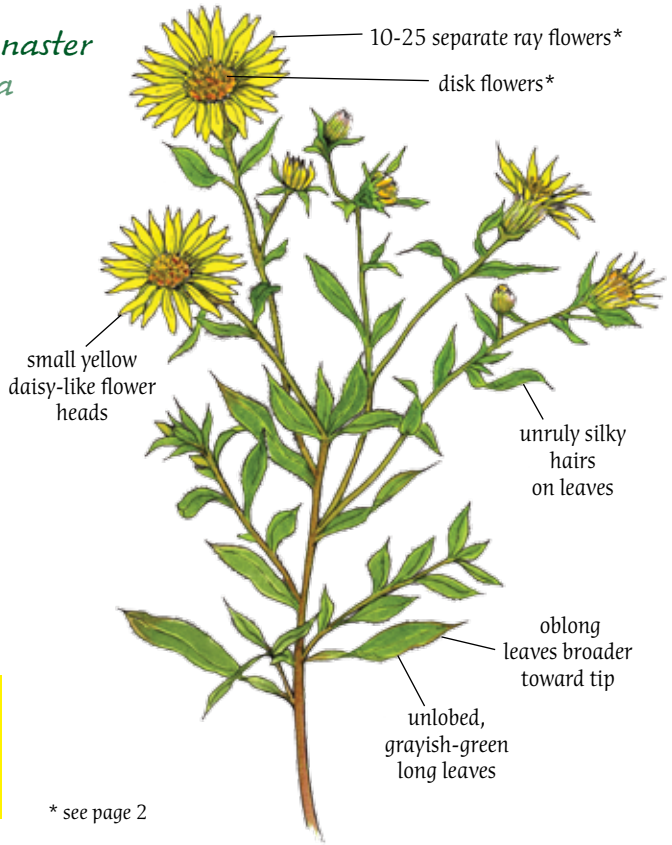
Cuckoo bumble bees parasitize nests of nonparasitic bumble bees. Queen cuckoo bumble bees invade other bumble bee nests, kill the resident queen, and force the workers to raise young parasitic bees along with the brood of the host colony. They can be seen patrolling a few inches above the ground looking for bumble bee nests.



FAMILY APIDAE  
Nest: Social (parasitic)  
Size: 0.4-0.9" long

## Hairy False Goldenaster *Heterotheca villosa*

This aster is found in clusters on well-drained, sandy mountain slopes. The leaves have a pleasant scent and look grayish-green because of the silky hairs that cover the plant. Hairy false goldenaster spreads easily in hot, exposed areas.



\* see page 2

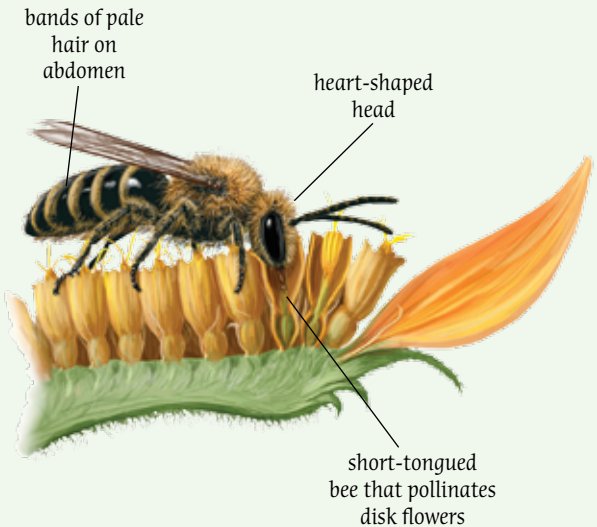
FAMILY ASTERACEAE

Blooms: July - September

Size: 6-20" tall

## Polyester Bee *Colletes spp.*

Slender, hairy, small bees that line their brood cells with a polyester-like material, hence their common name, "polyester bee." This waterproof lining allows them to nest along creeks and in moist soils.



FAMILY COLLETIDAE

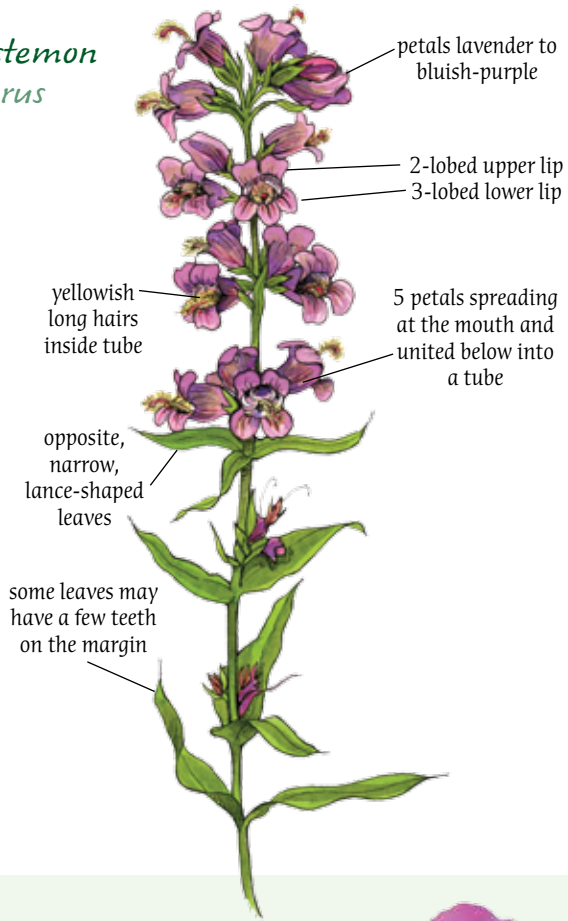
Nest: Solitary (ground)

Size: 0.3 - 0.6" long



## Fuzzy-tongued Penstemon *Penstemon eriantherus*

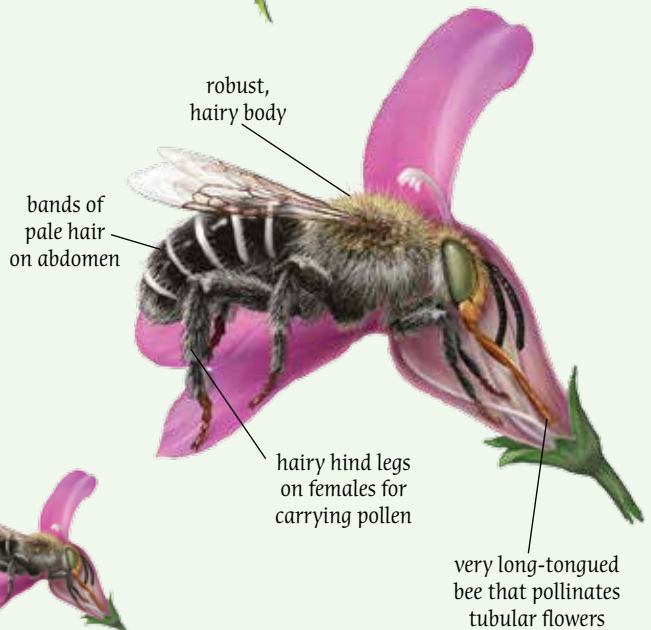
This penstemon, with its funnel-shaped blooms, can be found on open, dry and sunny mountain slopes with rocky soils. Look for ridges inside the “throats” of this wildflower along with prominent yellow hairs, hence the name “fuzzy-tongued.”



FAMILY  
SCROPHULARIACEAE  
Blooms: May - July  
Size: 5-25" tall

## Digger Bee *Anthophora* spp.

Robust, hairy and fast-flying bees that make a buzzing sound and are sometimes mistaken for bumble bees. They often gather together to sleep on a single plant and will fall asleep holding onto the plant with their jaws.

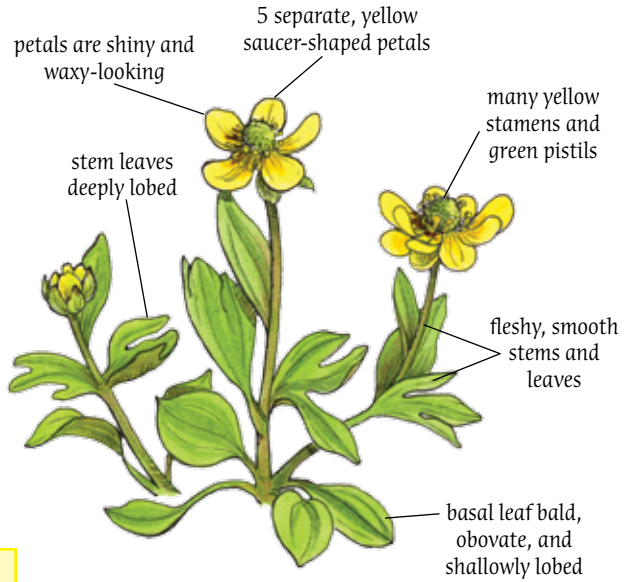


FAMILY APIDAE  
Nest: Solitary (ground)  
Size: 0.25-1" long

## Sagebrush Buttercup

*Ranunculus glaberrimus*

One of the earliest flowers to bloom. When you see a buttercup, you know that spring is on its way. Sagebrush buttercup grows in valleys and on dry, open mountain slopes.



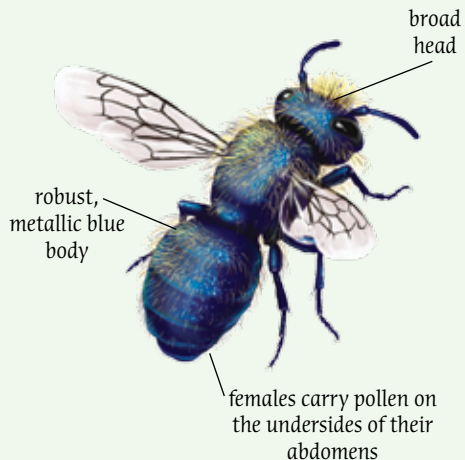
FAMILY  
RANUNCULACEAE  
Blooms: March - May  
Size: 3-8" tall

## Orchard Mason Bee

*Osmia lignaria*

One of the earliest bees to emerge in the spring. They are important pollinators of fruit trees; thus the name orchard mason bee.

Solitary nesters use existing tunnels in dead wood, crevices in between stones, and orchard mason bee houses. Females plug the entrance of each egg cell with mud.

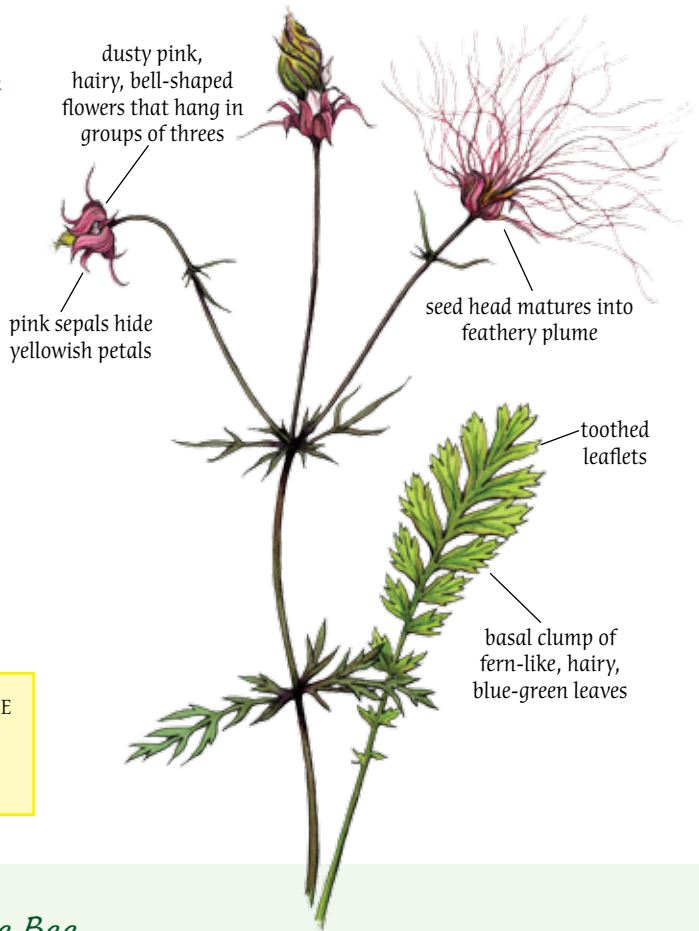


FAMILY MEGACHILIDAE  
Nest: Solitary  
Size: 0.2-0.8" long



## Prairie Smoke *Geum triflorum*

These nodding, urn-shaped flowers, also called “old man's whiskers,” grow in grasslands to mountain meadows in dry to moist open areas. Called “prairie smoke” because these flowers, when matured to feathery seeds, look like smoke.



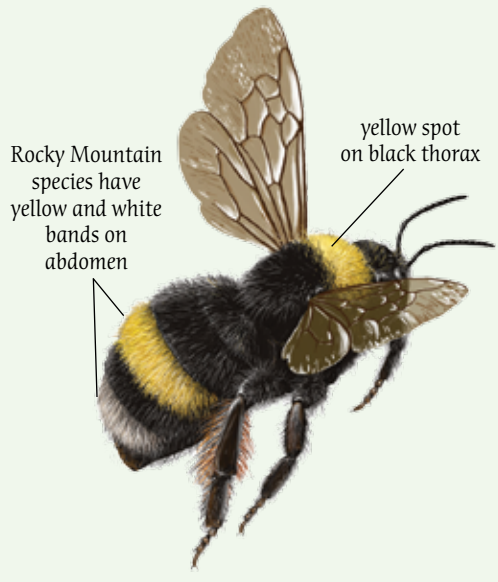
FAMILY ROSACEAE

Blooms: May - July

Size: 6-18" tall

## Western Bumble Bee *Bombus occidentalis*

Once common in the West, western bumble bees have disappeared in the western-most portion of their range, possibly due to introduced diseases and habitat loss. Variable in color, the Rocky Mountain western bumble bees have a yellow band and white bands on the rear of their abdomens. They emerge early in the spring.



FAMILY APIDAE

Nest: Social

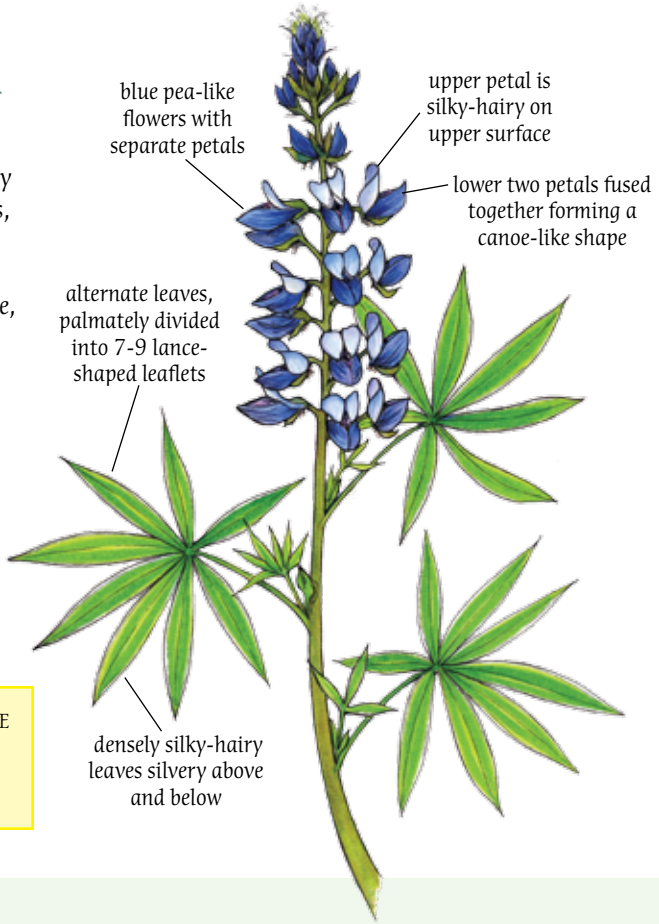
Size: 0.4-0.9" long





## *Silky Lupine* *Lupinus sericeus*

This perennial herb is found in moderately dry open areas from valleys, to mountain slopes and subalpine forest meadows. Although rare, you may spot a white silky lupine.



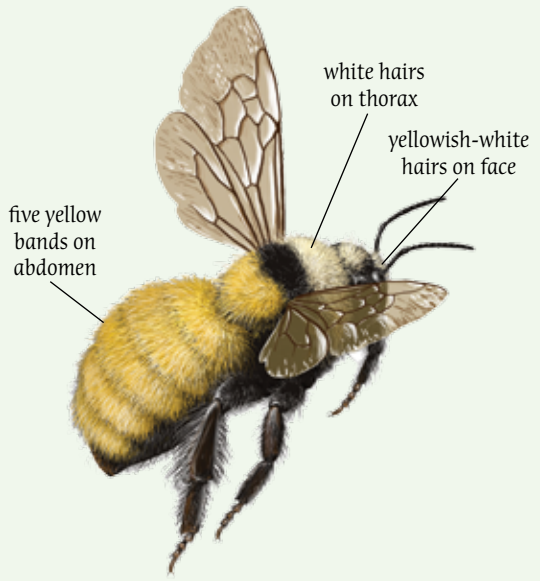
FAMILY FABACEAE

Blooms: May - August

Size: 8-32" tall

## *Mountain Bumble Bee* *Bombus appositus*

These large, yellow and black, long-tongued bumble bees are found in the Rocky Mountains. When a bumble bee lands on a lupine flower, its body weight tips the canoe-like petals down (as if opening a trap door) exposing the pollen which sticks to the bee's belly. Lupines have no nectar so pollen is the only reward.



FAMILY APIDAE

Nest: Social

Size: 0.4-0.9" long



Lolo National Forest  
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Text: Susan Reel  
Design and Native Plant Illustrations: Nancy Seiler  
Bee Illustrations: Steve Buchanan

For more information on bees and native plants,  
check out Pollinator Partnership at [www.pollinator.org](http://www.pollinator.org)  
and The Xerces Society at [www.xerces.org](http://www.xerces.org).

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